Migrant workers as informal interpreters on construction sites

PhD in Construction Management

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Morwenna Fellows

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COVID-19 Impact Statement

In this statement I will briefly outline the impact that the COVID-19 pandemic has had on my PhD.

Firstly, my plan was to do a linguistic ethnography, which would have involved extended periods of observation onsite and recording interactions. For example, I planned to record an induction and then analyse the different communicative modes used and, if possible, also examine the translated speech and text. This was the plan proposed in my confirmation report in November 2019. The preparation for this had involved researching linguistic ethnography and doing a literature review on interpreting studies, in particular to find ways that recorded data could be analysed. The first UK lockdown from March to June 2020 coincided with what should have been my core fieldwork period. As I could no longer do this, I had to adjust the project significantly. The data is now much more based on interviews. I spent a long time searching for and contacting potential participants, repeating this stage as the access to sites I had negotiated was now not viable. During the process of collecting the interview data I began the analysis. Here it became clear that I would need to adjust the research focus slightly, including the literature review and analysis methods. Specifically, I could no longer get interviews with multiple participants who worked on the same construction project because although I could interview some of the management because they were working from home it wasn't possible to speak to workers because they continued going to work onsite. So, the project perspectives were largely lost, and the participants that I spoke to were based in many different countries and discussed their international experience. These more personal interviews led to the unanticipated, but necessary alternative method of narrative inquiry.

Furthermore, not working from the office at the university has led to diminished support networks because of not having regular in-person contact with staff and students. Likewise, with not being able to attend conferences or development workshops in person. Working from a small flat rather than the office also made maintaining productivity a significant challenge. What is more, as the EPSRC grant was not extended this contributed to stress and pressure to finish as I have had to take on other work whilst finishing the PhD.

Altogether these effects of the pandemic equate to a substantial loss in time. Although the thesis does not have the variety of data aimed for, the impact of this has been mitigated by adjusting the research questions and finding alternative sources of data and analysis methods that contribute to fulfilling the same research aim.

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Abstract

In response to the challenges arising from employing large numbers of migrant workers on construction projects, the industry has found ways of communicating within teams with speakers of multiple languages. One widely used strategy is using a bilingual worker to facilitate communication. However, despite the importance of this language work for safety, relations and productivity, this interpreter position is kept informal and is also under-researched. Specifically, there has not been an in-depth study from a linguistic approach or that provides an emic perspective from informal interpreters. Therefore, this thesis investigates the work of informal interpreters on construction sites. This is done to contribute to a better understanding of these vital language practices and to inform best practice regarding the use of bilingual migrant workers as informal interpreters. It is argued that this language work should be part of a recognised and managed position in the workplace.

This study uses a qualitative approach, employing ethnographic methods. Through visits to four construction sites in London and undertaking forty interviews, with international participants, it has been possible to describe who some of these informal interpreters are and what language work they do. This answers the two broad research questions: (1) Who are the informal interpreters and why do they perform this task? And (2) What language work do the informal interpreters do and how? The data was analysed through a language and identity theory framework. The identity approach provides insights into the identities of informal interpreters in construction and their reasons for performing this language work; with findings that show that some migrant workers invest in their language skills with the hope that this will improve their social and/or economic situation. The translanguaging lens leads to a better comprehension of the varied ways in which these bilingual workers facilitate communication. This thesis contributes to knowledge about communication practices on construction sites internationally, with data and insights gained about practices in many countries because of the diversity of interview participants and the global nature of the construction projects. By applying the theoretical constructs of identity and translanguaging in a new context, like construction, it also contributes to these literatures. Moreover, the findings may contribute towards better understanding of informal interpretation in other settings, such as in industries with highly multilingual workforces including manufacturing,

hospitality and agriculture. Initiatives that have the potential to improve communication on multilingual construction sites and give recognition to workers' valuable language skills are suggested.

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Declaration of original authorship

Declaration: I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged

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1 Introduction

This thesis contributes to a deeper understanding of bilingual workers' language practices on construction sites. This research is significant because internationally migrant workers are hired in the construction industry (CI), meaning that communication difficulties arise when there is not one common language. These communication difficulties have implications for safety, productivity and relations. Therefore, the communication strategies of workers are vital and complex, and these are examined in this thesis, with a focus on bilingual workers who take on additional work informally interpreting.

This chapter presents a brief background to the research problem, which is then situated fully by the exploration of the relevant context and literature in chapters 2, 3 and 4. This chapter also states the research questions and outlines the scope of the thesis. The theoretical framework is outlined below, then discussed in depth in chapter 5. The structure of the thesis is detailed at the end of this chapter.

1.1 Background to the research problem

Internationally, construction is an industry that draws workers from other countries, either as itinerant or perhaps as permanent migrants who fill a skills gap (Harvey and Behling, 2008, Chan and Dainty, 2007). Moreover, the CI is a significant part of the economy worldwide, 'employing 5-10% of the formal sector workforce in most countries' (Buckley et al., 2016). In the UK, for example, it accounts for approximately 10% of employment (Cable, 2013) and around 1 in 10 workers in the UK in 2019 were migrants. More specifically, in London migrant workers comprise up to 50% of the onsite workforce (Winterbotham, 2020), many of whom speak no or little English (Oswald, 2019, ONS, 2018). For example, in other international contexts, in 2017 73.8% of employees in Singapore working in construction were migrants (Hamid and Tutt, 2019 , p.4), and in 2014 27.3% the US construction workforce were of Hispanic or Latino ethnicity (Bureau of Labor Statistics, 2015). The multinational nature of the construction workforce has attracted the attention of industry practitioners and academics for many reasons. One significant issue which has not received enough attention is communication onsite between workers who do not share a common language (Oswald et al., 2019).

The difficulty of communicating between speakers of different languages is faced daily by workers around the world. The term interlingual is used in this thesis instead of multilingual when referring to communication because it emphasizes the going between languages and their connection rather than separation of named languages. The difficulty of interlingual communication on construction sites has been widely cited as one of the causes of the higher accident rates observable among migrant workers in the CI (Loosemore and Lee, 2002, Tutt et al., 2011). For instance, non-English speaking background (NESB) workers are at higher risk of accidents than their English-speaking counterparts in countries such as the UK, US, Singapore and Australia (Loosemore and Lee, 2002, Sherratt, 2016, Oswald et al., 2015). For example, in the US in 2008, Latinos comprised 13.9% of the construction workforce yet accounted for 26% of construction fatalities (Menzel and Shrestha, 2012). In Loosemore et al.'s (2011) study of Australian construction sites, around 34% of the supervisors surveyed suggested that communication problems decreased safety standards (Loosemore et al., 2011, p.374). Moreover, language barriers can inhibit integration in the workforce and are recognised as a contributing factor to the vulnerability of migrant construction workers (TUC, 2008, Inghilleri, 2016). Having multilingual projects teams also has implications for trust, co-operation and responsibility. These issues have been under researched (Donaghy, 2009) and will be discussed below.

Only a small number of studies in construction have tackled interlingual communication specifically (Including Hare, 2012, Loosemore and Lee, 2002, O'Byrne, 2013, Oswald et al., 2019, Tutt et al., 2012, Kraft, 2020). Together these studies provide a picture of the complications faced and document ways in which interlingual communication is managed. For example, Hare et al. (2013) studied the use of pictorial aids for communicating with migrant workers, O'Byrne (2013) investigated interpreting in health and safety (H&S) training sessions, and Oswald et al.(2019) explored the challenges around communicating H&S and strategies used to overcome them. As well as pictorial information and interpreting, some companies have signs and documents translated (Tutt et al., 2011), encourage workers to learn English (Fitzgerald, 2006, Oswald et al., 2019, Tutt et al., 2011), provide training in other languages (Jaselskis et al., 2008), and use technological translation solutions (Tutt et al., 2011, Oswald et al., 2019). Such studies have largely investigated the topic at industry-level, but not at the level of the individual.

Despite these reported efforts at managing communication, everyday spoken communication onsite is still a considerable challenge. A bilingual worker who additionally acts as an informal interpreter is used to deal with this. He/she facilitates communication between speakers of different languages by transferring messages from one language into another, particularly in inductions, briefings and trainings. It is here that there is also a gap in the literature, as only the recent research by Oswald et al. (2019) and Kraft (2020) studied the work of informal interpreters closely, despite this position, and its importance, being recognised in numerous studies internationally (including Dainty et al., 2007, Loosemore and Lee, 2002, Fitzgerald, 2006, Phua et al., 2010, Lyu et al., 2018, Oswald et al., 2019, Tutt et al., 2013b). Informal interpreters' work is usually informal and invisible, yet given the poor safety statistics above, as well as the impact of poor communication on relations (Trajkovski and Loosemore, 2006) and productivity, this language work is likely fundamental to the safety and wellbeing of workers and to the progress of projects (Loosemore and Lee, 2002).

This thesis therefore aims to contribute towards filling this gap in the literature through in-depth ethnographic research exploring informal interpreters in construction. This research will reveal the complex language work of interpreters in these situations, which involves transferring technical work and safety information from one language to another, building on previous studies' contributions in this area, which are limited because they have not covered a linguistic perspective. The informal interpreters are not usually trained to do this language work (Loosemore and Lee, 2002). As they are not prepared for the task the workers find varied solutions and approaches to overcome language barriers. It is important to know what communicative strategies informal interpreters use to understand how communication across languages is achieved, as only then will it be possible to maximize the strategies that are most useful for achieving clear communication. Such strategies include using gestures and drawings, as well as linguistic strategies such as paraphrasing, summarizing and mediating. It is also necessary to be aware of the constraints under which the informal interpreters interpret, such as organisational, financial and time constraints, as these shape their ability to facilitate communication. For instance, their language work is facilitated and reduced in organisations with many resources and less complex linguistic needs. It is known from previous literature that the work is often not contractually or financially recognized and sometimes is labelled as a 'translator/interpreter', but often not named as a work position. Furthermore, the work that informal interpreters do seems to vary greatly (Tutt et al., 2011). So, the next logical step is to explore why and how it varies. Greater understanding of the

work will lead to it being more valued, as advocated by Tutt et al. (2013b), who call attention to the unfair use of workers' valuable linguistic skills, without formal recognition or recompense.

Understanding the informal interpreters' identities helps to understand their relation within the team as well as their individual performance of the work. Understanding the self-identity of the informal interpreters is a worthwhile endeavour for the implications on the future managing of this work practice. Understanding who the informal interpreters are is also in the interests of the bilingual workers who may be able to exercise their agency in deciding to take on this additional work or not, aware of the potential effects of this on their work trajectory and identity. As the position is largely invisible and informal the reason for doing the language work cannot be explained by financial rewards or prestige, for example, and so the rationale for why someone takes on this work requires further exploration. Oswald et al. (2019, p.4) raise the question of 'whether migrant workers given the task of translating actually consider this as part of their identity', and that question is addressed in this thesis.

As well as contributing to a better understanding of informal interpreters' identities and how they carry out the language work, this thesis builds on previous research to establish the environment in which informal interpreters work. It explains how different factors contribute to an individual becoming an informal interpreter, such as the linguistic make-up of a project and interpersonal variables. Various external factors that affect the scope of the work of informal interpreters are also detailed, such as ratios of different language speakers and sector differences.

Clearly, onsite communication is managed in various ways; at industry level through legislation, at project level through management strategies such as ratios of different language speakers and translating materials, and by the individuals engaged in it through their language work. This thesis will principally contribute towards understanding the individuals at the heart of interlingual communication onsite, focusing on the micro level, such as interactions and personal attitudes and histories, with some consideration of meso level factors such as their team and macro level factors such as migration and employment patterns.

1.2 Research questions

The purpose of this study is to investigate informal interpreters on construction sites and their linguistic practices. Two main research questions are used. These are informed by the research context and relevant literature, which is presented in chapters 2, 3 and 4:

1. Who are the informal interpreters and why do they perform this task?

2. What language work do informal interpreters do and how?

1.3 Scope

Geographically the scope of this research is extensive, as the practice of informal interpretation on sites occurs worldwide and the forty interview participants come from many different countries and have international experience. However, the observation and material data all come from London sites. The scope is limited to construction sites rather than the industry as a whole, as this working environment is distinct and arguably the communication here is more complex and more urgent than in other areas. This thesis intends to explore language practices on construction sites specifically. While there are many other stages and locations in a construction project where informal interpretation and translation work occurs, these are beyond the remit of this thesis. The sample size of the interviews was determined by having reached saturation, but the observation data was limited by time, especially constrained due to the coronavirus pandemic. The subjective researcher experience inherent to ethnographic research needs the use of the first person for clarity, given that the researcher's geographical location, languages, and network shaped the thesis. Specifically, only large sites were visited, in London, and workers who did not speak English were largely inaccessible because of the researcher's language capabilities and sometimes because of research access, this is discussed further in the methodology chapter.

1.4 Theoretical framework overview

The key theoretical concepts used in this thesis are outlined here briefly and explored in more depth in chapter 5. Whilst the questions of who the informal interpreters are, their reasons for doing language work, and how they do it inevitably overlap, they are addressed in separate

chapters in the thesis for clarity. Therefore, the language and identity approach is largely included in chapter eight, to answer question one (who are the informal interpreters and why do they perform this task?), while the translanguaging lens is largely employed in chapter nine, to answer question two (what language work do the informal interpreters do and how?).

The concepts identity, investment and imagined community are used to answer the question of who these informal interpreters are and why they carry out language work (Q1). These terms are used by Bonny Norton (Also known as Bonny Peirce) in her work on language learning. The individual's identity is conceived as multiple and fluid (Norton and Toohey, 2011). Norton argues that 'it is through language that a person negotiates a sense of self… it is through language that a person gains access to - or is denied access to- powerful social networks'(Peirce, 1995, p.13). It is also pertinent to this thesis that identities are believed to be adjusted through the experience of migration, and particularly that 'language practices are very much implicated in these identification processes' (Barkhuizen, 2013 , p.78). Related to identity, the term imagined communities, coined by Benedict Anderson in 1983, is used. Use of the term follows that as applied by Norton (2001), Kanno (2003) and Pavlenko (2007), to refer to communities that language learners hope or anticipate becoming members of. They argue that learners deem that these communities can offer them better opportunities and increased economic or social mobility (Group, 2016, p.32). While the participants in this research are language users and not language learners in a formal sense, for some there is also a strong link between their migration experience, language use and learning, and their imagined futures. Some migrant workers may invest in their language skills and bilingual identity, through learning and/or using the languages. The investment and imagined communities of informal interpreters are factors which likely affect both their personal identities as well as how they facilitate communication.

Concurrently, the theoretical lens of translanguaging is used to understand the language practices of migrant workers on construction sites (Q2). A definition of translanguaging is provided by Baynham and Lee (2019) as follows:

> Translanguaging is the creative selection and combination of communication modes (verbal, visual, gestural, and embodied) available in the speaker's repertoire. Translanguaging practices are locally occasioned, thus influenced and shaped by context but also by the affordances of the particular communication modes or

> combinations thereof in context. Translanguaging practices are typically language from below and are liable to be seen as infringing purist monolingual or regulated bilingual language ideologies and hence can be understood as speaking back, explicitly or implicitly, to these ideologies. (Baynham and Lee, 2019, pps. 4-5)

Conceptualizing workers' language practices as including translanguaging highlights how workers use multiple modes and languages flexibly to make meaning, and that instances of interpretation occur within a more complex and diverse interactional environment. The linguistic lens used in this thesis makes it possible to understand the communication practices that have been identified, but not fully comprehended, in previous research (Including Oswald et al., 2015, Tutt et al., 2012).

1.5 Thesis structure

The structure of the thesis is as follows: chapters two, three and four review areas of the literature relevant to understanding the work of informal interpreters, situating this study. Specifically, chapter two provides the context for this research by outlining the CI in which these informal interpreters work. It focuses on factors specific to migrant workers' employment (2.1) and safety (2.2) and other implications of language and culture for construction workers (2.3). In 2.4 the focus is on construction management issues such as co-operation, trust and productivity and how the informal interpreter may be involved in these. In the final section of chapter two, 2.5, it is considered how migrant construction workers can be conceptualised as vulnerable workers with language as a key contributing factor, highlighting the importance of the informal interpreters' work. Chapter three focuses on the topic of interlingual communication on construction sites. The strategies used to facilitate and manage this communication are explained and evaluated through reference to previous literature about onsite communication. These strategies are multimodal and often plurilingual, including for example signs (3.1), phones (3.4), gestures (3.4), written translations (3.3), language classes (3.2) and the provision of safety training in different languages (3.5). Having reviewed various ways communication onsite is facilitated, the literature on informal interpreters in construction specifically is reviewed in 3.6. In chapter four the practice of language interpretation is discussed, situating the informal interpreters' work by comparing it with different areas of language work. The differences between an interpreter and a mediator and how this affects interaction are explored, as well as the potential differences between the work of a professional

and an informal interpreter. Then in chapter five the theoretical framework used to interpret the data in this thesis is explained. The context and need for the research having been established, chapter six describes the methods employed to carry out the research. This includes a rationale for using ethnographic methods (6.1), an explanation of the process of gaining access (6.2) and collecting data (6.3), an outline of the data analysis (6.7), a reflection on the difficulties encountered (6.4), on my- self as a researcher (6.5) and on ethics (6.6). Chapter seven covers findings concerning the informal interpreters' work environment, the discussion of these findings provide the context for better understanding the next two data chapters and is descriptive. Chapter eight explores informal interpreters' identities, to answer question one, using constructs from the identity and language approach of Norton. Three participants' stories are presented to explore their identities and how this relates to their language work (8.1). The interrelation between language skills and promotion is then discussed with reference to the rest of the data set (8.2), followed by an examination of attitudes towards the language work (8.3). These are themes that emerged from the data. In chapter nine the language work that the informal interpreters do is examined through the translanguaging lens, answering question two. This has been organised into subsections: firstly, identifying their main language tasks (9.1), reporting on flexible language use (9.2), visual communication (9.3), gesture (9.4), technology (9.5), translation (9.6) and work that is beyond language (9.7). Then the work of professional interpreters in construction is reviewed for comparison (9.8). Finally, in chapter ten, 'conclusions', the findings of this thesis are summarised (10.1), the limitations (10.3) and implications of the thesis are discussed (10.2), and recommendations for practice and for further research are proposed (10.3).

2 Migrant workers in the construction sector

This chapter will establish the context in which informal interpreters interpret on construction sites. By discussing the employment context for migrant construction workers, co-operation and productivity, health and safety (H&S) in construction, and factors that contribute to the potential for these workers to be vulnerable, the importance of the informal interpreters' work becomes clear. The vulnerability of migrant workers in particular increases due to several factors; possibly including communication difficulties, H&S differences, their marginalised position as cultural outsiders, their rights and access to them, and factors specific to the nature of the CI. It is necessary to understand the specificities of the employment context of migrant workers in the CI to understand both what interpretation is required and how this context may determine who informally interprets and how.

It should be noted that within the literature the term 'migrant worker' has been defined in differing ways, sometimes to mean someone born outside of the UK and not holding a UK passport (CITB., 2018b), or someone who has come to the UK in the last five years (HSE., 2017). What is more, Meardi et al. (2012) suggest that recent movement of labour in the EU does not correspond to previous definitions of migrant which required permanence abroad of at least a year. Consequently, the use of the term throughout this thesis is loose, with the focus being on international migrants whose first language(s) is not the local one. To illustrate the above point, 13 of the 29 interpreter participants for this research (both professional and informal) had experience in construction outside of the European context and many of them had worked in more than one country that was not their country of origin, whilst others had only worked in the UK and not in their country of origin or any other country. For some of these migrants the term 'transnational' may be appropriate, as this describes a conceptualisation of migration that does not involve a 'to' and 'from' movement but rather emphasizes 'the simultaneous economic, social, and political connections that bind immigrants to two or more nation-states' (Dagenais, 2003, p.273). Therefore, the migration patterns of the participants cannot be practically generalised.

There are multiple reasons why migrant workers may be employed. First of all, migrant workers fill a skills gap in the UK CI. A study by the CITB in 2018 concluded that reasons for using non-UK workers included the added flexibility and speed of response to skills needed, fitting into the existing construction labour model (CITB, 2018). What is more, Chan et al.

state that migrant workers can stimulate positive change if managed effectively (Chan, 2010, p.249). Furthermore, migrant workers might be preferred because they typically have a broader range of skills (Chan, 2008). Another reason sometimes stated for hiring migrant workers is that they are widely regarded as having a strong work ethic (CITB., 2018b). Nonetheless, almost a third of the sample in the CITB report mentioned that language or cultural barriers can prove difficult.

2.1 The employment context

This section will provide the context for understanding the relevance of this thesis by giving an overview of the current situation of employment regulation in the UK CI. While the study is international, firstly it is not possible to do this for every country that the participants have worked in, secondly the UK is the country that most participants either are from or have experience working in and the only country where fieldwork was carried out, and thirdly, some of the issues discussed here are relevant to the construction context generally regardless of the specific country. Internationally relevant issues include the temporary nature of project teams, the use of migrant workers, and the high level of H&S risk relative to other industries.

The nature of employment in the construction sector is complex and unique, and there are factors that affect migrant workers specifically. Unfortunately, these differences are likely to contribute to more precarious employment for migrant workers. This analysis builds upon the suggestions for further work in the report 'One Death is Too Many' (Donaghy, 2009), notably the need for more in-depth studies of groups of potentially vulnerable workers in the CI and ways out of vulnerability. As well as addressing the proposal that 'the concept of 'vulnerability' requires more robust understanding- whether there are supporting pathways out of vulnerability or circumstances in the industry which act as traps in which vulnerability is increased' (Donaghy, 2009, p.71). This background information and literature review shows how migrant workers can potentially be vulnerable and argues that interpretation and translation practices are one important way in which this can be addressed.

It is necessary to briefly review the industry's employment structure to comprehend the situation of migrant workers in the CI. In comparison with other industries, there are relatively high numbers of genuinely self-employed workers (Harvey and Behling, 2008). According to the Office for National Statistics 41% of UK construction workers were self-employed between

2014 and 2016. The Construction Industry Scheme (CIS) is a taxation system unique to the industry, creating a situation only found in the UK. While the 'bogus self-employed' are legally employed by this scheme, the term has come to be used because the profile of this type of worker fits that of an employee rather than a self-employed individual. For example, these workers have tax deducted at source yet they lose certain employment rights such as holiday or sick pay, and do not have autonomy to set their wage or working hours (Harvey and Behling, 2008, Seely, 2016). Such workers are not covered by working time directives and consequently work long hours (Harvey and Behling, 2008), which could be linked to increased accident rates. According to Harvey and Behling, this taxation system presents significant incentives for tax evasion because workers are hired in a way that does not require employers to pay National Insurance (Seely, 2018, Behling and Harvey, 2015). Furthermore, the consequences for both vulnerability of the workers and financial costs to the state are long-lasting, as many workers from this industry, which is physically demanding, require services such as health care, Pensioner Tax Credits and Housing Benefits (Behling and Harvey, 2015).

The fragmented nature of employment in the CI, which is project based and highly subcontracted, is relevant to onsite communication because teams may not work together for long enough to establish their own most effective way of communicating at work or to develop the relations required for this. In this system, the company employing the labour is a labour only subcontractor (Harvey and Behling, 2008). As supply chains become longer, enforcement of rights becomes more complex and responsibilities more ambiguous (TUC, 2007, McMeeken, 2015). Strauss (2012) expresses concern that unfree labour is on the rise in UK because of such flexible labour markets. Migrant workers in the UK have the same rights as UK nationals, but the high proportion of subcontracting and self-employment in the UK CI means that construction workers have few rights and migrant workers particularly have difficulty resisting their situation because their job is at stake and they lack the linguistic and cultural competence to do so (TUC, 2007). Kevin Hyndland (CIOB, 2018) expresses that relying on labour agencies can create the conditions under which forced labour occurs, this fact has been recognized in Norway where there is a limit on the layers within construction supply chains for companies undertaking public contracts. The prevalence of bogus self-employment also has the effect that there is less investment in training and fewer opportunities for apprenticeships (Lamm, 2017, Behling and Harvey, 2015). This leads to a vicious circle of worsening the skills gap, causing an increased demand for migrant labour, increasing false self-employment, and therefore further reducing training opportunities (Behling and Harvey, 2015).

Moreover, research has revealed a higher rate of injuries and fatalities on sites using bogus self-employment. Finally, it is important to acknowledge that migrant workers are not responsible for falsely declaring themselves to be self-employed (Harvey and Behling, 2008). While employment issues are not researched directly in this thesis, it is relevant to consider the ways in which the employment context affects language practices and vice versa, this is investigated in chapter 7. Although the more extreme issues raised above have not been researched, the position of informal language workers in such practices may be significant.

The issues discussed in this section should be seen in the context of globalization. While migration is not a new phenomenon it is affected by economic and political changes, and the type of migration implicated in the EU is different to past trends because of its more temporary nature (Black, 2010). This phenomenon is discussed in an article by Meardi et al. who explain that foreign labour may act as a buffer for employment uncertainty due to its mobility, and it does so without causing political problems, precisely because of the workers' outsider status (Meardi et al., 2012). In the current system, the fact that employers are not responsible for redundancy pay makes workers easily disposable (Behling and Harvey, 2015). Migrant workers are also more susceptible to being negatively impacted by economic downturns. An illustration of this can be found in Buckley's study which explores the impacts of an economic crisis on migrant construction workers from India, these migrant workers were the first to lose their jobs in Dubai in 2009 (Buckley, 2012). This same trend of migrant workers being the worst affected by economic downturns was identified by Thiel in the UK, he found that 'this non-Irish labour was the first to be dismissed when work slowed' (Thiel, 2012, p.24).

The legal status of the individual is also a significant factor as to whether they are in a vulnerable situation. Although illegal immigration is regulated by The Immigration Act 1971, The Immigration, Asylum and Nationality Act 2006, and The Modern Slavery Act 2015, difficulties of enforcement, the occurrence of falsified documentation, and some exploitative employers combine to mean that there are still people working on UK construction sites illegally; and as the Home Office affirmed, 'illegal working often results in abusive and exploitative behavior' (CITB., 2018b). Indeed, Blythe from the CIOB is quoted as saying "if someone is working here illegally, they are probably subject to trafficking or some degree of exploitation." (McMeeken, 2015). Whilst in the UK being an illegal immigrant means that workers are open to exploitation because of their lack of security by not being legally in the

system, in some cases inequality is built into the system. For example, in Singapore there is no minimum wage and rates of pay differ by nationality (Hamid and Tutt, 2019).

In the opinion of the CIOB (2018), part of the problem of modern slavery in the UK CI is that the UK has not fully implemented the EU posting of Workers and Enforcement Directive which is meant to guarantee fair competition and workers' rights throughout the EU. It is possible that Brexit is exacerbating this problem by being able to withdraw further from such commitments. The current political climate in the UK could signify dramatic changes in migration patterns. Research carried out by the CITB revealed that even before Brexit was complete, in 2018, employers had been impacted. Pertinent to this study, two-fifths of agencies were expecting staff shortages in the sector, and half of London firms reported that they are reliant on non-UK labour. Employers are concerned about retaining their non-UK workforce, and agencies are concerned about future access to non-UK workers. With Brexit, Eastern Europeans lose their right to work and consequently may be more vulnerable to exploitation (CIOB, 2018). The free movement of people between the EU countries and the UK ended on the 31st of December 2020, so now employers must register as sponsors to recruit from abroad. What is more, the individual being employed must meet job, salary and language requirements; 'unskilled' workers such as labourers would not meet said requirements. As these rules do not apply to those EU nationals already registered as living in the UK before the transition, then it will take some time to see the impact of Brexit on migration and the UK CI. Another effect of Brexit is an increase in racial abuse on construction sites, which is relevant because bilingual workers may be able to help improve relations, as will be discussed in the findings (CIOB, 2018). What is more, the UK has risen from low to medium risk as a trafficking destination (CIOB, 2018). Considering that 'in the European Union, construction ranks second only to the sex industry as the sector most prone to exploitation', this is an alarming finding (CIOB, 2018, p.8).

In summary, both legal and illegal workers can be exploited, and it is important to recognise that in some instances the exploiter is 'the intermediary who recruits workers… from other countries. Workers are under the control of their exploiter: trapped in debt, with little or no language skills…' (p.17). Whilst this study does not investigate these extreme cases, it is necessary to be aware of the importance of language in such issues. For example, the 'intermediary' mentioned above who recruits workers is likely to be bilingual because they negotiate with contacts in two different countries, and many of the workers they exploit will not be able to understand the language of the destination country. Moreover, if there is a worker

who acts as an informal interpreter in these exploitative scenarios then their language work will be of vital importance for the safety and wellbeing of the workers.

2.2 The safety of migrant workers in the UK CI

Previous literature has linked migrant workers' safety with languages. Therefore, the issue of safety in the CI and particularly safety communication will be discussed in this section. 'Health' and 'Safety' are two terms that are frequently amalgamated but defining the terms separately is useful when discussing risk and responsibility. The Cambridge English dictionary states that 'health' is 'the condition of the body and the degree to which it is free from illness, or the state of being well.' 'Safety' is defined as 'a state in which or a place where you are safe and not in danger or at risk'. The thesis investigates onsite interpreted communication generally, much of this communication is of safety information. While health/wellbeing is also likely relevant because of the effect of communication on relations, stress and isolation this relevance is more intangible.

Construction work is dangerous. In the UK the fatal injury rate in the CI is around four times the all industry rate and workplace injuries are about 50% above the all industry rate (Statistics, 2018). Because of the relatively high accident rates in the CI, there are many regulations that aim to standardize the control of risks onsite. The primary legislation is the Health and Safety at Work etc. Act 1974, extended by the Management of Health and Safety at Work Regulations 1999 (Cameron, 2011). Such legislation established the requirements for risk assessments and PPE, for example (Sherratt, 2017). The 1992 EEC Directive on safety signs at work sets the requirements for the provision of signage and the Management of Health and Safety at Work regulations 1999 promote the ratio of 1 to 4, with one English speaker to act as an interpreter for every four non-English speakers to ensure communication of H&S information (Tutt et al., 2011). According to McKay et al. (2006, p.70), there also needs to be a form of regulation to ensure the effectiveness of those carrying out this language work. For example, Tutt et al. suggest that 'standard English language tests such as IELTS and TOEFL could offer an indication of the translational ability of such workers' (Tutt et al., 2011, p.19). While some form of regulation would certainly afford a degree of assurance, a test of translational ability itself rather than simply language level would be more useful, especially in contexts requiring the interpretation of documents and videos, as discussed in 4.2.

Despite the plethora of regulations there are still many accidents on UK sites. Consequently, there have been attempts to explain why regulations are not enough. Sherratt highlights that safety management is in fact the attempt to manage unsafety and that the changed use of the term has arguably contributed to negative attitudes concerning safety (Sherratt, 2016). She further argues that safety has almost become synonymous with red tape and is seen negatively rather than positively (Sherratt, 2016). This is just one of the aspects that may contribute to the concept as well as the reality of safety on UK construction sites. In some cases, it may be that non-compliance with legislation means that it is ineffective in regulating safety (TUC, 2007). Indeed, after a yearlong ethnographic study of construction sites in London, Thiel (2012, p.144) reported that 'health and safety regulation was far from all-encompassing out on the site. It could be simply neutralized in the face of other goals- such as ignoring it when engaged in price work…and it was always negotiated through the screen of workplace culture rather than being concretely set.'

Attitudes towards safety have been cited as a contributing factor to the high incidence of injuries in the sector. For example, Pink et al. (2010, p.658) note that there is a stigma attached to the open discussion of risks and hazards, if in addition to the stigma it is difficult for workers to join discussions in the official project language then it is even less likely that migrant workers engage in H&S discussions. Furthermore, participants in O'Byrne's study suggest that safety training is not always taken seriously (O'Byrne, 2013). A related issue is the existence of a macho culture within the workforce (Watts, 2007, Sherratt, 2016), which may have a negative impact on attitudes to risk taking, safety training, and reporting incidents. As Sherratt (2016) reports, the World Health Organization (WHO) recognise a direct link between masculinity and risk taking. This macho culture is partly due to the sector being dominated by a male workforce, and the nature of the work as physical and dangerous adds to this view of the sector as a male workplace. However, it is also possible that the root of this macho risk-taking culture is in the individuals who are drawn to work in the sector, and not only as a collective identity. Indeed, Phua (2017) found that the subsectors of construction management and architecture are attractive to individuals with a physical risk-taking propensity. Whether or not this tendency towards risk taking also applies to other workers, it is possible that this contributes to the site safety difficulties by overlooking hazards and risky behaviour. It is plausible that such macho

attitudes are compounded by language barriers, as workers may refuse to speak up in a language they do not feel that they are proficient in.

Such attitudes, among other factors, contribute to a site 'safety culture' or 'culture of safety' (Gherardi, 2002, Sherratt, 2016). While safety culture is a somewhat 'elusive and intangible concept' (Sherratt, 2014, p.229), Sherratt identifies several factors which she suggests are characteristic of a positive safety culture, these include 'top down management commitment, worker engagement with formal and informal communications on safety matters, safety training, encouragement of safe behaviours, and a 'no-blame culture' to encouraging accident and near miss reporting' (p.231).

How a culture of safety is created is contested. Gherardi and Nicolini (2002) suggest that the usual format of safety training in a classroom-like setting, with prescriptive teaching of regulations and what is dangerous, is largely ineffective. They argue that this is because learners are social beings that learn from interacting in the specific setting, 'practice is not learnt with the hands but through observation combined with physical and linguistic action' (p.207). Gherardi highlights the need to understand that language is not simply used to produce or carry meaning, but some utterances also carry pathos, and some are performative. For example, 'Be careful!' 'is a performative utterance: saying the words 'be careful' produces a change in the emotional and cognitive state of those present.' (p.211). Gherardi discusses linguistics in relation to learning, however it is also important to consider that it is essential that these elements are maintained when the message is transferred to another language. Given this observation, the findings of Oswald et al. (2019) that show a complete lack of communication through failed acknowledgements between a local worker and migrant workers could reveal an inability to share knowledge and understandings, as they suggest. In line with the view of Gherardi and Nicolini, Dainty et al. (2007) suggest that participation in safety management is important for creating a sense of responsibility. In the study they explore the significance of experience-based knowledge for understanding the concepts of H&S. Through an ethnographic exploration of how migrant workers on UK construction sites learn and communicate H&S, Tutt et al. (2013b) concluded that tacit knowledge is developed through multimodal and multilingual interactions that include the use of gesture and objects. The authors stress that 'local tacit and normally unspoken OHS…knowledge and practices…remain unaccounted for in formal OHS policy and practice' (p.523). Similarly, Williams et al. (2010) studied attitudes, Personal Protective Equipment (PPE) use, work practices and work-related

injuries prior to and after a Spanish participatory safety training course. They found that, to a small degree, a participatory course caused the initiatives to be sustained; workers said that they tried to share what they learnt with their co-workers, emphasizing a more collaborative environment after training. The researchers concluded that the impact on safety was not as great as hypothesized because the work practices are under the control of the employers rather than the employees. Considering the discussion above, perhaps another factor was that the one-day course was not long enough to alter embedded practices. Subsequently, apprenticeships as well as classroom-based learning should be promoted, yet CITB plans will decrease the provision of training through apprenticeships (CITB., 2018a).

In the research carried out by Oswald et al. in 2019 it was discovered that because bilingual forepersons are so important for the organisation, they would receive warnings and not dismissals for negligence, wilful violations and destructive acts. This differential treatment goes against what Dekker and Breakey (2016) term a "just culture" comprised of trust, learning and accountability, which is positive for organisational safety. This is one of many reasons to be discussed for why the language work needs to be formally recognised and planned for.

In summary, the aforementioned studies challenge the status quo of H&S standardization, finding it limiting. For example, training on the job, as opposed to in a classroom, is considered to result in shared understandings of safety and the dissemination of practices (Sherratt, 2016). However, the fluidity of workers in construction is an obstacle to creating and learning safe working practices in a natural and not prescriptive way. What is more, the existence of workplace ghettos (Dainty et al., 2007, Trajkovski and Loosemore, 2006) further fragments working groups and inhibits shared practices. Nevertheless, such considerations of how a positive safety culture is created need to be borne in mind while investigating interlingual communication onsite, as the work carried out by informal interpreters particularly is likely intertwined with engagement with H&S, not only with the translation/interpretation of H&S information. Extending this discussion, the following section focuses on the interplay between language and culture on the one hand, and risk and vulnerability on the other. This discussion shows ways the informal interpreter function could be used.

2.3 Language and culture in risk and vulnerability

As discussed, statistics from around the globe corroborate that NESB workers are at higher risk of accidents than their English speaking counterparts in English speaking countries such as the UK, US, Singapore and Australia (Loosemore and Lee, 2002, Menzel and Shrestha, 2012, Sherratt, 2016, Trajkovski and Loosemore, 2006, Hallowell and Yugar-Arias, 2016, Roelofs et al., 2011). For example, according to Oswald et al. (2015), in the UK 'approximately 8% of the manual labour in the construction industry are non-UK workers (CCA, 2009), yet they account for 17% of total fatalities'. Together these studies contest the suggestion made in the Donaghy report (2009, p.36) that an increase in the number of migrant deaths could result from 'a greater number of migrant workers being at work in construction that year', instead giving strength to what Donaghy refers to as the hypothesised causal link between the number of migrant deaths and vulnerability because of exploitation, because migrant workers are accustomed to tolerating lower standards of H&S or because a language barrier prevented effective communication of safety.

Furthermore, the hypothesis of Guldenmund et al. (2013), stemming from a study in Denmark, Britain and the Netherlands, is that migrants may be involved in more accidents because they are exposed to more risks. They indicate that publications on accidents involving migrant workers do not include exposure data. Discussing possible reasons for this increased exposure, with the UK and Spain as case studies, Meardi et al. (2012) suggest that these workers are often in the most dangerous jobs within the most dangerous sectors, an opinion supported by Oswald et al. (2018) in their UK study . This correlation is supported by a finding from Hallowell et al.'s study (2016), that Hispanic workers are more willing to accept dangerous work for fear of losing their jobs, especially because of the need to support extended family. Similarly, Wasilkiewicz et al. (2016, p.137) report that superiors' expectations of migrant workers played a role for safety. They report that a Polish interviewee experienced higher expectations towards him to perform risk-related work because he was a migrant worker.

Oswald et al. (2018) also noted levels of training, supervision and employment terms as risk factors for migrant construction workers. Likewise, the aforementioned HSE report entitled 'Migrant workers in England and Wales', although it covers a range of sectors, provides a useful foundation for understanding the increased risk in the employment situation of migrant construction workers. The report highlighted that migrants' limited knowledge of the UK H&S

system, and their different experiences of H&S management are factors in the increased level of risk they face. Similarly, Hallowell et al. (2016) found that because of their experiences in their home countries, Hispanic workers sometimes experience an internal pressure to complete work quickly and neglect safety. The worker's reason for migrating is also a contributing factor, considering for instance that the aim of earning as much money as possible in a short period of time can create unsafe conditions.

Numerous studies have been done in Europe and the US that have reached similar conclusions regarding cultural factors that negatively affect the safety of migrant workers. For instance, when researching Latino construction workers in Las Vegas, Menzel and Shrestha (2012, p.731) found that some 'participants attributed workplace accidents to worker fear of asking questions about safety'. Indeed, this builds on the work of Jaselskis et al. (2008), who discuss the importance of cultural training for construction site performance; drawing from Hofstede's (1984) cultural dimensions theory, they claim that workers from a country with a high power distance culture would not dare to speak to a boss. Hofstede's dimensions of national culture have been heavily critiqued (McSweeney, 2002) and while 'his assertion of the relative immutability of national culture is surely wrong'(Thompson and Phua, 2005 , p.66), it is nevertheless important to consider whether migrant workers are accustomed to local styles of working and interacting or not. This is a factor which is not generalizable by nationality, but such socialised working practices may vary and become a further communication barrier that could affect safety. For instance, Wasilkiewicz et al. (2016) report that Polish workers rarely say no to managers. Similarly, in a study by Roelofs et al. (2011) in the US, Hispanic workers reported supervisor pressure and intimidation regarding raising safety concerns. Likewise, Hallowell and Yugar-Arias (2016) concluded that Hispanic workers under-report accidents due to fear of losing their jobs. The in-depth research method of photovoice arguably allowed Hallowell at al. to understand workers' reasons for their actions and attitudes, by giving voice to the participants. The main findings of their research were that Hispanic workers consider that they are more likely to finish a job quickly, more inclined to accept dangerous work, less likely to give feedback, more likely to be distracted at work because of family difficulties, and less likely to ask for help in matters of safety. Their research approach and data contrasts with Jaselski et al.'s study above which attributed workers' reluctance to speak with their superiors simply to a cultural trait, and whose data came from a survey on contractor attitudes and needs. The use of survey methods limited the potential for other perspectives to be found because of the use of questions that

are already formulated by the researcher(s). Similarly, Loosemore and Lee reported from their study in Australia that NESB workers were reluctant to speak to English speaking managers, which caused problems to be ignored or addressed without consultation, resulting in the need to repeat instructions and supervise more closely (Loosemore and Lee, 2002). Furthermore, Hallowell et al.'s (2016, p.199) interviews with Hispanic workers in Colorado also reveal that 'Hispanic workers perceive that they are…more likely to be distracted by family issues while at work because of their strong and broad family ties… more likely to ignore criticism because of machismo;… less likely to ask for safety assistance when it is needed because of pride.' However, in interviews by Dainty et al. (2007), none of the workers said that they felt at greater risk than their UK co-workers. This conflicting data could demonstrate the complexity of cultural factors that will apply in some cases and not others, or that risks may not be perceived, or perhaps the different levels of risk for migrant workers varied over time. It also shows that more research is needed about migrant workers and site safety before it will be possible to lessen the difficulties associated with intercultural and interlingual working.

Whilst most of the aforementioned studies report on problems, the daily workers still succeed in working together, often safely, despite not sharing a language. Therefore, it is necessary to report on the ways in which these problems are dealt with in order to be able to build on these practices.

2.4 Communication management: teamwork, trust, co-operation, productivity and responsibility

Issues such as co-operation, trust, productivity, teamwork and responsibility are widely discussed in the construction literature because the CI is a contentious sector (Phua, 2004), and it is argued here that communication on multilingual sites is pertinent in each of these debates despite the lack of research focusing on the interrelations between multilingual communication and collaboration/trust/productivity/responsibility/teamwork. Therefore, these issues are briefly reviewed here, making it possible for the data to make an original contribution to these discussions.

Loganathan and Forsythe (2020) evaluated the influence of teamwork on the productivity of trade crew. In their review of relevant literature, they note that labour constitutes 30-50% of

project costs and yet is often only used at 40-60% of its potential efficiency (p.1040). Construction labour productivity is consequently a key area of interest. However, Loganathan and Forsythe emphasize that research to date has largely focused on measuring individual worker output and has not explored the 'complexities of how to get the best out of the holistic crew as an interactive unit, which is how most labour actually occurs onsite' (p.1040). Nevertheless, Loganathan and Forsythe state that communication is a major contributing factor to the success or failure of teamwork, noting particularly 'language differences among personnel' (p.1053). Consequently, understanding better the informal language work that occurs onsite contributes also to understanding better the complexities of teamwork, which impacts productivity. Teamwork and trust (discussed below) are inseparable, and teambuilding activities are often used in an attempt to foment these (Bresnen and Marshall, 2000a). Indeed, Bresnen and Marshall (2000a) found evidence that such activities promoted feelings of group identity and cohesion, especially in the early stages of a construction project. However, they note that unfortunately teambuilding 'rarely involved those at lower hierarchical levels', which is where the informal language practices discussed in this thesis occur (p.827). Yet various characteristics of teamwork, including open communication, shared goals and co-operation are argued to be key to project success (Phua and Rowlinson, 2004).

Loganathan and Forsythe (2020) underline the importance of trust in teamwork and consequently also for productivity. Among the consequences they cite of not achieving mutual trust on a site are disagreements and missed deadlines. It is of significance to this discussion that Santoso (2009) argues that when the foreman and workers are of different nationalities trust declines. Much research on trust in the CI has focused on trust at project level (Lau and Rowlinson, 2009, Bresnen and Marshall, 2000a, Bresnen and Marshall, 2000b, Doloi, 2009), which has formed part of the discussion on partnering. Partnering can be described as involving 'a commitment by organizations to cooperate to achieve common business objectives' (Bresnen and Marshall, 2000a, p.820), the concept encompasses a wide range of behaviours, attitudes, values, practices, tools and techniques (Bresnen and Marshall, 2000b). Bresnen and Marshall (2000a) conclude from the case studies in their research that 'there were significant benefits to be gained from the long term, informal development of trust' (p.822). As specified by Lau and Rowlinson (2009), the benefits of partnering can include reduced disputes, a reduction in the value of claims, savings of cost and time, improved quality, and good working relationships (p.542). They conclude that 'partnering projects tend to display more of inter-firm trust than interpersonal trust whereas a non-partnering project tends to display a higher

interpersonal trust' (p.551), it would be useful in future research to determine how language differences affect these relationships and what function translation and interpretation plays in partnering. Indeed, Phua (2013) emphasizes that the construct 'trust' is often used to explain project outcomes and that in fact the whole partnering agenda seems to based on the belief that greater project performance can be achieved through better levels of mutual trust, and consequently co-operation, between different project organizations and project team members. Nonetheless, in this discussion it should be borne in mind that the 'evidence in favour of partnering is not always convincing'(Bresnen and Marshall, 2000b, p.231).

While language translation issues will be relevant to the discussion on trust in partnering at organisational level, given the international nature of many construction projects, it is trust at an individual level that is more relevant to this research given the focus on communication onsite specifically. According to Lau and Rowlinson (2009) 'trust is regarded as a quality of relationship that can have an impact on project performance' (p.539) and trust is vital for a good interpersonal relationship. Interestingly, Lau and Rowlinson (2009) found that face-to-face communication was an important factor in interpersonal trust. Consequently, using a bilingual worker to relay messages but not to interpret directly might have a negative effect on trust in the project team. Lau and Rowlinson argue that effective communication supports good relationships because uncertainty is minimized through communication, stating that the outcome of this is co-operative behaviour when trust is present, whereas the alternative is distrust and conflict. Significantly, Lau and Rowlinson (2009) highlight that middle managers deal with more problems affecting working relationships than others given that one of their main functions is communication and co-ordination. It is consequently necessary for middle managers to have interpersonal trust with both the working team and the more senior managers. These relationships are further complicated when speakers of different languages are involved, meaning that communication and its possible effect on relations must be considered as a priority when forming teams.

In their case studies of partnerships in the CI, Bresnen and Marshall (2000a) found that some participants had reservations about 'the lack of clear demarcations of roles, responsibilities and authority' (p.827). Given the informal nature of the language function explored in this thesis, it is likely that there is even less clarity on international partnered projects and the effects of this need to be understood. What is more, Bresnen and Marshall's respondents believed that it was important to spread collaboration down the supply chain and expressed concern that

subcontractors tended to revert to adversarial attitudes or behaviour. Consequently, while it appears that the partnering concept has promise for allowing positive multilingual communication practices to develop because of increased stability of labour, relationships and opportunities for planning because 'the greater stability in workload associated with long-term partnering helps companies deploy their resources more effectively and makes them more likely to invest in training and research' (Bresnen and Marshall, 2000b, p.231), in reality, partnering hasn't usually extended to this level.

Another relevant discussion in the construction management field therefore revolves around co-operation. Phua and Rowlinson (2004) claim that 'a cooperative approach between construction organizations would bring about trust and commitment induced efficiency, and better resource allocation and utilization which leads to increased industry performance'(p.45). Furthermore, in reference to the discussion on co-operation, Phua (2004) highlights that while the emphasis is on co-operation between organizations, this phenomenon only exists as a consequence of individual project member's interactions. Phua demonstrates how social identity theory can help explain co-operative behaviour, explaining that in SIT individual co-operative behaviour is dealt with from a socio-psychological perspective. She explains that the basic tenet of SIT is that identification with organizations and groups, and membership of these, are two of the primary psychological forces that motivate individual thoughts and behaviours (Phua, 2004). Further, in SIT it is argued that individuals see themselves and others in terms of group boundaries rather than individual ones, and one form of social identification is organizational identification. Phua argues that the temporal nature of project organizations may make it difficult to establish salient project organizational identities and finds that organizational identification is the key predictor of individual co-operative behaviour in the construction industry context. Again, language translation will be key to the development or not of such identities, as separation of workers into 'linguistic ghettos' (Trajkovski and Loosemore, 2006) will likely inhibit this further. Moreover, Doloi (2009) studied the importance of communication, trust and confidence and joint risk management in achieving project success and found that communication is the 'greatest influencing factor for relational partnering success' (p.1106). Furthermore, Doloi found that 'trust and confidence become higher as the perceived communication between partners becomes better and vice versa' (p.1108). What is more, Doloi emphasized that success required clear lines of communication at all levels and that companies need to establish clearly defined roles and responsibilities.

It is also pertinent to consider responsibility when investigating informal language work on construction sites, especially because this work is usually not included in formal contracts. Loosemore studied responsibility in relation to power and conflict in construction (Loosemore, 1999); Loosemore found that 'when a problem arises, power struggles can develop between differing interest groups who seek to off-load responsibility for it' (p.707). He argues that these power struggles sometimes develop because of a reluctance to accept responsibility, because of differing interpretations of contractual clauses, or due to unexpected events not being covered sufficiently in the contract. Loosemore concludes that 'a party's responsibility is determined by their power rather than the opposite, as the principles of risk allocation dictate' (p.707) this means that the informal nature of language work may cause conflicts because of unclear delegations of responsibility.

2.5 Language barriers

As Inghilleri (2016, p.88) argues, 'the absence of translation … speaks volumes about these particular migrants' place in the transnationalized world economy'. The lack of sensitivity or awareness of languages and the barriers that they create is telling of the commodification of migrant labour, where humans are viewed in terms of their economic value. Linguistic barriers not only create practical difficulties in the workplace but can extend to all spheres of life and contribute to shaping the position of the migrant worker as an outsider, in a situation of increased vulnerability (De Guchteneire, 2009). Inghilleri (2016) acknowledges that many NGOs, law enforcement and worker's rights organisations now recognise the significance of translation for their work combatting illegal and abusive practices. Nonetheless, she highlights that this is still far from the provision of competent translators and interpreters for all labour migrants and subsequently also from revealing abusive practices. This issue is relevant to construction because many of the relevant bodies and charities only work in English (e.g., Lighthouse Club, Mates in Mind and Band of Builders). This limits their potential to help but also their understanding of what issues workers face. Perhaps informal interpretation happens within these organisations too. The final section of this chapter will focus on language barriers onsite and the implications of these.

Linguistic and cultural differences are often intertwined, and discrimination and social exclusion can occur because of one or both of these differences. An illustration of this type of segregation is highlighted in Hamid and Tutt (2019) study of Tamil migrant construction

workers in Singapore, which explores exclusionary social practices in society and discrimination and precarity in the workplace. This illuminating study was able to provide a broad picture of the workers' experiences by using decolonised research methods. Although Tamil is recognised as one of four official languages in Singapore, English is dominant because it is the language of government, business, education etc. Hamid and Tutt examine how Tamil migrants are negatively stereotyped in the media, because the workers do not read these state newspapers that are in English 'Tamil migrants have been positioned and defined by a dominant discourse from the outside and the stereotyped views are not contested.'(Hamid and Tutt, 2019, p.525). These workers' home and social lives are also segregated physically from other Singaporean citizens. They are housed on the outskirts of the city in dormitories, similar to Dubai's residential camps for workers. In many countries migrant workers are housed on the peripheries of cities, preventing social integration and inhibiting language learning. Separation by ethnicity in the social sphere can come from both directions. That is to say that in this study Tamil workers chose to congregate in Little India together to share time with people from their home country and consume goods from there too, essentially in a micro culture. At the same time, the study was able to reveal other causes for this trend, namely the exclusion of these workers from other social spaces with physical or financial barriers. Migrant workers are also more likely to live in poor quality overcrowded housing and feel unable to act on this as their accommodation is tied to their employment (TUC, 2007). In Meardi et al. (2012) study, a Spanish unionist mentioned that there were even different canteens for North African and Latin American workers. While such ethnographic studies are situated in a specific time and place and cannot be generalised, the multiplicity of such snapshots across the globe points to an underlying norm in labour migration of language being part of segregation practices. This is highly relevant as it is possible that informal interpreters might play, or have the potential to play, a part in improving relationships, breaking down segregation.

One outcome of the HSE research in 2006 was the request for further guidance in relation to translation of H&S information and training and easier access to forms in different languages (McKay et al., 2006). It was also suggested that the HSE focus more on these issues during inspections, by checking if H&S information is provided in other languages and how it is translated. It was also recommended that it is checked how it is ensured that migrants understand the H&S training and their associated rights. Another recommendation was that the HSE produce a publication on H&S rights for migrant workers in different languages. Translated H&S leaflets can now be found on the HSE website.

The Trades Union Congress' 2007 Commission on Vulnerable Employment highlights that language is one of the key barriers to accessing knowledge on rights and trade unions, alongside socialisation in the host society (TUC, 2007). Although the findings of the TUC commission may be dated, it is one of the latest and the most comprehensive research reports on vulnerable employment. The unions assist with immigration status, legal representation, workplace problems and a host of other bureaucratic tasks. This help is particularly important for migrant workers who may be unfamiliar with the legal and administrative systems as well as the language (De Guchteneire, 2009) and could be used far more successfully if the knowledge and language barriers were addressed. However, in a series of blacklisting scandals many workers have been denied jobs for union activity or for raising H&S issues (CIOB, 2018). However, in the UK, there are some other bodies that also help to disseminate knowledge and empower workers. An example from the 2007 report is ACAS (the Advisory, Conciliation and Arbitration Service) which provides advice to vulnerable workers over the phone and includes a translation service (TUC, 2007). The union GMB designed a course aiming to combat the problems described above, which combined ESOL and employment rights (TUC, 2007). It would be helpful in future research to explore further the interpretation and translation practices in unions.

Language not only presents a barrier in the most obvious sense as communication, but this implied vulnerability can also be exploited. As one TU officer explained 'the main problem is language. Agencies start recruiting people from the new countries because they don't know anything about employment law and they can exploit them easily'(TUC, 2007). Unfortunately, this same phenomenon was recognised by the Equality and Human Rights Commission (TUC, 2007) who state that dishonest employers and agencies exploit the fact that workers cannot understand the English language, further, an employment rights specialist explained that employers prefer workers who don't speak the language because they won't cause problems by making demands**.** Inghilleri explores the relationship between translation and migration in her 2016 book of that name. A concerning practice that she highlights is the signing of contracts in English without understanding the contents (McKay et al., 2006, TUC, 2007, Inghilleri, 2016), a practice found on UK construction sites (Pink et al., 2010). The ILO stresses the importance that contracts be translated into a language that the migrant worker understands, and that the dense legalese should be put in more everyday language, particularly critical as there is a range of literacy skills amongst workers (Inghilleri, 2016). In a minority of cases in

the HSE 2006 study, the documents were translated, but the agencies doubted the accuracy of the translations which caused the workers to misunderstand the terms (McKay et al., 2006). Indeed, Inghilleri criticizes the ILO recommendations for not including the importance of guaranteeing the quality of translations.

Many of the issues discussed, such as higher risk exposure, vulnerable employment, a lack of cultural capital, and language barriers, all point to a vulnerability of migrant construction workers. This conceptualization emphasizes the importance of the work that informal interpreters do.

The ensuing chapter will review the literature to date on the topic of intercultural and interlingual communication on construction sites, providing the context for this research and demonstrating why more knowledge is needed in this area.

3 Interlingual communication on construction sites

This section will review the literature that reports on facilitating interlingual communication on construction sites. This review will establish what is already known about how plurilingual teams manage to work together on construction sites around the world. Reviewing the literature on these methods will determine that although these initiatives can improve interlingual communication onsite there is still always a need for informal interpretation practices. It will also reveal that while some studies have provided insight into these practices, a lot more research is required to understand them.

Using a variety of communication methods and pictorial content together seem most effective (Cameron, 2011, Hare, 2012). For example, in the United Arab Emirates, low-skilled labour from less-developed countries is recruited, and the challenge of having multiple languages is increased by having workers with low literacy levels. Loney et al. (2012) document different strategies used to improve H&S communication in this context. A range of multimedia resources were used in five languages, and extra pictorial content was developed for those with low literacy. The materials included posters, pamphlets and animated videos.

Some examples from the literature on interlingual communication on construction sites will now be discussed in more depth. While multiple communicative modes as well as operational strategies about communication may be used simultaneously, for clarity these have been separated into: visual communication (3.1), language classes (3.2), translations (3.3), technology (3.4), multimodal communication (3.4) and safety training in different languages (3.5).

3.1 Visual safety communication

The use of signs with pictograms to convey safety messages quickly and across linguistic barriers is widespread on construction sites. These are often visible to and decipherable by passers-by, in itself a demonstration of their utility. The use of signs is regulated by the EC Safety Sign Directive (92/58/EEC), which states that construction site signage must be comprised of a pictogram and written information (Tutt et al., 2011). Pictorial signs alone cannot bridge the communication gap; however, these signs are often more useful than translated written signs as some workers are not able to read (Bust et al., 2008, Roelofs et al.,

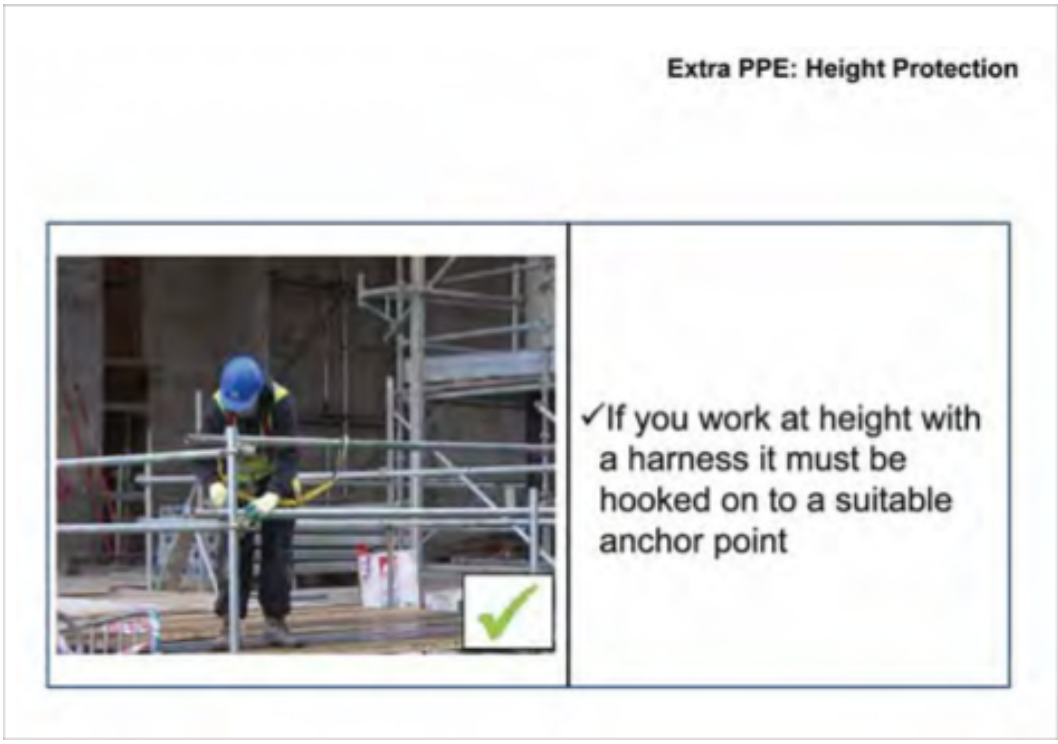
2011). Indeed, Roelofs et al. (2011) attribute some accidents to the fact that Hispanic workers are unable to read the translated signs. What is more, many of the migrant workers that can read in their own language do not in fact see translated signs; Tutt et al. (2011) state that although it is the policy of some major contractors that signs are translated when one language equals at least 5% of the workforce, in reality they found that this was not happening, Phua et al. (2010) likewise argue that the use of signs and other strategies for dealing with communication difficulties is sporadic. In fact, having all signs translated is not practical on sites where several languages would need to be translated, as this can cause sign saturation (Tutt et al., 2011).

Another important concern about visual information is raised by Bust et al. (2008) who note that the meaning of pictures is dependent on their context, and perhaps also who is interpreting the message. Therefore, studies have been carried out to assess to what extent such signage is useful. As an example, Hare et al. (2012) did a content analysis of worker induction materials, to find the critical H&S terms, they then developed pictorial images and tested them for comprehension. From the assessment of these visual materials, they concluded that cultural differences may distort comprehension and that images should be supplementary to other communication methods. Specifically, they stated that less experienced non-European workers for whom English was their third language identified images at a significantly lower rate than the other workers. Consequently, even though signs and other materials might not rely on language directly it is still necessary to consider the communication needs and skills of those involved, taking particular care with workers who have probably had less exposure to these images. If the function were formalised, site interpreters could be engaged with when considering communication onsite; not only to translate materials but perhaps to highlight or report back when a communicative means is not adequate.

Another example of research on visual communication in the industry is Cameron et al.'s (2011) study. They assessed whether H&S training that is delivered using pictorial aids leads to improved H&S behaviour among migrant workers in the CI. By using a control group for comparison, they were able to conclude that the training was in fact more effective. Nonetheless, they also concluded that the signage produced was inconsistent and lacked comprehension testing. The visual materials used included sketches, pictograms and photos. Drawing on the idea that visual images can evoke empathetic responses (e.g. MacDougall 1998

in Bust et al., 2008), using realistic images in safety training may have more impact on the workers as they could relate to them. It is vital that these signs or images used are tested to ensure that most people interpret the message as it was intended, without needing to understand the words. Sherratt (2016) indicates that signs often assume a shared understanding by what they do not say, citing the example of 'beyond this point the following PPE MUST be worn as a minimum' that assumes that the reader knows what PPE is and is able to identify what is required, when in fact they may be new to construction or come from sites where this is not the norm. Below is an example of a photo from Cameron et al.'s (2011) study, which can largely be understood without the writing. The visual may grab the attention of and enforce the message to those that can read English but does not speak for itself.

Image 1. Example of using visuals to explain site rules. (Cameron, 2011)



Additionally, using video may help in H&S training. For example, while the above picture may be more relatable than a pictogram, if you are unable to read the words the instruction may not be clear and may be more accessible as a video. Indeed, several such initiatives are in use. For example, NAPO, a European initiative, create animated H&S videos that aim to break down linguistic and cultural barriers. According to Ulubeyli et al. (2015), because cartoons aim to narrate a lot of information in a compressed form they are 'often considered to be a direct and easy method of communicating a message' (p.468). For example, the video

‘Best Signs Story’ helps the viewer identify signs depending on their colour and shape; the video format means that the importance of the signs in context is shown, although the music and style of the films perhaps downplay the importance of the messages (NAPO 2013). The NAPO films use very few words but when used they are usually displayed on the screen in many languages. Significantly, their website can also be navigated in an array of languages. The video ‘Napo in Safe on Site’ shows some common risks of working on construction sites. In the first few minutes some hazards and best practices of working at height are demonstrated, the message is clearer than a picture. Examples such as this one are useful for better understanding interlingual communication more generally but should also be considered in relation to the informal interpreters’ work. Interpreting a video is impossible and creating subtitles time-consuming, so it is best if the video itself is comprehensible. In contrast to films like the NAPO ones, the HSE video ‘It’s Your Right- Health and Safety Guidance for Migrant Workers’ is more impactful because of the realistic visuals. However, the voiceover is in English and could not be understood without a high level, despite being described as using ‘simple English’. For example, understanding the voiceover, such as ‘if you have any questions or concerns about wages that are below the national minimum wage, working hours or the way an agency or gangmaster has treated you, then you can contact the Pay and Work Rights help line…’, without subtitles is probably impossible. Similarly, the video describes how workers can contact the HSE and have the help of an interpreter, yet all of this is explained in English.

Oswald et al. (2019) note a conversation with a migrant worker who was asked to translate the video and responded, “if you pay me another salary”, the result was that non-English speakers were not shown the safety video. This causes some concerns, firstly if the video is important for English speakers, then it is also for non-English speakers. Secondly, asking a worker to translate a video displays a lack of appreciation for the skills required for an accurate translation. Regarding the issue of pay and migrant workers translating or interpreting, Fitzgerald shares an example in his report of a worker who was paid for the bricks he laid but also did unpaid language work to fulfil the company’s requirement of having one English speaker per gang, meaning that his hourly pay was lowered (Fitzgerald, 2006, p.16). Therefore, visual communication is an area which may extend the scope of work of informal interpreters, by having to translate materials, or reduce it if videos are already translated and they do not have to interpret them on the spot.

An upcoming and therefore under-researched possibility for visual communication is the use of virtual reality (VR). VR is a technology that generates a simulated environment for the user. VR systems can either use VR headsets, which consist of a head mounted small screen in front of the eyes, or the virtual environment can be created using multiple large screens. These systems produce realistic images, sounds and sensations to simulate being physically present in the space. The user can look around, move around and interact with objects in the artificial place. Sacks et al. (2013) investigated the viability and impact of running safety training using virtual construction sites. As they argue, such systems provide the opportunity to expose workers to hazardous situations and accidents during training. Overall, they concluded that induction using VR 'was more effective than safety training with traditional classroom training methods using slide presentations' (Sacks et al., 2013, p.1016). Specifically, over time training using VR was more effective than traditional training. Although not discussed explicitly in their research, such visual methods are particularly promising for communicating training to migrant workers who cannot understand the language the trainer uses.

3.2 English for Speakers of Other Languages (ESOL)

Another measure sometimes taken by employers or unions to try to improve interlingual onsite communication is the provision of English classes, a strategy recommended by the HSE, and facilitated by some TUs, but which requires further attention by industry practitioners because provision and uptake is not extensive (Oswald, 2019, Fitzgerald, 2006, Tutt et al., 2011). There are some clear advantages and disadvantages to this approach. On the one hand, this approach would be more beneficial in the long term, not only at breaking down language barriers but also for integration into the workforce. On the other hand, learning a language takes time and the workers need to be able to communicate immediately. Unfortunately, the transience of the workforce and the financial and time implications also cause difficulties for running classes. The risk of making mistakes, both in terms of safety as well as for re-doing work, also means that an interpreter might still be needed. English classes in the CI vary in content and format. Available examples are discussed below.

In their study of Australian construction workers, Trajkovski and Loosemore (2006)found that nearly half of their respondents had misunderstood instructions in English, yet only 58.9% thought that English classes at work would improve this. According to Trajkovski and Loosemore this response can be attributed to language interference, whereby speakers fall back

on similar sounding words and syntax from their first language. It is likely that there are many other explanatory factors, including personal reasons such as time, motivation and ability, and practical reasons concerning the provision of classes. The authors suggest that one reason why language assistance is not provided could be the apparent evidence that it has had little effect reducing injuries and fatalities amongst NESB workers in the past. However, they highlight that this evidence may rather signify issues with how the assistance itself was provided. Indeed, Loosemore and Lee (2002) concluded from their research in Australia and Singapore that language training is usually too general to improve the technical communication needed at work.

The lack of ESOL classes tailored for the industry in the UK is reflective of the inconsistent nature of dealing with communication difficulties more generally. Nonetheless, the TUC explains the possibility of 'matched time' classes whereby for each hour the employee attends a class in their own time the employer acknowledges this commitment by funding another hour. Their website also lists links to online resources that can be used for learning English. Other examples can be found in the work of Tutt et al. (2011) who found evening English language classes for migrant workers funded by the contractor and subcontractors. A Polish worker with good language skills had taken on extra language work and this included interpreting between the Polish workers and English language tutors. This course had a unit specifically on construction. Interestingly, this same worker also ran Polish safety sessions. Further, the union UNISON directs users of its website towards a free online English course by the Open University aimed at construction and engineering professionals (UNISON, 2019). It is significant to highlight that in the TUC study migrant workers were asked to identify their main workplace problems and that the majority said that racism and exploitation was the first problem and the need for English classes the second. It is probable that these issues are intertwined; linguistic barriers block cultural integration and understanding of others (CIOB, 2018). Another promising example of collaboration to provide learning opportunities for construction workers can be seen in the report, a partnership between a union, a construction firm, a community college, and the national construction skills body that led to the provision of popular after-work ESOL classes (TUC). The benefits recognised include improved H&S communication, improved relations with the local community and between the employer and the union. The achievement was recognised by the government, with the HSE promoting the model and citing it as an example of best practice (p.72). This model continued to be used, as evidenced by a UCATT case study announcing the opening of a learning centre in Liverpool

in 2012. However, beyond these previous examples the TUC website offers a module on ESOL in the workplace for union reps but there is nothing construction specific.

Regrettably, investment in ESOL has declined in recent years. Since August 2007 classes have not been free. ESOL is now usually only available free of charge to those unemployed or on benefits (House of Commons Library, 2018), leaving the onus for learning on individuals or their employers. As many workers work through agencies and are classified as self-employed, moving frequently, then employers are not very likely to invest in ESOL classes. However, it has been announced that the Greater London Authority is planning to provide free ESOL courses up to the level required for British citizenship (Whieldon, 2019). There are of course also ESOL classes that workers can sign up to of their own volition, but with the cost implications, unpredictable and long working hours, and perhaps a lack of recognition of the effort by employers, then this is unlikely to be a solution. Most local councils do not provide translation either. Yet a shift from using translation services to fomenting the common use of English will only be effective if the language support is provided. Even so, it is necessary to recognize that recent migrants or people who struggle to learn the language will still need further linguistic assistance and so replacing translation services entirely should not be the goal. The scarcity of examples from the UK suggests that the provision of ESOL classes is sporadic and uncoordinated. For language learning to be effective it needs continual reinforcement. Without examples of sustained ESOL classes it is impossible to determine the impact of classes on onsite communication or safety.

Sometimes English is the minority language on constructions sites in English speaking countries, therefore teaching other languages should be considered (Jaselskis et al., 2008). Jaselskis at el. concluded that in this case in the US it would be more economic to train the local supervisors in Spanish, this would also be easier because there are less of them, and they tended to have higher education levels. What is more, wider participation in the language learning programmes could help to create cultural understanding between the groups. In a US study of workforce integration in the CI Jaselskis et al. (2008) found that 84% of American supervisors are dissatisfied with their ability to communicate in Spanish. Interestingly, in the survey, 15% of the supervisors suggested taking Spanish as a Second Language (SSL) courses and 46% proposed a combination of English and Spanish courses for both American supervisors and Hispanic workers. Although the case in the UK is different because of the likelihood of there being more languages involved, this is still an interesting observation to

consider. A one-day Spanish H&S training session was carried out. The presentations included picture representations of the terms, an effective method according to the Institution of Occupational Safety and Health report which concluded that using images to convey safety messages in training as opposed to words alone improved retention of learning (Cameron, 2011). Basic phrases were taught using flashcards. In addition, instructors discussed cultural dimensions/differences, this should have more impact than a purely linguistic approach, as Loosemore and Lee (2002) explain 'it is clear that resolving language differences within an organisation requires much more than simply learning another language. It also requires some degree of cultural assimilation'.

It is now widely acknowledged that a significant proportion of communication is non-verbal, as tone of voice, facial expressions, hand gestures, posture and physical distance are all parts of communication. Therefore, it is logical that multimodal messages are more effective, hence the use of pictograms discussed above. This is also true for language learning. For instance, one method of language teaching is based on Total Physical Response (TPR). The idea is that using physical signs or gestures along with the words leads to greater retention of vocabulary, and faster and more meaningful learning. Significantly for the H&S context, it is particularly useful and easy to employ with learning and giving instructions.

In conclusion, these studies suggest that pictograms be used in language education for construction workers, that the training includes both languages and cultures, and that managerial commitment is required. Currently, language classes do not have a great uptake, some of the reasons cited for this include the time required after a long day at work and practical transport issues, also these workers may not be accustomed to a traditional classroom setting. These issues must be considered in the design of a course. Jaselskis et al. (2008) propose that training the link person/facilitator to deliver the course material would be an effective solution, this link-person seems to be the same as an informal interpreter although it is not explained how they work. They also recommend that the courses be delivered by someone with multicultural experience in the CI that is fluent in both languages. This is important in the light of previous concerns that communicating H&S information and training in the migrants' language may impair social cohesion by not encouraging English learning (Dainty et al., 2007). Therefore, extending the work of the interpreter to encompass language teaching has the potential to formalise the position of informal interpreter, improving interpreted communication by training this person, and improving teaching by teaching both languages in

a multimodal way, and with attention to cultural differences. In this scenario the language worker would have the same employer as the gang of workers that they are part of, but to maintain a standard of training this could perhaps be regulated by another party.

3.3 Translations

Multiple references to translated materials in the literature show that this is a common solution to the difficulties caused by linguistic variety onsite (Bust et al., 2008, Tutt et al., 2011, Oswald et al., 2015). The extent to which texts are translated will vary from site to site. According to a survey by Bust et al. (2008) the translation of H&S information and use of interpreters are the most common ways of ensuring that workers understand their H&S responsibilities. Bust et al. (2008) and Tutt et al. (2011) explain that there is no quality control of the translations and that their effectiveness should be assessed. This concern is echoed by Oswald et al. (2015) who note that often the same person is required to translate and interpret, which demonstrates a lack of appreciation of these different skills. Likewise, Loosemore et al. (2010, p.183) highlight that the quality of the information received in the site induction cannot be assured if they are interpreted by unqualified bilingual workers, which is what they found in their study in Australia. Materials that may be translated could include signs, induction forms and safety training materials.

A novel use of translation was described by Tutt et al. (2011). 'TalkSign' allows workers to access verbal H&S information in their own language by pressing buttons for the language they choose and the sign they want to hear an explanation of. This is a potentially useful solution to the problems of having too many signs and languages, and to illiteracy. Yet Tutt et al. explain that the sign is not well used, possibly due to the stigma attached to publicly displaying a lack of English language ability. Nonetheless, they note that the sign could be used in a different way, such as in inductions. Another initiative, documented by Oswald et al. (2015), is the use of wallet cards with common statements; it would be useful to know to what extent these are used, and if they are effective then they could be developed and used more widely. Throughout this thesis the terms L1 and LX speaker will be used in the discussion rather than native and non-native speaker, as proposed by Dewaele to reject the ideological assumptions about the superiority and inferiority inferred in native/non-native (Dewaele, 2018). As concluded by Oswald et al. (2019), although communication was recognised to be an important challenge few employers had tried solutions as they perceived

them to be too complicated or expensive. However, Oswald et al. (2015) and Tutt et al. (2011) found useful strategies used to aid communication in specific training or induction moments but that were not rolled out for further use. As with language classes and visual communication, the extent to which materials are translated will affect the work of the informal interpreters.

In the following section, the use of technology and other modes of communication are reviewed.

3.4 Technology and multimodal communication

In some of the aforementioned studies technology has been mentioned as a way to break down the language barrier. For example, in Oswald et al.'s 2019 research they found that Google Translate and other apps were sometimes used. However, the outcome was not very effective. H&S documents were translated by Google Translate and then post-edited by L1 speakers. The possible outcome: '"I am given what I think is a Google translate." He smiled. I asked, "And how is that?" He replied, "Emm no no not good, the sentences…" He moved his hands around. I interrupted, "Are formed in a different way?" He agreed, "Yes yes, I think that makes the Google translate not good."'(Oswald, 2019). Another employee explained that he had tried using an app on his phone to translate when the 'translator' was not available, but '"Any luck?" Barry, shaking his head with a big grin, "No mate, it came out just complete nonsense! ... like hamburgers, sausages, washing powder!"'.

Advances in technology mean that electronic dictionaries, online translation tools and language learning apps are readily available as an economic and convenient way of helping to break down language barriers. In simple communicative situations, such as a tourist might encounter, these tools may suffice. Tools such as Skype translator use machine learning and consequently they are constantly improving (Neubig, 2019); moreover, Skype claim to currently be able to voice translate conversations in ten different languages. However, one major obstacle to using these tools is accent differences. Mistranslations can also occur when one word has multiple meanings, which happens frequently in English. Translation is also badly affected by a noisy environment. Another important consideration is the lack of the human factor or instinct because in emotional and emergency situations this could be crucial. Also, non-human

translation tools are not able to sense whether there has been a misunderstanding, for cultural or linguistic reasons.

An area that can be reviewed to gain insights relevant to the construction context are NGOs because a lack of resources causes NGOs to create new alternative methods of communicating when it is not possible to use an interpreter or a translator. Innovations include applications such as Vento.tv and Tarjimly which connect volunteer interpreters with refugees to provide instant language assistance from anywhere. Additionally, Refugeye is an app that uses pictograms to help refugees to communicate if they do not speak the language of the host country. The pictograms can be drawn over to help understanding. A similar initiative created jointly by UNHCR, MercyCorps, Google, ThoughtWorks and Translators Without Borders is the Translation Cards app (Drew, 2016). The Translation Cards are based on frequently asked questions by refugees and migrants, they have visual and audio translations. Considering the positive conclusions of Cameron et al.'s report on the use of pictures in safety training with migrants, it could be pertinent to consider a similar tool for the CI (Cameron, 2011).

Indeed, using a combination of such tools could help to facilitate communication between construction workers. Another app with potential for this purpose is iTunesU (Yang, 2018). Using this app tutors can create materials that they design to meet the specific needs of the course. These can include videos and podcasts, which would be particularly helpful for illiterate workers. What is more, a list of terms could be imported from the app. Relatedly, Quizlet is a memory tool which uses flashcards and activities to teach vocabulary. Advantages of such methods include that workers do not have to travel to a class, the style of learning may be more comfortable for people who are not accustomed to being in a classroom, and the costs are relatively low. Furthermore, language content could be created that was specific to those workers' needs, the learning does not need to be interrupted when the worker moves to a different site, and the content and level can be made universal across the industry. Such an app could be used to enhance the usefulness of initiatives already in use such as wallet cards with common phrases on (Oswald, 2019) and translated documents, by making them more accessible and the meaning universal.

Another interesting study concerning the use of technology in H&S communication in construction is 'Looking and learning: using participatory video to improve health and safety in the construction industry' by Lingard et al. (2015). Lingard et al. argue that participatory

video offers alternative, deeper and more effective ways for migrant workers to engage with H&S than traditional inductions in the local language. Participatory video in this context involves participants in the learning and research processes directly and consequently in 'the production of video-based ways of knowing' (p.742). Lingard et al. found that playing back video footage of real work practices is a great way of bringing attention to routine or taken-for-granted practices that need to be examined critically. In the conclusion of their own research project using participatory video, they claim that 'the workers generally agreed that it was easier to retain and recall the content of videos as compared to text-based H&S resources' (p.746). Another key study regarding the use of video to communicate safety information to construction workers is that of Edirisinghe and Lingard (2016). They review a number of illuminating case studies. For instance, they demonstrate how gaming-based approaches can be used to provide interactive and engaging H&S training, as can VR technology, and state that 'QR codes have recently been incorporated in learning resources with some success' (p.368). Nevertheless, they highlight some limitations of such technological aides, namely 'limitations to the use of smart phones to access the material and limitations of internet connectivity' (p.374). Furthermore, adoption of the technology could be considerably impacted by organizational and/or national regulations about the use of mobile phones onsite. Edirisinghe and Lingard also note that 'experienced workers might not feel comfortable using a common laptop to access knowledge and may feel embarrassed that in doing so they will indicate to colleagues that they do not possess the required knowledge' (p.374/5). Furthermore, Ewart (2018) highlights that the behaviour of people using technologies is unpredictable and can 'subvert the digital practices intended by corporations, technical professionals and policy makers' (p.325), an observation that should be borne in mind with all of the above mentioned and new uses of technology to communicate on construction sites and research needs to be carried out to determine how new technologies are used in practice.

Inventive uses of gestures and drawings are a widespread solution for conveying messages (Oswald, 2019, Tutt et al., 2013b). In Tutt et al.'s 2013 study, hand signals were described as part of a work group's own 'language' that also involved mixing languages and using phones. Likewise, Barry, from Oswald et al.'s study, explains 'we just been having to use lots of hand and body signals…They seem to get the idea so far.' (Oswald et al., 2019 , p.7). While body language is an important and useful part of communication, Barry's words "seem" and "so far" perhaps show doubt about whether understanding can be consistently established and suggest that the utility of this communication is limited to the gist. Sometimes this may be adequate

but sometimes not. Nonetheless, hand signals are part of everyday communication even between speakers of the same language, since noise or distance might complicate verbal communication, especially on live construction projects. Non-verbal communication is clearly a beneficial part of communication but given the nature of the construction sector and the fragmented supply chains, there are real questions about how widely comprehensible they can be in any context.

3.5 Safety training in different languages

Another way of tackling some of the difficulties for site safety that come with having workers who speak many different languages is to provide training in multiple languages. There are reported instances of providing inductions, training, and tests in other languages as well as English, and of training the English-speaking supervisors in the other widely spoken language. The principal advantage is that workers are likely to understand the content, whereas relying on untrained interpreters or English alone is riskier.

A study in the US by Jaselskis et al. (2008) involved developing training courses to improve onsite communication by drawing on results from a survey that provided recommendations. 15% of respondents suggested Spanish as a second language courses, and 46% suggested a combination of English and Spanish courses to help overcome the language barrier. Consequently, the courses included both English and Spanish as a second language and a Toolbox Integration Course for Hispanic Workers and American Supervisors (TICHA). The language courses focused on basic phrases and construction vocabulary. The presentations used images and the words in both languages. In the TICHA course cultural differences and safety are discussed. Jaselskis et al. claim that 'integration between these groups would minimize hazards and miscommunication and increase harmony and productivity on the jobsite.'(Jaselskis et al., 2008).While on more diverse sites this would be more complex it can be something to work towards. In contrast to this example, commenting on the situation in Singapore and Australia, Loosemore and Lee (2002) found that managers did not seem to be acquiring L2 skills despite the existence of segregated ethnic groups onsite, and in the UK this approach has not been widely documented either.

Much work with translanguaging (a perspective on language discussed in depth in 5.2) has focused on education, questioning traditional teaching methods where languages are usually

taught as completely distinct systems with only one language being used at a time (J.Simpson, 2016). A course that was designed from the perspective of translanguaging as opposed to linguistic separation may be helpful to foment social cohesion as well as improving linguistic communication. Previous studies have argued that safe practices are learnt through engaging in a safety climate by learning from others (Tutt et al., 2013a), and such practices must be severely inhibited by the existence of linguistic ghettos.

In terms of training certification, the Construction Skills Certification Scheme (CSCS) website is only available in English and states that the 'Health and Safety in a Construction Environment Award' assessment can be taken in English, Welsh, or Gaelic, directing readers to the local training provider for advice on other languages. Nevertheless, the CITB HS&E test can be taken with the help of a translator in fourteen different languages. From 2020 the CITB will no longer be the service provider and so it waits to be seen whether the situation will change (CSCS., 2019).

In conclusion, there have been a variety of efforts to improve intercultural and interlingual communication on construction sites around the world. Some such initiatives have been useful or have potential, yet further research is needed to assess the impact of these methods and efforts need to be made to streamline them. In the cases of language teaching and signage, consistency is vital to the effectiveness of these measures. Alongside these methods for facilitating communication, it is documented in the literature that a bilingual worker is often used as an informal interpreter to enable the other workers to understand each other. As discussed, this figure has appeared in previous research, but little is known about the ways in which the language work is carried out and greater understanding of who the informal interpreters are and why they do the language work is also required. The following and final section of this chapter will outline what we know about informal interpretation onsite from prior research.

3.6 Informal interpreters in construction

The key research papers that have contributed to the literature about communication with migrant workers on construction sites is reviewed briefly here and drawn on throughout this thesis; here the findings related to informal interpretation are described, forming the basis from which this study was designed.

One of the earliest papers on the topic is by Loosemore and Lee (2002) and examines the Australian and Singaporean construction contexts. Through a survey and focus group they found that L1 English speakers were a minority out onsite and were confined to managerial level. They concluded that although instructions frequently had to be repeated and reinforced, creating frustration, management of language was largely reactive. They also reported that operatives worked in isolated language groups. Then Dainty et al. investigated the health, safety and welfare of migrant workers in the South East of England (Dainty et al., 2007). They also found that each gang had a designated English speaker because migrants from particular countries tended to work together. Furthermore, they noted that PMs often did not know the nationality or the employment status of the operatives working on their project. In contrast with many of the more recent papers, the authors state that 'many had employed translators' (p.4), but it is not clear whether they were really translators or employed as such. They reflect that this approach to dealing with communication runs the risk of migrant workers 'reverting to their first language in order to communicate with their colleagues' (p.24). Subsequently, through responses to their survey, Bust et al. (2008) found that having 'H&S information translated' and 'use of translators' were the most common strategies used for ensuring workers understood their H&S responsibilities. During the interviews it was found that difficulties were experienced with this method of working. Similarly, Phua et al. (2010) reported findings from their survey that managers relied on informal interpreters, these were usually the supervisors of subcontracted workers. Like Loosemore and Lee, they reflected that the problems created by cultural diversity were accepted as inevitable. These studies provided an initial understanding of the work of informal interpreters in the CI. However, more recently ethnographic studies have provided richer insights that were not possible through surveys or interviews in which the topics of discussion were prescribed by the researchers.

Beyond the bilingual workers who are identified as informal/untrained interpreters there are also a couple of other functions described in the literature. As well as informal interpreters, Tutt et al. (2011) found bi/multilingual outreach workers on one site whose purpose was to be available for migrant workers to speak to, thereby encouraging engagement in dialogue with site management or TUs, it was also hoped that these workers would 'help the industry better understand cultural differences' (p.13). This research also found that while one person, Magda, was identified specifically as the interpreter/translator for a team of up to 15 Polish workers,

another worker was more informally also beginning to carry out this function when Magda was not available. The story of Lukasz is also presented in the paper, a worker who was receiving extra pay for language work which, as well as translation and interpretation, included running language classes and Polish safety training. Tutt et al. call for these language practices to be recognised and regulated.

In a 2013 publication, Tutt et al. describe the communication practices of a team of workers who they say 'evolved its 'own GlazaBuild language'- a conglomerate of communication methods'(Tutt et al., 2012, p.517). This makes visible a further blurring of boundaries between those workers who are considered bilingual and used as interpreters and the other migrant workers, who are described as creatively communicating despite not having much knowledge of the local language. In 'Building networks to work: an ethnographic study of informal routes into the UK construction industry and pathways for migrant-upskilling' Tutt et al. demonstrate how an agency worker developed an informal language worker responsibility into a permanent job (Tutt et al., 2013a).

In some of the previous studies about informal interpreters it has been found that sometimes there is a system in place to make sure that people can find these people to interpret when necessary. Oswald et al. (2015) describe how on one site informal interpreters would wear a black band on their helmet to make them identifiable. However, one bilingual worker refused to take on the language work because he was not paid extra for doing it. A further practice that is very comprehensible is using stickers on hats, however, Tutt et al. (2011) highlight that these stickers are used inconsistently, sometimes to display the first language of the person or sometimes for the language they can interpret, undermining their utility.

Providing insights from a different country that show similar ways of working, Wasilkiewicz et al. (2016) published research about the management of communication on Norwegian construction sites. Through informal interviewing they found that teams are also organised by language with the supervisor being used to interpret. In this case, the migrant workers were Polish, and the informal interpreter used Polish and either English or Norwegian.

More recently, in their 2019 paper, Oswald et al. examine further the challenges and strategies surrounding communication on a multinational construction project in the UK. They state that workers onsite did not speak English whereas migrant workers based in the office were fluent.

They document another instance of a migrant worker who begrudges translation work, they claim that 'translating only featured as a very small part of Dmitri's worker identity and became a frustrating thing to juggle among his other, more valued, tasks' (Oswald, 2019, p.5), as demonstrated in the quote "I just wish I didn't speak Polish" (p.5). These workers were reluctant to interpret if pay was linked to productivity, this is a key point to consider both for the recognition of the language work done and for the standard of the interpreting. It was also found that the policy of having one English speaking interpreter for every six non-English speakers was not very practical as they could not always be present, for reasons of work location, training, sickness, holidays etc. Another important finding was that these interpreters had too much responsibility, over time they received more training than other colleagues because they would then explain the contents of the training to their colleagues in the other language, consequently they could influence significantly how tasks were carried out (Oswald, 2019). The authors recommend that 'professional translators are provided to aid informal translators' (p.9), and that the informal translators are trained and remunerated. The suggestion of combining professional and informal linguists is very interesting.

The final key papers for the discussion here are by Kraft and examine the Norwegian CI. The research was ethnographic and includes recordings as well as interviews. Similarly to Tutt et al. (2012), she describes that workers onsite use a mixed variety of language, termed 'Svorsk' which stems from Swedish and Norwegian, or 'construction site English'(Kraft, 2019 , p.11). She explains that in Norway the recommendation of having one bilingual per team, who can do language work, also exists. In her article 'Trajectory of a language broker: between privilege and precarity'(Kraft, 2020) she argues that 'despite being a workplace need, the responsibility of becoming a broker is left with the individual.'(p.2). Notably, the language workers in her research received a salary bonus for their language work.

It is important to remember that we do not know what individuals interpreting prioritise, and to consider how this could impact the message transmitted. The priority could be to relay the message until they believe it is understood, in which case how do they know or check that it has been understood? (McKay et al., 2006, Oswald et al., 2019). Alternatively, they may prioritise an agenda, either their own or their linguistic group's. It is also possible that these language functions are created by site and safety managers precisely to influence these groups of workers. These uncertainties stem from the function being kept informal. It is also important to know whether these informal interpreters are tasked with solving misunderstandings and

problems or if they are used as a conduit and the interlocutors maintain power and responsibility over the communication.

Other bilingual language work positions, both formal and informal, will now be reviewed with the aim of situating and better understanding the responsibility of informal interpreters on construction sites.

4 Language interpretation

This section will outline different types of language work that exist more widely as well as that of professional interpreters, to situate the work of informal interpreters in construction. This will include a discussion about the differences between interpretation and mediation, considering which task informal interpreters in construction may usually perform. By examining some of the different functions of language professionals in other working environments it is possible to identify more precisely what function is being performed within the construction sector.

Many terms have been used to describe the function of a person who facilitates oral communication between different languages. Within construction the terms used have been 'gatekeeper' (Loosemore and Lee, 2002, Phua et al., 2010), 'informal interpreters'(Tutt et al., 2011), 'mediators' (Tutt et al., 2011) 'translators' (Dainty et al., 2007, Cameron, 2011), 'link-persons' or 'facilitators'(Jaselskis et al., 2008), and 'language brokers'(Kraft, 2020).

In this thesis 'informal interpreters' is used to discuss these language workers and distinguish them from professional interpreters. It should be noted that in construction to facilitate communication is usually just one aspect of this person's work, as they are primarily construction workers (Oswald, 2019). This multiplicity of terms stems from and contributes to a lack of understanding of the skills required in these different linguistic positions and the definitions of the professions. The words 'translator' and 'mediator' will be used to refer to these professions specifically.

4.1 Language workers in different organisational environments

Some of the areas in which language workers are needed will be discussed here with the intention of better understanding language workers in the construction industry through comparison.

Many Non-Governmental Organisations (NGOs) require language workers, either in their work in other countries or when working with migrants here in the UK. One area is with asylum seekers and refugees arriving to the UK who do not speak English. Whilst it is a legal right that these people are accompanied by an interpreter when they access public services, such as the

police and NHS, there are unfortunately still gaps, which are often filled by NGOs. For example, on the UNHCR website it says that they provide an advocacy service, this is clearly differentiated from their use of interpreters (UNHCR., 2009). Likewise, the British Red Cross will provide an interpreter to facilitate the communication between their caseworkers and refugees when providing support such as accessing the GP, or emotional and material support. Here the interpreter is a volunteer and likely will not interpret as a professional interpreter would. For example, the profile for the volunteer position of Refugee Support Interpreter with The British Red Cross states that the person should be 'able to use emotional support skills in a calm and responsible manner' and 'diplomacy' (Cross., 2019). Refugee Action also look for volunteer interpreters, but do not define what is expected of the interpreter. In a blog post on their website, it is stated that sometimes receptionists at the GP do not know an interpreter is needed or how to book one, or they are used but the patient is referred to another service where an interpreter is not provided. Consequently, whilst it may be that during appointments the interpreter is a professional, it is likely that this work is supplemented by volunteer interpreters who help migrants to access services and advocate at these points, or indeed by bilingual workers or friends/family who informally interpret. One NGO that stands out for its focus on communication is Translators Without Borders. The organisation provides translations and trains new linguists as translators and interpreters for languages with few resources. They also train humanitarian staff in the basics of interpreting. They also developed a glossary app, available in five languages, which standardizes the way terminology is translated and gives confidence to the field worker that the person they are trying to communicate with will understand, as well as helping the interpreters. This glossary app is another example of an initiative that could be adapted for the CI.

City councils also require the support of language workers in their work with local populations and they direct their workers to the company that they use to provide translation and interpretation services. Interestingly, where advocacy is mentioned as a service available through the council this is for people with a mental incapacity and does not mention migrants that may need help integrating into British society and accessing services. Nonetheless, in some organisations the position of a 'linkworker' combines translation/interpretation and advocacy work. For example, the organisation Diversity Voice receives funding from Somerset County Council and schools to provide an array of services to help migrant children to settle into their new school in England. Similar to the linkworker position discussed, some posts are advertised as 'bilingual support workers'. For example, Surrey County Council, through the Race Equality

& Minority Achievement service, provide bilingual workers to support young people from minority language communities in their educational achievement. The term ‘bilingual worker’ is also used in a range of businesses such as for secretaries, customer service assistants and care workers. Further, whilst the term ‘mediator’ is often used in academic debate on the work of the interpreter, in the UK this term is used to describe the person who resolves disputes but not for a linguist. It is notable however that the distinct position of intercultural/cultural mediator exists in other countries, such as Ireland and Spain (Phelan, 2010).

Non-professional interpreting and translation is a recent field of inquiry. Areas where these activities have been identified and investigated are in disaster and conflict management, and informal interpreting by/for inmates, in schools, and in churches (Antonini et al., 2017). In their 2017 book ‘Non-professional Interpreting and Translation’ Antonini et al. (2017) use the term ‘non-professional interpreter’ because their focus is on who carries out the work more than on how, whereas this research covers who and how. What is more, they suggest that 'the term "ad hoc" places a special emphasis on the allegedly limited and unplanned occurrence of non-professional interpreting and translation...however...much NPIT is- if not planned - at least strongly expected to take place, by either primary party, (or even both parties) and/or the interpreter, in a number of circumstances in which participants are aware that there is no professional option available.' (Antonini et al., 2017). It seems likely that the expectance is also present in construction, but this is an area that will be explored in this research.

Here some insights from non-professional interpretation practices by children will be discussed as a comparison for informal interpreters in the CI, this area is chosen as it is one of the few areas with research outputs available. To distinguish this interpreting activity carried out by children, researchers use the term ‘child language brokers’ (CLBs) (McQuillan and Tse, 1995, Yoo, 2019, Crafter and Iqbal, 2020, Antonini, 2016). This term also shifts the emphasis from a psycholinguistic/psychological approach to a sociological/sociolinguistic one (Antonini et al., 2017). The child is often in the conversation to support their parent (Cline, 2019a, Yoo, 2019). The researchers report that the potential disadvantages of using CLBs, as opposed to professional interpreters, are: a greater risk of translation errors (Yoo, 2019), that they sometimes distort what is said for their own reasons, that they lose time on their own work and may experience tension with peers (Cline, 2019b). The advantages reported were cost savings, that the timing can be more flexible, and the child will be familiar with the dialects involved. Additionally, many say that they prefer having someone they know as a language broker (Cline,

2019a).The majority of ex CLBs evaluated the experience positively overall. Interestingly, the young adults reported an increased sense of confidence, belonging, and empowerment from doing the work, and respect from peers (Cline, 2019a). These findings are interesting in relation to construction; prior research has tended to suggest that informal interpreters in construction have a negative experience with pay, refusing to translate, or resenting the language work. The experiences of informal interpreters in construction and their opinions about the work will be explored. Nonetheless, it is important to acknowledge that in Cline's study 32% had found language brokering embarrassing, 42% found it stressful, and 21% had felt angry when they had to translate in school (Cline, 2019b). Crafter and Iqbal, who studied how children who language broker manage conflict, also state that children sometimes experience embarrassment when language brokering, as well as feelings of pride and competency or incompetency (Crafter and Iqbal, 2020, p.32) Significantly, Cline et al. report that the CLBs found their work easier when staff valued it and acknowledged the responsibility it entailed (Cline, 2019a). Similarly, Yoo, in her study of CLBs' positioning, concluded that teachers' acknowledging language brokering can validate and affirm the positive attributes of brokering and also encourage students to embrace this part of their identity (Yoo, 2019). Cline et al. provide recommendations for ensuring that the communication goes smoothly (Cline, 2019a), those that may be relevant to construction are: allocate enough time because interpreting adds time and explanations of differences in systems may be needed, brief interpreters in advance so that they can prepare vocabulary, and address participants directly. The last point recognizes the power loss of the participants by speaking through an interpreter, and for safety culture it may be important to not create a feeling of exclusion due to said loss of power (Cline, 2019a) . Cline et al. also recommend using simple language, breaking information down into manageable chunks, and using visual aids.

Some points relevant to this study are raised by Pérez-González and Susam-Saraeva who highlight that non-professional translators and interpreters are 'involved in the translation and distribution of news, mediation of religious services, fanfiction communities, online social movements and networks, crisis and disaster management, conflict, as well as community settings' (Pérez-González and Susam-Saraeva, 2012, p.152). They also stress that because non-professionals do not go through professional training to interpret, they are not 'indoctrinated' in norms of the profession. The authors argue that the NPIs are therefore 'more prepared to 'innovate', play around with the material in hand, retell it in a way that is likely to be more interesting and intelligible for their audience – often because they are themselves part of the

audience' (p.158). This is an interesting prospect worth exploring in construction, given that adapting material to the audience, e.g., workers, is already recognised as important, and is more so with speakers of another language.

4.2 Professional interpreters

Professional interpreters will be discussed here to provide a basis for comparison with informal interpreters.

Significant employers of interpreters are international organisations such as the European Union (EU) or the United Nations (UN) which employ large numbers of highly skilled professional interpreters to interpret into and from many languages. Such interpreters usually do simultaneous interpretation. Many businesses also rely on interpreters to facilitate meetings with clients who do not speak English; this may be interpreters working in person at meetings, conferences, site visits etc. or working remotely via video links or telephone. The other area where there is significant demand for interpreters is in the public services, including in the medical sector, in schools, with the police, in court etc.

The professional work of interpreters in the different contexts mentioned above varies greatly due to the inherent nature of the contexts, the qualifications required, the modes of interpreting used, and a comparative lack of professionalization of interpreting in the public services. Nonetheless, the fundamental aim and professional principles of the interpreters are the same, in contrast perhaps to the other language workers discussed previously.

The key elements that differentiate a professional interpreter from a bilingual person are skills in interpreting modes, following a code of conduct, and knowledge of technical vocabulary in both languages in the area of expertise in which they work. This consensus can be seen in the course plans for different universities, and the websites of language professionals and associations. Moreover, an interpreter should have a good memory, be a fast learner, and be flexible.

Two points of particular interest from the code of conduct of the Chartered Institute of Linguists (CIOL, 2017), for example, are: '2.2 Members/chartered linguists will work only within their linguistic competence'. 'Linguistic competence' means their spoken and/or

written command of the language(s) concerned, their awareness of dialects and other language variants, and their knowledge of the cultural, social and political features of the country or countries concerned.' This necessitates a bi-cultural person not only bilingual. In construction, it may be difficult to find informal interpreters with this level of bi-cultural knowledge because of their immersion in construction where they may work in 'linguistic ghettos'(Trajkovski and Loosemore, 2006). Point 6.3 is also significant, 'members/chartered linguists will carry out all work impartially.'. While impartiality may not initially appear relevant to construction, whereas it is clearly paramount in legal interpretation, the observations from previous studies regarding trust that the interpreters are interpreting what the speaker said show that knowing that the interpreter is being impartial is important. As an illustration, Oswald et al. (2019) explain that in their research they found that a client was concerned about what the bilingual supervisors were communicating to the workers about safety and the H&S professionals were also concerned about whether their message was being delivered. Oswald et al. claim that 'this is indicative of the power that particularly multilingual members of the community held in determining how tasks were carried out and what information was communicated to work teams' (Oswald et al., 2019, p.6).

An important player in setting apart professional interpreters are associations. Members are listed in a database which serves as a place to look for accredited interpreters. For example, the National Register of Public Service Interpreters (NRPSI), the Institute of Translating and Interpreting (ITI), and the Association of Police and Court Interpreters (APCI). The CIOL provides CPD opportunities, qualifications, policy advice, and promotes the profession. As well as the interpreting qualifications they offer, the CIOL provide an oral language exam called the Certificate in Bilingual Skills-Police, this is not an interpreting exam but rather tests the worker's language ability for working in plurilingual communities in London. It is interesting to highlight that: 'this qualification can be adapted to any business sector or industry where face to face language skills are regularly required in communications with the public, customers and clients or other stakeholders' (CIOL., 2019).

A professional interpreter is trained to interpret using different modes depending on the requirements of the communicative situation. There are three core interpreting modes: consecutive and simultaneous interpretation, and sight translation. These are all oral modes. For example, the consecutive mode is usually used when two speakers of different languages need to have a conversation, the interpreter interprets short interventions from one party to the

other and vice versa. Interpreters learn to take notes to ensure that they can recall all the information, this is necessary for longer interventions or when information such as numbers and names need to be interpreted exactly. In simultaneous interpretation, dialogue is interpreted in real-time, this is a complex cognitive skill that requires practice. Finally, a sight translation involves the interpreter reading a document aloud into the other language. The interpreter reads the document and speaks it in the target language, similarly with the other modes this skill is not natural and requires practice, as well as knowledge of potentially complex terminology and phrasing (O'Byrne, 2013).

There are many reasons given in the literature for why a trained interpreter or mediator should be used and not an untrained bilingual worker. While there are reasons why having a trained interpreter may not be possible or even optimal, it is useful to deliberate on the reasons why this is advocated and whether these are relevant to the CI. As explained by Cambridge (2002), bilingual people are used as a cheap solution but may result in an expensive lawsuit. For example, in the tragic case of Wille Ramirez who is quadriplegic as a result of a misdiagnosed intracerebellar haemorrhage (Price-Wise, 2015). The misdiagnosis was caused by a mistranslation from an informal interpreter. Significantly, they all believed that they were communicating adequately and did not require an interpreter. On top of the personal consequences there are heavy financial consequences, this lawsuit resulted in a seventy-one-million-dollar settlement. Both the health and financial implications of mismanaging communication must be considered in the construction context. Cambridge (2002) also highlights the moral problems, lack of knowledge of complex concepts, and lack of impartiality and confidentiality when using an untrained interpreter. According to Cambridge, if these bilingual people are willing to help, you have to think about their personal intentions. What is more, a bilingual person can have limited fluency in one of the languages, but an interpreter must be proficient in both (Valero-Garcés, 2014). For example, many bilinguals will have strengths and weaknesses in different areas of the language because they use one language at home and one for work, this unequal fluency is termed the ‘complementarity principle’ by Grosjean (1985). It may be necessary, for example, that the person used to informally interpret has had experience working in construction in countries where the relevant languages are spoken, if they speak English because they learnt it at school for instance, but are L1 speakers of another language, then they would not know the industry relevant language. Furthermore, a professional interpreter intervenes to highlight how a misunderstanding may be due to a cultural difference. As Loosemore and Lee (2002) explain, ‘problems can arise when receivers

attribute meaning to a message according to their own cultural frame of reference which can, in some circumstances, be very different to the intentions of the sender' (p.518).

Another difference is that bilingual people have the liberty to intervene, express opinions etc. (Valero-Garcés, 2014) whereas interpreters intervene very occasionally to ask for clarification or to highlight a possible misunderstanding. Also, bilingual people may omit information. The distinction that Angelelli (2010) draws should be taken into account, she explains that such informal interpreters are often 'circumstantial bilinguals', meaning that they have become bilingual through life circumstances rather than through choice. This may mean they have different attitudes towards and abilities in languages than people that have deliberately followed this path. For the aforementioned reasons, an interpreter is not simply a bilingual person.

4.3 The work of informal interpreters in the construction industry- interpretation or cultural mediation?

In this section the work of informal interpreters in the CI will be examined through the existing literature alongside a discussion of the differences between cultural mediators and interpreters, which model is likely to be closest to the reality of interpretation onsite, and which would perhaps be the most appropriate. The language work done by informal interpreters onsite is usually natural translation/interpreting, defined by Muñoz Martín as 'the translation done by bilinguals in everyday circumstances and without special training for it' (Pöchhacker, 2015, p.269).

It is likely that the three interpreting modes discussed previously are needed in the construction sector at different times. Consecutive interpreting could be needed daily for communicating instructions, warnings, questions etc. It is likely that informal interpreters are required to accurately convey series of instructions that include difficult terminology, measurements etc. and this would be exceedingly difficult without skills in this mode. Therefore, untrained interpreters may miss out information or make mistakes in the transmission. Interpreting is a mentally challenging task, and the difficulty of comprehending different accents adds to this (Trajkovski and Loosemore, 2006). In an industry like construction, the variety of accents can be great because of the mobility and diversity of the workforce. The greater the demand from such factors the greater the likelihood of errors. Trajkovski and Loosemore (2006) explain how

differences in forms of expression between languages can cause instructions to be ignored. As an example, they mention indirect speech acts, such as ‘Do you have your safety helmet on?’ as opposed to ‘Please put your safety helmet on?’. The interpreter needs to be conscious of such subtleties. Simultaneous interpreting is probably required in induction, or any presentation, when one person is speaking to a group. The potential negative effects of not using a trained interpreter in these contexts are multiple. The dialogue will have to be separated into portions that are easier to interpret by consecutive interpretation, which is time consuming, and it is questionable whether time is allowed for this to happen and whether participants concentrate throughout this type of interpretation. Alternatively, some speakers do not comprehend what simultaneous interpretation involves, expecting an untrained interpreter to do this, going too fast etc. O'Byrne (2013) found that even when external interpreters were used in the CI they were not able to carry out their job fully because the people they worked with did not understand their professional function and therefore made them summarise the material. Consequently, migrant workers with low levels of English are not given access to the same information as their colleagues. Some of the interpreters in O’Byrne’s research are not informal interpreters that are workers but are not professional interpreters either, as it appeared that there were no qualification criteria and they had no code of conduct (O'Byrne, 2010). Finally, sight translation might be needed onsite, for example this should happen if a contract is written in English or to interpret written instructions or specifications. It is probable that in practice, on sites where a professional is not employed, then migrant workers do not receive this information at all or they are given a summary (O'Byrne, 2013). This lack of information clearly raises ethical concerns.

In the field of public service interpreting (PSI) there is an on-going debate concerning the work of the interpreter, and indeed concerning what constitutes a mediator or an interpreter. The issue is also pertinent in the CI given that not much is known about the reality of the linguistic work that is carried out. In PSI two opposing models exist, the impartial model and the advocacy model (Cambridge, 2002 in Valero-Garcés, 2014), these models will be used to frame the discussion on informal interpreters in construction.

As discussed, in the academic literature about professional and informal interpreters a number of different terms are used to describe the responsibility. The term ‘gatekeeper’ has been used to describe informal interpreters in the CI (Loosemore et al., 2011, Phua et al., 2010, Loosemore and Lee, 2002). According to the Cambridge English dictionary, a gatekeeper is

‘someone who has the power to decide who gets particular resources and opportunities, and who does not’ or in Business English it is ‘a person or organization that controls whether people can have or use a particular service’. It is interesting to note that the word is not traditionally used in connection with a linguist, and that this figure is expected to have power and control. It is possible that informal interpreters in construction have significant influence over and responsibilities for other workers because of their position as spokesperson and gatekeeper into the other linguistic world. Indeed, Wadensjö (1998) highlights that when accessing services through an interpreter the gatekeeping is doubled.

The term ‘mediator’, more commonly used in interpreting studies (IS) literature, is defined as ‘a person who tries to end a disagreement by helping the two sides to talk about and agree on a solution’; it is clear that many interpreting settings do not necessarily involve dispute resolution, for example interpretation of a presentation at a conference, booking a medical appointment, or a school parent’s evening. Nevertheless, the term is usually combined as a ‘cultural mediator’ or ‘intercultural mediator’, describing more aptly the position that they fulfil, as someone in the middle. The utility of the term ‘mediator’ will be discussed further below. An advocate is described as ‘someone who publicly supports something they believe in’ or ‘a lawyer who defends someone in a court’. ‘Link worker’ does not appear in the Cambridge dictionary but is usually described as a community support worker. Nonetheless, Jaselskis et al. (2008) state that more than 75% of American supervisors have a link-person to help them communicate with the Hispanics in their workgroup. Finally, the definition of interpreter as ‘someone whose job is to change what someone else is saying into another language’, is arguably over simplified. Even without performing additional tasks, interpreting involves decision making because ‘an utterance never has one meaning in and of itself’ (Wadensjö, 1998) and languages do not have neat equivalents. Pöchhaker (2008) examines the etymology of the word ‘interpreter’, explaining that it is ‘associated with ‘inter partes’, designating the human mediator positioned between two sides or parties’ (Hermann 1956/2002:18)’. From the discussion thus far, it can be seen that the work of informal interpreters in construction likely includes a variety of different tasks related to the named language functions but not described by any of them exactly.

Often, interpreters are envisaged as simple conduits, this is the foundation of the impartial model (Cambridge, 2002 inValero-Garcés, 2014). According to this model, the interpreter repeats all that is heard, all the parties involved in the conversation can speak with their own

voice and are understood by all. This supposed lack of agency of the interpreters is often referred to as invisibility. Angelelli, in the Routledge Encyclopaedia of Interpreting Studies, describes that this model 'foregrounds accuracy as the most salient feature of performance, over and above such considerations as effectively working with participants' intentions and taking account of the objective of the exchange and of the context in which it takes place'(Pöchhacker, 2015, p.214). Some argue that interpreting in this way empowers the participants (Hale, 2007). In this model, interpreters should not intervene apart from to make linguistic, and occasional cultural, clarifications. In the public services the prime reason for using this model is that the interpreter does not have the same knowledge about the topic as the professional (doctor, lawyer, police etc.). This may sometimes be relevant in the CI as the interpreter may not know the specialist skills, employment relationships, regulations etc. involved. Another reason for this model is the sensitivity of situations in which the interpreter might not be familiar. In construction this may be relevant bearing in mind the possibilities of accidents, disputes, time pressures etc. Pöchhaker (2008) highlights the tension in interpreting between the expectation of faithful representations of the original words and the inescapable differences between languages. One criticism of this model is that the concept of cultural competence, required to make clarifications, is too vague given that everyone has their own beliefs, habits etc. This concept of the conduit has been proven unrealistic through numerous studies that demonstrate that PSIs usually also perform coordination and cultural mediation functions (Martin, 2002, Baraldi and Gavioli, 2016).

On the other hand, according to the advocacy model, the interpreter advocates, asks their own questions, and advises. As discussed, the position of cultural mediator exists in some places, and the reality in social and health services would appear to be somewhere between the models, whilst it is more likely that court interpreting ought to be strictly impartial. The supporters of the advocacy model argue that cultural mediation creates an equal communicative situation where there is often a power imbalance (Van Dessel, 1998, Inghilleri, 2005). This is relevant in public services when one of the parties is a service user, and it is certainly possible that this observation is also relevant to workers. For example, migrant workers are less likely to be union members and more likely to not know their rights, and numerous instances of mistreatment of migrants have been discovered (Chan, 2008). Someone with knowledge of the differences between the safety cultures and employment rights in the countries involved can help to explain and mediate these differences and help the worker to exercise their rights. Mediators could also help migrant workers with difficulties outside of, but related to, work,

including self-employment matters, housing issues, and accessing health services. Indeed, an example of a construction worker fulfilling a similar position was found by Tutt et al. (2013a, p.1034); Lukasz is described as an 'unofficial focal point' for workers' questions and information, 'crosscutting the workers' cultural lives and working lives'. However, Lukasz was frustrated by having to juggle this with his construction work. Mediators can also recognize and act on discrimination if necessary. In terms of who acts as a mediator the issue of trust should be noted, for example, researchers from Denmark found that younger workers were used because they had more language skills, but this person would not have been a natural choice of leader in their home country and this could consequently cause tensions (sakosi., 2018).

Baraldi and Gavioli's research in healthcare settings (2016) concluded that interpretation and mediation are closely intertwined. They explain that mediators have agency, that is, the possibility to choose a course of action from a range of available ones (p.38). Through their analysis of the interaction, they display how the choice of the rendition form includes mediation (p.51). Possible types of renditions include: multi-part renditions, expanded renditions, substituted renditions, and non-renditions. They explain that the different types of renditions facilitated communication in different ways, such as by explaining what type of information the doctor is requesting and by giving participants space to deal with the issues they want to have translated. They concluded that this promoted successful interaction. However, they also suggest that there is a risk that these actions may result in professional infringement on the role of the medical practitioner. Wadensjö (1998) describes interpreters' coordinating work by identifying whether renditions are implicit, such as modifying renditions, or explicit, such as talking with individual participants for clarification or repetition. Wadensjö (1998, p.6) also argued that these contrasting models of interpreting are partly an academic construct linked to traditional assumptions about language, the mind and communication. Whilst this position is shared in this thesis, the framework is useful for analysing the work of the interpreter to find out what is happening, whilst highlighting the complex and variable nature of this bilingual work.

In the foundational work 'Interpreting as interaction' Wadensjö (1998) explains that interpreters too are subjects who make sense in subjective ways, yet the conduit model of interpreting conceptualizes the interpreter as if they were working in a social vacuum. Similarly, Davidson suggests that interpretation can be said to be the linguistic mediation of social interaction because 'interpreters are speaking agents who are critically engaged in the

process of making meaningful utterances that elicit the intended response from, or have the intended effect upon, the hearer, not a simple or thoughtless task.' (Davidson, 2002) Wadensjö suggests instead that, to an extent, the meaning conveyed is a joint product. Believing that the literature on interpreting was largely normative, and that beliefs about how interpreters should work interfered in investigations of real cases of interpreting (Wadensjö, 1998, p.83), Wadensjö based investigation on how interpreting happens. Although IS has advanced since said study, with different perspectives and methods, this research largely adopts the same question. This is because there is little research on interpreting in the CI, and the interaction is varied and only loosely comparable with interpreting.

As discussed, research into interpretation in the CI has not been very extensive, however it seems probable that the work carried out by informal interpreters is closer to the cultural mediator model because they are not trained for the work, usually come from the minority group, and do not usually have a function established in a contract, or often even remunerated (Tutt et al., 2011). It is important to remember that untrained language workers are unlikely to carry out the work as a professional would do and these differences should be explored because the interpreter's work can have extensive consequences. It is argued in this thesis that their function should be made clear to all parties involved and covered in any training.

Furthermore, literature concerning PSIs shows that other participants in the communication often consider interpreters to be gatekeepers and that their work extends into the personal sphere too. Specifically, some cultures have a strong sense of social relations and expect help from members of their community (Birot, 2013). Interpreters are in a unique position as possibly the only door for the client to the host country or perhaps link to their country of origin. This empowering position is also often a strain as the interpreter is restricted by ethical and practical limits on their ability to help. Moreover, somebody not trained as an interpreter may advocate subconsciously. What is more, the informal interpreters used onsite come from the minority ethnic group and may consider themselves, and be considered by others, to be a representative of their linguistic group (Martin, 2002). An instance of this was found by Tutt et al. (2011) who describe one Polish worker who was paid for additional work that involved interpreting and training. However, the worker discussed how this work caused him also to be the go-to for other Polish workers who had a variety of linguistic problems and cultural questions, such as with completing council forms. While not mediating in terms of disputes or

conflict, these bilingual workers occupy a middle space both linguistically and by operating in-between workers and management.

As mentioned previously, it is important that the person carrying out the language work has profound knowledge of the cultures involved. As is argued by Al-Bayati in research on safety in the US construction industry, although language solutions are incredibly important for creating a safer environment for migrant workers alone they are not enough to overcome the cultural barrier, particularly regarding the workers' values (Al-Bayati, 2016). As a result, speaking a person's language or translating a training material to a specific language is not enough to address cultural differences. In matters of safety, it is important that the message is transmitted as it was intended by the speaker and not influenced by the interpreter's values.

Given the complexity of the terminology in the industry as well as the financial implications, it should be considered whether a bilingual person that is trained for this work might be the more practical approach. This issue is reported in an ITI interview with the Secretary General of EuroACE (the European Alliance of Companies for Energy Efficiency in Buildings), Adrian Joyce, who explains that: 'the understanding of the concepts and techniques used in construction vary a great deal more than many people know between different countries and are often related to long-standing traditions and cultures. So, translating in these areas requires more than a technical or academic grasp of the subject. It is best carried out by someone who has spent some time immersed in the sector' (Joyce). Nevertheless, further considerations on this issue will be discussed, as for someone without a solid training foundation this is a challenging task.

The progress of language services in the public services may be a useful example to consider the potential for addressing the difficulty of multilingual communication in the CI. According to Corsellis, before interpretation services are established as the norm and as a professional activity in the public services, these usually pass through the phases of a lack of recognition by authorities that there is a problem, refusal to accept that a problem exists, and analysis and implementation of solutions at a local level through private and personal initiatives which are usually possible thanks to volunteers. The next stage is usually institutionalisation at a national level to achieve a series of measures such as codes of conduct and the professional interpretation services (Corsellis, 2002). If this model were to be applied to the CI, the UK is currently in the penultimate stage. Achieving the final stage would be different for this industry

than for public services, if it is possible, due to economic and practical factors; long subcontracting chains, a lack of investment in training, and the invisibility of the problem are some of the obstacles to this progress. Significantly, the catalysts for the development of official PSI services in several countries, including the UK, were cases of erroneous interpretation with serious consequences. For example, in the UK the case of Iqbal Begum who was wrongly condemned for the murder of her husband in 1981 (Halliburton, 1996). The CI has been working for years to improve its record and reputation as a dangerous industry, a concern that has increased with the influx of migrant workers, and language services should be part of this effort.

One of the only studies in construction of interpreters specifically is 'Interpreting without a safety harness: the purpose and power of participants in interpreted Health and Safety training for the construction industry in Ireland' (O'Byrne (2013). There was a large influx of migrants to Ireland from the EU after the accession of ten countries in 2004, due to the consequent linguistic and cultural differences interpreters were hired for H&S training sessions. Her study describes the setting and why interpreters are vulnerable within it. O'Byrne explains that 'it is a particularly challenging environment for an interpreter, necessitating not only extensive terminological research but also mastery of a range of interpreting modes. In addition, the position of the interpreter as mediator between a tutor and up to 20 trainees requires a range of additional skills, including public speaking and, on occasion, conflict resolution' (O'Byrne, 2013). It can be seen from this quote that professional interpreters in the field go beyond the work of an interpreter into that of a cultural mediator. A key influence on the position that the interpreter embodies in the interactions is the attitude of the person that they are working with. From O'Byrne's study, it is clear that frequently the task of interpreting is not understood or valued and that this impacts the outcome. For example, one respondent stated 'I find it problematic when the tutor says ah, go on, and [I] practically deliver the module. Also, because there are a lot of bullet points and it's not my responsibility to fill out the bullet points into sentences' (p.132) Another participant explained that 'I didn't manage to interpret everything, because it was too much, there were some parts that I was just summarising []. If I took a bit of time to look in my glossary or my dictionary he would just move on [], saying ah it's not important anyway. [laughter]' (p.133). Most tellingly, one respondent said 'I have seen interpreters taking notes, which is not their function. You know, notes on what's going on and what's being said … the function here is really just to relay what the tutor says' (p.223-4). This shows a complete lack of understanding of the profession and also demonstrates a lack of trust.

From this study of interpreting in construction it can be concluded that the professionals need to work together for the service to be most effective. Indeed, several companies that use interpreting services provide training to their staff on how to work well with interpreters (see for example the Scottish Refugee Council and Bristol City Council).

In conclusion, more research is needed to understand the work that is being done and that needs to be done to help communication with migrants on construction sites. As has been seen, there are many possible labels and functions of this linguistic work. Through this research the work will be described, meaning that it can be formalized to help improve the communication of tasks, safety information etc. as well as the working conditions of these migrant workers carrying out linguistic tasks.

5 Theoretical framework

This chapter details the theoretical and conceptual frameworks applied in the following data chapters.

To thoroughly investigate the work of informal interpreters, theories are required that explain both the language practices of this worker and who the informal interpreters are. The role of theory in interpretivist research, as explained by Schweber (2015), is to help the researcher to 'rein in or move beyond their own subjective positions and common-sense views of their research object' (p.845). In this thesis, translanguaging theory is essential for me to move beyond a constrictive opinion of interpreting as well as societal views of language use and separation to understand linguistic practices onsite. Likewise, using the language and identity approach helps avoid stereotyping informal interpreters and seeing their identity as static, instead revealing the complexity and fluidity of the workers' identities and the relation between identity processes and language practices.

Both of these theoretical lenses are poststructuralist, broadly this entails 'moving beyond the search, associated with structuralism, for unchanging, universal laws of human behaviour and social phenomena to more nuanced, multi-levelled, and, ultimately, complicated framings of the world around us'(Block, 2007, p.864). For the investigation of language itself this perspective assists the researcher to focus on the reality of language in use. For the investigation of identity, the poststructuralist perspective is useful because the range of participants and their migration and work trajectories is diverse and attempting to create one explanation for the practices and experiences of them all would obscure interesting differences. Indeed, this choice to use a poststructuralist lens is in line with a shift in linguistics from perceiving identity as a set of fixed characteristics, which are learned or biologically founded, to seeing identity as a social construct. This change reflects how identity has become a more complex phenomenon because of increased mobility and diversity due to globalisation (Preece, 2016) . Simply put, translanguaging is used to understand informal interpreters' interactions, and the language and identity approach to understand who the people doing the language work are and why they are doing this work. In combination the insights obtained from analysing the data through this framework comprise a significant advance in understanding the work of informal interpreters onsite.

5.1 The identity and language approach

This section will describe the identity and language approach that is being used to assist in answering question one, 'Who are the informal interpreters and why do they perform this task?'. In this thesis the term 'identity' is used to refer to 'how people understand their relationship to the world, how that relationship is constructed across time and space, and how people understand their possibilities for the future' (Norton, 1997, p.410). That is, identities are understood to be affected by the world around the individual and can change across their lifetime. Identities are also understood to be shaped by the individual's visions for the future, not only by the past and the present (including Dagenais, 2003, Kanno, 2003, Norton and Toohey, 2011).

In this thesis identities are considered to be interactional accomplishments, in the sense that they are enacted through the linguistic and social practices of individuals within the constraints of particular societies. It is the relationship between language and identity that is the focus here. The relationship between language and identity is arguably an area that has been under-theorized, with the focus of linguistics researchers working on language and identity previously largely being on negotiation of language choice or performance or indexing of identities (Pavlenko and Blackledge, 2004). Indexing of identities refers to the idea that features of a speaker's language use signal their identity, such as social class or regional or national origin. Whilst an individual's use of language is inextricable from their identity, as one influences the other, this relationship is now usually considered to be reciprocal and less deterministic (Block, 2007). For instance, one's identity may be positioned by others in discourse but is also frequently negotiable through language (Creese and Blackledge, 2016, 2016, Fuller, 2007). The approach to identity taken here aligns with that which has become dominant in the field of applied linguistics (Including Norton, 2000, Pavlenko, 2001, Hall, 2002, Block, 2006, Kanno, 2003).

Essentially, the authors using this approach frame identities as 'socially constructed, self-conscious, on-going narratives that individuals perform, interpret and project in dress, bodily movements, actions and language. Identity work occurs in the company of others' (Block, 2009, p.27). This approach can therefore aide this research, which seeks to understand who the people taking on informal interpretation work are and why they do this (question two), by proposing links between language use and identity. These links are specified below in the

discussion of the key concepts: 'investment' and 'imagined community'. The approach is largely poststructuralist but maintains some influence of structuralism. Moreover, in this approach identity is not considered to be determined by biological factors or by membership in social categories such as social class, education, family etc.,; essentially, although such social categories can influence identities and indeed how these are projected in dress, bodily movements etc., they are not determinants (Block, 2009). So, in this identity and language approach it is recognised that identity is 'neither contained solely inside the individual nor does it depend exclusively on how others define the individual'(Block, 2009, p.26). This language and identity approach also makes it possible to see how individuals are 'situated in a larger social world'(Norton and Toohey, 2011, p.414), indeed it is often individuals' awareness of their situatedness that motivates their trajectory, as will be seen in the discussion below about imagined future identities and communities.

It is well recognized that identities are adjusted through the experience of migration, particularly in the case of permanent migration (Blackledge and Pavlenko, 2001, Barkhuizen, 2013). So, the worker's status as a permanent migrant or not is one factor that may affect the identity of an informal interpreter. The question of identity (re)construction in migration is particularly relevant in relation to workers who carry out language work, as 'language practices are very much implicated in these identification processes' (Barkhuizen, 2013, p.78). The nature of migration for construction work is often temporary or pendulum migration (Tutt et al., 2013a), especially in the EU context. One consequence of this is that there is more personal choice than for permanent migrants in terms of the extent of their engagement with host communities and their languages. Therefore, challenges and changes to their identities may not always be substantial (Kinginger, 2013). From here we can understand how identity change, related to language practices, can sometimes be a choice for migrant construction workers. The nature of migration, as well as employment commonly alongside other migrants from the same country, mean that these workers often do not need to use the local language or to integrate into the local culture. Relatedly, Block (2009) posits that critical experiences can result in the formation of hybrid identities. He defines critical experiences as 'periods of time during which prolonged contact with an L2 and a new and different cultural setting causes irreversible destabilization of the individual's sense of self' (p.21). This identity struggle does not mean adding new to old, rather the result of the critical experience is a transformed, third place or hybrid identity. Block notes that while classical immigration still occurs many migrants today are transnationals, creating a situation where

they live ‘straddling geographical, social and psychological borders.’ (p.33). Notably, Benson et al. describe second language identity as a feature of an individual’s personal and social identity that stems from ‘the potential that more than one language implies’(Benson et al., 2013, p.29). As the position of informal interpreter is not a formally defined one, because it does not have a related job title or description and neither are there consistent societal expectations that someone will take this work on, these migration and language use factors create significant differences in how the workers engage with the language function and consequently how the language work is performed. Therefore, different performances of the language work can be better understood by examining the worker’s identity.

Particularly relevant to comprehending the different ways in which the participants in this study engage with languages and the relationship between this and their identities is the concept of non-participation. Lave and Wenger argue that the practices that we do not engage in are also relevant for defining our identities, and that ‘what we are not can even become a large part of how we define ourselves’(Wenger, 1999, p.164). One such social practice relevant to this study is migrant workers interacting in their L2. For some of the migrant workers in this study whether they were a proficient L2 speaker or not was significant to their identity. Whereas some workers notably did not want to engage with the L2 or participate in the local society, thereby maintained a strong identification with their country of origin and their L1. Again, when considering the different ways in which the responsibility of informal interpreter is engaged with, whether the worker participated in the daily social interactions of the local L1 community or not is highly relevant and related to identity. It was found that the scope of language work taken on by informal interpreters varies greatly, with those workers who engaged with the local language community usually immersing themselves in the language function and those who did not engage much with speakers of the local language only performing the most necessary language tasks.

Two concepts that derived from literature on second language acquisition (SLA) and identity are particularly useful for exploring the informal interpreters. The first is ‘imagined communities.’ These are communities in which language learners ‘desire to become, or anticipate becoming, members because they perceive that such communities can offer them…enhanced opportunities…they might gain greater access to a wider range of semiotic resources, and, concomitantly, greater economic or social mobility.’ (Douglas Fir Group, 2016, p.32). This conceptualisation seems just as applicable to migrants using and developing

their language skills in the workplace as to learners. Norton and Toohey (2011) argue that the theoretical constructs of imagined communities and imagined identities are appropriate for understanding second language acquisition (SLA) because learners' hopes for the future are important for their identity (p.415). Specifically, the target language community is 'a community of the imagination, a desired community that offers possibilities for an enhanced range of identity options in the future. An imagined community assumes an imagined identity, and a learner's investment in the target language can be understood within this context' (p.415). This use of the term 'imagined communities' builds on the original work of Anderson (1991) who conceived that humans are able to relate to people that are not direct social contacts through their imaginations, he observed that nations are imagined communities because there are many people one will never meet in the same nation and yet it is a community in their mind. From this premise, Norton applied the term in the field of SLA (2001) to conceptualise the communities that people aspire to become part of when they learn a language. Norton (2013, p.8) maintains that 'a focus on imagined communities in language learning enables us to explore how learners' affiliation with such communities might affect their learning trajectories.' In this research, as most of the informal interpreters were not lifelong bilinguals but rather were learning the language in their own time and through using it in the workplace, these concepts have a similar relevance. In fact, the link between language skills and economic mobility for migrant construction workers has already been made in the literature (Tutt et al., 2013a, Kraft, 2019). The notion of imagined communities posits a potential reason why informal interpreters take on this language work, investing in an imagined community, perhaps that of a permanent employee and/or permanent, local language speaking, migrant. However, this notion is broad, and a more concrete conceptual framework is needed to achieve a close analysis, as outlined below.

This is where the concept 'investment' is useful. Norton explains that the concept 'investment' is best understood in relation to Bourdieu's economic metaphors, particularly cultural capital. Bourdieu and Passeron (1977) use the term cultural capital to refer to the social assets of an individual, such as education and style of speech or dress. Bourdieu argues that some forms of cultural capital have a greater exchange value than others. With this understanding, Peirce suggests that individuals invest in a second language supposing that 'they will acquire a wider range of symbolic and material resources, which will in turn increase the value of their cultural capital' (Norton Peirce, 1995, p.17). What is more, language competence can function as symbolic capital, such as increasing social status and

permitting access to valued language communities (Dagenais, 2003, p.272). The sociological construct 'investment' is different to the psychological construct of motivation because it conceives of the language learner as having a complex identity that changes across time and space and is reproduced in social interaction rather than a unitary and permanent personality. The construct 'investment' 'seeks to make a meaningful connection between a learner's desire and commitment to learn a language, and their changing identity' (Simpson, 2011). Consequently, it is probable that some informal interpreters invest in their imagined futures through the interpretation work. Essentially, the individual's imagined identity can have a significant impact on their investment in learning and using their L2 because the imagined identity impels them to seek out opportunities to pursue opportunities to learn and practice their L2 (Douglas Fir Group, 2016). Some of the questions posed by Darvin and Norton in their publication 'Identity and a Model of Investment in Applied Linguistics' were considered during data analysis in this research and contribute to answering the research questions, firstly, 'How invested are [learners] in their present and imagined identities?' and secondly, 'What do [learners] perceive as the benefits of investment?'(Darvin and Norton, 2015, p.47), in this study the individuals may not be 'learners' per se but are language users.

The concept of investment helps both to understand the meaning of the work for the individual but also may explain, to an extent, the different ways that the informal interpreters perform the language tasks. However, it is important to recognise that in the case of some bilingual construction workers there may be other reasons behind why and how they facilitate the communication between other people onsite or not, including their language competence and confidence and their relations with the people involved in the communication (Fuller, 2007).

Linked to the idea of non-participation described previously, the concept investment is a way of recognising L2 learners' changeable desires to engage in social interaction (Norton, 2013, p.6). For it is the individual's need to learn and use a language as well as their motivation that is implicated. While participation describes the actual actions, investment is related to the individual's desire and commitment to participating in interactions, which is affected by the relations of power and language practices of the relevant community (Norton and Toohey, 2011). For instance, an individual in a relatively powerless position in the workplace is less likely to speak up in their L2, similarly, certain named languages are 'languages of power' (Norton and Toohey, 2011, p.424) which afford the speakers of these languages more

opportunities to speak. Through her study of immigrant women in Canada using English as an L2, Norton Peirce found that, in difference to motivation, the construct investment was useful because it recognises that the speaker's relationship to the target language is socially and historically constructed, rather than dependant on internal motivation alone (Peirce, 1995, p.17). For instance, someone can be motivated to learn a language but not be invested in the current community where that language is being taught or used because said community may be sexist, racist, elitist, anti-immigration or homophobic (Norton and Toohey, 2011, p.421), leading to the individual either being excluded from or choosing not to participate in those practices. While many of the migrants working onsite are not language learners per se, the impact of the work environment on an individual's investment, or not, is a relevant consideration.

It is necessary to recognise here that this theoretical approach has been criticised by some researchers, and there is a need to justify its use despite these criticisms. Firstly, Price (1996) highlights a contradiction between Norton Peirce's conceptualisation of 'subjectivity as changing' (Norton Peirce, 1995, p.15) and the fact that one of Peirce's principal research participants can uphold her identity as a mother over other identities even when she might be constructed in discourse as an immigrant (Price, 1996). This criticism is interesting and highlights, as Norton Peirce recognises, that 'further research is necessary to refine, extend, or refute the theories presented' (Norton Peirce, 1996, p.338). For instance, the concepts 'salience' and 'investment' could possibly be used to explain how an individual can insist on one identity over others. Certainly, more conversational data that allows for closer analysis is needed to strengthen Norton Peirce's claim that language is involved in the construction of identities and not only in what identity options are available to the individual, such as mother, wife, worker, and immigrant. More longitudinal studies would also support the claim that identities change overtime. Therefore, while in the intervening years this approach has not been refuted, there is still scope for extension and refinement. Indeed, this research provides new examples of how this poststructuralist language and identity framework helps to understand possible relationships between naturalistic SLA and identity for adult migrant workers, a context with much less research than SLA in classroom settings. Meanwhile, the relation between translanguaging practices and identity, discusses below, also adds to the literature in this area, as the connection between these interlingual language practices and identity has only been explored in-depth in a few publications (Richards and Wilson, 2019, Nguyen, 2019, Nkadimeng and Makalela, 2015, García and Leiva, 2014). Despite the above

shortcomings, as stated by Crump (2014) in her review of Norton Peirce's more recent work (Norton, 2013), 'Norton's constructs of investment and imagined communities have been resilient and productive even in light of significant socio-political and economic shifts over the past decade' (p.257).

Secondly, concerning 'Negotiation of Identities in Multilingual Contexts' Nilep (2006) highlights that Pavlenko and Blackledge state that individuals have agency and continually seek new social and linguistic resources that will enable them to 'resist identities that position them in undesirable ways, produce new identities, and assign alternative meanings to the links between identities and linguistic varieties' (Pavlenko and Blackledge, 2004, p.27). Yet Nilep highlights a tension between this statement and Pavlenko and Blackledge's claim that some identity positions can be assumed without negotiation and some are imposed and non-negotiable which leaves only a portion of identities to be negotiated (Nilep, 2006). It seems likely that this reading is a simplification of Pavlenko and Blackledge's work as, for example, assuming identities without negotiation may be the result of an individual's prior investment in a language, allowing the individual to assume an L2 identity, or investment in a skill allowing them to assume a new worker identity, with relatively less struggle than in situations that require resistance. For instance, in this research some participants resisted the identity of 'construction worker' that was imposed on them and instead struggled to be recognised as an artist (Magda) or a graphic designer (Joao), identities that could not easily be assumed in the social context they were in at the time. In Pavlenko and Blackledge's work 'negotiation of identities' refers to negotiation within interactions in a social setting but the identity work that underlies this is a longer process. Therefore while this critique underlines a need for further clarificatory publications (a process which has begun in the intervening years (Creese and Blackledge, 2016, 2016, Creese and Blackledge, 2015)) as Nilep nonetheless concludes in his review: 'the book represents an important contribution to our understanding of the interconnectedness of social practices, languages, and identities', hence their contribution to the theoretical basis of this thesis.

Finally, Ramos Pellicia (2015) explains that Block gives an overview of how SLA research has indirectly explored issues related to identity but had not concentrated on the direct connection between SLA and identity until recently, which is the gap that Block's research begins to fill. However, Ng (2009) provides a valid critique of Block's work by signposting

his over emphasis on interviews and narratives to support his description of identities as open-ended and unstable. Ng stresses that research interviews can create the realities they claim to describe. Indeed, within this thesis the limitations of the available data types are recognised (chapter 6) but the advantages of narratives for exploring identities are also discussed.

Given the above criticisms, the identity and language approach is particularly helpful in the extracts of narrative inquiry on in-depth interviews (chapter 7). This analysis of the interpreters' narratives helps comprehend their own sensemaking stories and trajectories (Brown et al., 2008). Indeed, sense-making is grounded in identity construction. The ways individuals make sense of actions and events are analysed, contributing to a deeper understanding of these individuals. This section has outlined one layer of the theoretical framework, the part concerned with the individuals at the centre of this research. The theoretical construct translanguaging will be discussed in the following section, this construct is largely used to answer question two, 'What language work do the informal interpreters do and how?'.

5.2 Translanguaging

To understand the informal interpreters' language practices interlingual communication is conceptualised in line with the concept of translanguaging. The translanguaging perspective views language as fluid and unique to each individual (Hua, 2017). Essentially, as Creese and Blackledge suggest, while 'the idea of a *language* therefore may be important as a social construct, but it is not suited as an analytical lens through which to view language practices (Creese and Blackledge, 2015, p.20). The act of translanguaging is similar to code-switching and code-mixing in that a plurilingual person does not use just one language in an interaction. However, the concept differs because it rejects the structural view and separation of language, and instead emphasizes the individual and the flexibility of language in use (Creese et al., 2016). According to Creese, 'translanguaging is a way to seek connections where miscommunication threatens. It puts the relational before the linguistic, it foregrounds meaning rather than code, and understanding more than "correctness".' (Paulsrud et al., 2017). Translanguaging also differs because it is a practice that endeavours to avoid valuing some language practices above others.

Researching everyday communication on construction sites through the translanguaging lens helps to show how individuals use their communicative capabilities to interact with colleagues who do not share the same named language. According to the theory, language encompasses multiple senses and signs as well as multiple languages, and the individual uses their entire communicative repertoire to create sense and meaning. This conceptualisation of language seems appropriate for interpreting on construction sites, a context marked by its diversity of language speakers and activities and that creates a need to organically devise means of communicating that go beyond more rigid and simple conceptualisations of communication and indeed interpreting. This thesis will show empirically how this theoretical link can contribute to the understanding of communication on construction sites.

It is probable that attempts to facilitate communication onsite that build upon existing practices are more successful than approaches that seek to create radical change and impose demarcated languages. This is significant because speakers of more than one language do not think in one language (Hua, 2017) and bilinguals do not have equal knowledge in each language. Researchers working with translanguaging think of people as possessing an idiolect, rather than knowing languages. For example, a monolingual speaker's communicative capability is unique to that person because of factors such as region, social class and style, and a plurilingual speaker's idiolect includes linguistic features specific to distinct socially and politically defined languages.

It is worth highlighting here the difference between the terms 'multilingual' and plurilingual'; while multilingual refers to a person's ability to use two or more languages or the co-existence of these languages in a society, plurilingualism is subtly different in conceptualising languages as a network. The term plurilingual stresses that an individual does not keep these languages compartmentalised but rather builds up a communicative competence where languages interrelate and can be drawn on to understand previously unknown languages (Council of Europe, 2019). Such considerations may be valuable in a context as linguistically diverse as a construction site.

Wei extended the idea of language instinct, the innate capacity of humans to acquire languages, by adding the concept of a 'translanguaging instinct'. According to Wei (2018, p.24) 'the Translanguaging Instinct drives humans to go beyond narrowly defined linguistic cues and transcend culturally defined boundaries to achieve effective communication.' If we are to

accept this as an innate capacity, firstly we can understand how understanding in such circumstances is achieved currently, and secondly, we can view this practice as something that can be utilised by all workers, including those who are L1 speakers of the country's official language.

The employment of translanguaging to study the language practices of an interpreter may at first appear contradictory, as interpretation is understood as the transfer of meaning from one distinct named language to another. Yet there are two principal reasons for why this is not the case. Firstly, as will be examined in the data, the language work onsite is rarely an interpretation, this is an oversimplification from previous literature. Secondly, the practices of translation and translanguaging can be used in parallel, especially in instances of informal interpretation, as although the means are different the common goal of both activities is the same. In fact, the presence and utility of translanguaging practices in community interpreting events is beginning to be explored (Baynham and Hanušová, 2017, Baynham and Lee, 2019, Rock, 2017, Aldersson, 2019). Indeed, the Leeds group of the translation and translanguaging project (TLANG) (Simpson, 2017) recorded dialogues with a community interpreter and found that she frequently translanguages. For example, context specific terms such as 'council tax' were left in English whilst everything else was interpreted. In the book 'Translation and Translanguaging', Baynham and Lee (2019) claim that there is a fundamental difference between the two practices – translation is an institutionalized practice that is regulated and involves money, whereas translanguaging is a bottom-up language practise. Nevertheless, they also examine the work of informal interpreters and demonstrate that translanguaging was a useful concept for understanding a community interpreting event because 'there we saw how interpreting involves a to-and-fro, back-and-forth negotiation across languages, and therein resides translanguaging. This departs from a linear imaginary of translation as moving from Language A to Language B' (p.185). Such distinctions are even more blurred in the context of a bilingual worker informally interpreting on the construction site, where the practice is barely regulated. Although translanguaging likely happens regularly onsite, including by the informal interpreters, there are translating and interpreting episodes within this, when there is a stronger consciousness of the borders of the languages involved. Baynham and Lee explain that 'a translanguaging space emerges from different kinds of mediating procedures, including translation, transliteration, code-switching/mixing' (2019, p.40). They argue that consequently translation can 'be seen as embedded within a translanguaging space, at the same time as it is composed of successive translanguaging

moments… mutually embedded such that we can speak of translation-in-translanguaging and translanguaging-in-translation' (p.40).

Indeed, Rock (2017, p.232) advocates for a review of interpreting practice to address the pervasive monolingual norm which influences it. The recommendation is not to change interpreting to include more translanguaging but rather to make people who work in fields where interpreting is needed more aware of the reality of multilingual communication, with the intended effect of creating understanding of the complexity of the task, arguably this is needed in construction. Rock (2017, p.232) emphasizes that 'assumptions about the benefits of language separation can unnecessarily stigmatise those for whom translanguaging is a normal part of everyday life and can lead to erroneous assumptions about their capacity for full and active participation in encounters across the social scene.' This statement is valid in the construction site context and will be explored in the data. So informal interpretation onsite can be conceptualised as 'translation-in-translanguaging'. This way the complexity and collaborative and contextualised nature of the interlingual communication becomes visible, and the language skills of migrant workers come to the fore.

On one scale, translanguaging makes translation impossible because different language and semiotic resources are drawn on simultaneously. Yet on another scale translation can be conceptualised as an array of activities 'that includes but also goes beyond substantive translation, there is an overlapping region between nonsubstantive translation (cultural mediation, diffusion of symbols, transculturation) and translanguaging'(Baynham and Lee, 2019, p.53). Baynham and Lee's conceptualisation of the translation process is also applicable to interpretation, namely that 'translanguaging can be a way of understanding the routine moment-to-moment flux and bricolage of translating as an activity, where translators draw on their multilingual repertoire and artefacts in the environment, such as the internet, dictionaries, and databases, in coming up with a translation "equivalent"'. This conceptualisation is particularly applicable to informal interpreting, as while in translation and professional interpreting this is often a hidden cognitive process, in informal interpreting it might be spoken aloud or made visible, and perhaps done as a collaborative effort involving various human and non-human actors. Nonetheless, it is important to highlight that in their theorising Baynham and Lee (2019) argue that translation moments correspond to translanguaging moments but are not reduced to them because translation works across borders keeping languages apart while translanguaging brings them together and thereby

dissolves these borders (p.183). In summary, translation and translanguaging are different forms of dynamic language practices but can be mutually embedding, translation in translanguaging and translanguaging in translation (p.185). In essence, the informal interpreters interpret within a translanguaging space, and while the interpretation is their task, the translanguaging practices are of interest as part of the communication practices of themselves and others onsite, and because of their involvement in identity processes, which will be discussed later.

However, the recent popularity of the term translanguaging has raised concern and its use needs to be justified. In the 2018 paper 'Meaning-making or heterogeneity in the areas of language and identity? The case of translanguaging and nyanlända (newly-arrived) across time and space' Bagga-Gupta and Dahlberg criticise use of the term. Some of those criticisms relate specifically to education contexts and are not relevant here. Others, however, concern the concept itself. The first issue they present concerns the fact that this type of hybrid communication is dominant around the world but not recognised in Euro-centric discourses, yet this is an issue that is taken up in the translanguaging literature itself, indeed the contexts in which it has been researched are largely everyday interactions. The second issue they profess is that by using concepts that mark boundaries, such as bi/multi-lingual, meaning making becomes secondary, even though from the participants' perspectives it is the central aim of the interaction. Yet this difficulty, of studying language practices without using such terms and centralising the language user, is recognised by many who use translanguaging, and who make efforts to move away from the separation and hierarchy of languages, for example in their new forms of transcription, and strive to focus on the participant, through ethnography, rather than extracting language for detached analysis (Copland, 2015). Bagga-Gupta and Dahlberg also argue that prefixes such as 'trans' in translanguaging are not helpful because instead of understanding such practices as the norm of human communication they 'index boundaries that build upon a monolingual norm'. These authors build on this criticism in a 2019 article, stating that 'making visible complex practices have resulted in methodologies and representational techniques that, while seeking to "go beyond" boundaries across language-varieties and modalities, may, in fact, deploy and reinforce such boundaries' (Messina Dahlberg and Bagga-Gupta, 2019). The rationale behind such issues of terminology is relevant, however in contexts where the monolingual norm is so ingrained it may be too difficult to reclaim terms such as 'languaging' in a way that covers plurilingual norms, therefore, translanguaging has merit for having succeeded in bringing these matters into

dominant discourse. Another criticism that needs to be addressed here is the overemphasis on the emancipatory benefits of translanguaging, which is also relevant to the construct of investment, ultimately the individual's identity options are limited and frequently 'linguistic and cultural diversity maps closely onto various and multiple indices of social deprivation'(Bradley and Simpson, 2020 , p.23). Here the use of narrative inquiry is helpful for situating the individual and their actions within their life trajectory and circumstances.

The drawback of using translanguaging is that to fully exploit its potential for insights it is necessary to have recorded linguistic data. As this has been impossible to obtain in this research, the theory is used with interview and material data, another reason for combining it with an identity approach to achieve a deeper and more holistic analysis of the dataset. Likewise, the identity and language approach alone would not enable a close enough focus on language given that this is the primary feature and practice of interest in the workers studied.

5.3 The parallel use of the identity and language approach and translanguaging

The identity and language approach and translanguaging are related, as language is closely tied to identity and the translanguaging perspective highlights this. Translanguaging is also chosen because it is a language-user oriented theory not a language orientated one, like code-switching. Translanguaging theory is usually employed in projects using linguistic ethnographic methods, and as Pérez-Milan explains, this methodology usually entails the perspective that 'language and the social world are mutually shaping' (Pérez-Milans, 2016). Furthermore, Blackledge and Creese (2016, p.272) stress the importance of considering individuals' identities as emic positions, as self-identities, rather than thinking of identities in terms of categories. Concretely, they argue that identities should be understood as fluid, not stable, affected by time and space. This matter is particularly significant for understanding migrant workers who interpret because frequently they are speakers of languages with lower status and 'language issues are likely to be more salient as they negotiate identities often from relatively powerless positions.'. In the context of a construction site, we can see that some people are unable to negotiate their identities because of being in powerless positions, some in more powerful positions do not need to, but others use their communication skills to 'negotiate new subject positions' (Blackledge and Creese, 2016, p.276).

The connection between translanguaging practices and identity has been most widely discussed in relation to language learners but also overlaps significantly with workers' language use (see Nguyen, 2019, Nkadimeng and Makalela, 2015, García and Leiva, 2014). It has been suggested that translanguaging practices enable students to overcome language barriers and articulate an identity that is between two languages/social groups, 'translanguaging can be seen as a means of creating their 'trans-identity' (Nguyen, 2019, p.41). For these scholars, language choice in use is directly related to identity shift. Expressly, as Li and Zhu emphasize, beyond mixing different linguistic forms from different languages, translanguaging also entails expressing and negotiating identities in 'newly created social spaces' (Li and Zhu, 2013 , p.532). Furthermore, the connection between translanguaging and a transdisciplinary framework for SLA was discussed explicitly in a 2019 paper by Leung and Valdés who state that the 'trans' prefix in terms such as transnational, transcultural and translanguaging 'forces us to grapple with change, with movement, with fluidity, and perhaps with conflict. In most cases, the "trans"-turn challenges established orthodoxies and understandings'(Group, 2016, p.349).

Neither the identity and language approach nor translanguaging have been used in the existing literature on onsite communication. However, translanguaging has begun to be used in the literature on interpretation and seems particularly apt for exploring this in more informal contexts. Furthermore, studies in construction management have not explored language identities. Consequently, this theoretical model is well-positioned to help create new insights in the area of communication with migrant workers on construction sites and to propose new ways of researching informal interpreters more generally.

This chapter has made clear the relation between the chosen theoretical constructs and the questions addressed in this thesis. The following chapter outlines the methodology used to collect and analyse the data from which the answers stem.

6 Methods

This methodology chapter explains the rationale for choosing the methods (6.1), a description of the process of gaining access to research sites (6.2) and of data collection (6.3), a reflection on the difficulties I encountered carrying out the fieldwork (6.4) and on my role as a researcher (6.5), and an overview of the ethical considerations taken into account (6.6). In the final part of this chapter the process of data analysis is described (6.7).

Research into interlingual communication, particularly in the context of construction, entails multiple methodological challenges, such as the different languages spoken and the itinerant nature of the workforce. The research methodology was designed to meet those challenges as far as possible and adapted as the research progressed, as Costley and Reilly state, 'linguistic ethnography must be fundamentally flexible in nature' (Costley and Reilly, 2021). Essentially, it entails using qualitative methods within a language and identity theoretical framework.

6.1 Rationale for an ethnographic approach

An ethnographically informed approach was utilised in this thesis and the data collected include informal interviews, observation notes, photos and documents. The reasons for this approach were multiple. Firstly, the research needed to be qualitative because of the exploratory nature of the research aim, which is to explore the work of informal interpreters. Secondly, ethnography is used to explore everyday social experiences and how reality is produced through interaction (O'Reilly, 2008), which aligns closely with the aim of this thesis. As little is known about the topic, using a combination of methods helps to create a more rounded understanding, and determine what questions need to be asked. Combining methods also increases the validity of the research (Kawulich, 2005, p.5).

Quantitative methods were not used because the aim of the research is not to confirm theories or assumptions but is exploratory. Furthermore, a survey was not used in part because many of the studies in this area already used surveys. For example, Jaselskis et al. (2008) carried out a survey of contractor attitudes and needs regarding the use of Hispanic workers in the US. They report on how many contractors rely on an interpreter, which solutions they propose to language barriers etc. Bust et al. (2008) in their survey included a question, for instance, on how it is ensured that workers understand their H&S responsibilities e.g. by using interpreters

or having translations or language classes etc. Wasilkiewicz et al. (2018) survey research reports on language related challenges such as building errors, disagreements and accidents, Phua et al. (2010) explore existing strategies for managing cultural diversity, and Loosemore and Lee (2002) investigate the problems that ensue from having a diverse team. Combined, such studies offer a foundational understanding of communication problems onsite, and strategies used to manage them. Arguably, another survey would not yield many new insights because more in-depth, exploratory research is required to establish what other questions need to be asked. Without doing more-in-depth work first on informal interpreters specifically, then using a survey would potentially constrain the scope of findings and not challenge preconceptions of the researcher, who limits to a greater extent than in interviews the remit of participants' responses. Some studies on onsite communication have used observation and interviewing and have provided valuable insights that build on the above survey research. It is these studies that this research builds upon by using similar methods but more focused on the language practices.

A case study of an informal interpreter would provide an interesting and underrepresented perspective, but although a case study would develop the current work, a study with more participants was preferred at this stage as this has identified patterns and extended previous work to give a wider view of communication practices. Moreover, a case study would require a deeper level of access to an informal interpreter with the same language combination as the researcher than was gained in this study.

What is more, methods commonly used in the field of consecutive interpreting research, which rely on recorded data of interaction and micro-analytical methods (Hertog and Van der Veer, 2006, Drew et al., 2001, Davitti, 2019), would not be appropriate to explore the work of informal interpreters generally, as on construction sites directly interpreted communications are rare. Nevertheless, an in-depth study of a key moment, such as an induction, using multimodal analysis of interpreted interaction, could be very revealing. The primary reason for needing an in-depth analysis is to ground assessment of interpreting practices in 'what *actually* happens in interaction and *how* it happens, rather than on *a priori* assumption of what should (not) happen' (Davitti, 2019). According to Davitti, multimodal analysis can provide evidence of the complexity of discourse interpreting interaction, which is often underestimated. Furthermore, Pasquandrea (2011) explains how the data may be misinterpreted if only the

verbal is analysed because, for example, verbal initiation is often preceded by nonverbal signals.

The potential use of video data was also explored for this research. This would allow for an in-depth multi-modal analysis of communication, albeit not analysis of a conversation but rather perhaps following the interaction. This type of data would make it possible to examine issues of participation, empowerment and neutrality, which are relevant to the work of informal interpreters and workers onsite who do not speak or understand the dominant language. It may also be possible to analyse interpreted messages, to see whether these are simplified or expanded upon etc. As with the case study, using this method could create a valuable contribution to our knowledge of language practices onsite, but this was not used ultimately because of the difficulties negotiating access for such data in the sector and the associated time constraint, accentuated by the COVID-19 pandemic.

The methodology used in this thesis aligns with the 'shift in translation studies away from a predominant concern with translated textual products and toward a view of translation and interpreting as social, cultural and political acts' (Cronin, 2013), with a focus on interpreters as actively participating cultural agents. I decided that an ethnographic approach was needed to research the work of informal interpreters on construction sites because of the situated, complex nature of communication, aware that being there is the only way of understanding what is involved in the work in practice (Tutt et al., 2013b). The ethnographic approach taken in this research aligns with O'Reilly (2012) definition of ethnography to an extent because it combines a family of methods, involves direct contact with humans in their daily lives, and acknowledges the roles of theory and the researcher. However, the contact was not as sustained as in traditional ethnographies. Yet, shorter versions of observation are common in the field of construction; Oswald and Dainty (2020), suggest that this may be due to the nature of the industry, with a transient workforce and dynamic projects. It is nevertheless argued that ethnographic research has good potential for understanding construction practice and offers insights that can be used for proposing interventions to improve the experiences of the group studied (Tutt and Pink, 2019, Oswald and Dainty, 2020), which is an aim of this thesis.

Observation allows me to describe what I see and what I hear, both very important for understanding the informal interpreters' work. Specifically, observation methods make it possible to determine who interacts with who and how (Kawulich, 2005). The notes collected

from observation help comprehend the work of the interpreter, such as by identifying what communication needs there are, the different types of communication used, and the relationships between the different linguistic groups.

Photos of materials relevant to communication onsite are used to support the analysis. This includes signs and posters. Induction documents and hat stickers were also collected. This visual and material data also helps to delineate the informal interpreters' work, by showing what textual information is already translated and what is not.

I also conducted informal interviews with many different participants; the reason for the interviews being informal is so that the interviewee takes the lead (Copland, 2015) and I learn from each participants' own perspective (O'Reilly, 2008).

All research methodologies have their limitations and risks, and where possible I have minimised these through the research design. Remaining issues include that ethnographic studies are not generalizable due to their comparatively small samples. However, by carrying out a multi-sited ethnography, and considering that the workforce in construction is transitory, the findings may be inferred to this group of workers, the informal interpreters (O'Reilly, 2012). Similarly, because the periods of observation are short, there is a risk of reactivity, known as the Hawthorne effect which is 'a change in the subject's normal behaviour, attributed to the knowledge that their behaviour is being watched' (Oswald et al., 2014 , p.57). However I hope to have mitigated the Hawthorne effect by using more than one approach (Oswald et al., 2014). Furthermore, how my identity and the way I accessed participants may have affected the data is reflected on in 6.5. Part of this chapter has been dedicated to reflection because the subjective nature of the qualitative research in this thesis requires a reflective account of the research process (De Fina, 2019), so that the reader is aware of the circumstances of data collection and how this created the unique data set.

6.2 Negotiating access

To facilitate the process of negotiating access, I did this in stages (Heath et al., 2010). This involved doing two separate ethics applications. One for an initial stage with informal interviews, and one for the main study, which was more complex as it involved observation and material data collection. During the process of gaining access, I was open about my

position as a researcher and my research aims. I reassured participants by explaining that data would be anonymized and by emphasizing my interest in the ordinary, the routine, and examples of good practice rather than the dramatic or negative. I also offered to create a report and/or to present my findings as a way of reciprocating their time commitment (Heath et al., 2010). Examples of the information sheet and the participant consent form are included in the appendices.

As a PhD student in the School of the Built Environment at the University of Reading, I gained access to some of the construction sites for my fieldwork thanks to members of the department, and others through contacting sites who had advertised their efforts to facilitate communication onsite on a public forum. The negotiation involved a discussion about the research and the type of access needed and encouraging any questions, this initial contact was by phone or email. Once research access was agreed with the gatekeeper, I shared an information sheet and consent forms with the interview participants I met onsite. I initially did a site visit in May 2019 which helped me design the project. I then did some site visits with a large contractor in October 2019 where I started the interviews; however, this group of workers would move on as the project finished before I was ready to start the more intensive period of data collection.

The onset of the pandemic just when I was getting started with the core data collection in February 2020 meant that the site visits I had scheduled had to be put on hold. As it became clear that lockdown was going to last a long time, I had to find new ways of collecting data. I interviewed a few UK based construction managers during this time, as they were working from home and we could do a video call, but I was not able to access the workers as they were still working onsite. At this point I started to search online networks more thoroughly. One of the networks I used is an online job platform for linguists. I contacted people who said on their profile that they had experience interpreting in the CI. I began with people reportedly in the UK. Those who responded had varied experiences spanning many languages and many countries. I then expanded the scope to all English-speaking regions listed, because of the low response rate I needed to reach more participants. These countries were the UK, New Zealand, Australia, Ireland, Canada, Antigua, the Bahamas, Belize, Trinidad and Tobago, Jamaica, Dominica, and the US. Initially it was useful to hear from professional interpreters about their jobs in construction, helping to delineate when and why professionals are hired and how their work differs to that of the informal interpreters. Yet on this platform I also found several participants who responded saying that they had experience working in

construction but weren't trained as or hired as interpreters. They were advertising their language services on the website because they had developed these linguistic competencies during their construction employment. After months of contacting people with the criteria that one of their languages was English and they listed construction as a specialty, I had 11 professional interpreter participants (hired as interpreters and trained), 5 semi-professional (hired as interpreters but not trained) and 3 informal interpreter participants (not trained to interpret and hired in another capacity, e.g., labourer). One interview was discarded because the participant's interpreting experience turned out to not be relevant. The response rate was low and of those that did respond by email there were a lot that I did not pursue for an interview because they did not have much relevant experience. Nonetheless, this process itself, of searching the network and contacting people, helped to understand the field better, particularly in relation to construction sector differences and global similarities and differences regarding communication onsite. This access method, although it meant that I was not out onsite, had a considerable advantage - as the participants had advertised their speciality in this topic many of them were enthusiastic to share their stories.

As a consequence of this flexible ethnographic approach some of the information that contributed to this thesis has not been explicitly included in it because of not engaging the individuals in the consent process as they were not going to participate in interviews or observations. One example of such information is the emails exchanged with potential participants, through which I learnt that professional interpreters are often used in other construction related activities including interpreting in court disputes, at trade shows, conferences etc. I also trawled social media sites and job platforms for Spanish speaking migrant workers in London looking for construction work and watched YouTube videos, for example where one worker explained to potential migrants, in Spanish, how to access construction jobs in the UK and talked them through the paperwork, helping those unable to understand it in English. Searching the websites of companies, unions, and charities related to construction and seeing where language is not mentioned was also useful for comprehending the invisibility of the language work. On one construction forum I did find several posts relating to good, innovative, practices related to communication across languages. These were incredibly interesting and a useful starting point for negotiating access. Even so, after conducting a thorough search using keywords it was clear that there were just a few relevant posts over many years, and the fact that these initiatives were celebrated as a leading example

of good practice could demonstrate how attention to improving communication with speakers of other languages is atypical.

6.3 Data collection

The first two site visits were useful for evaluating the adequacy of my research design. The first, in May 2019, was the site of an educational building in Southeast England and was my first time on a construction site. Although I did not record the initial conversations, it was useful for me to get the feel for a site and learn from the manager's years of experience managing multilingual teams.

Southeast England, 09/05/19, 8am, project 0

The first time entering a construction site as a complete outsider researcher was a stimulating experience – fascinating and tense. First, I had a long chat with the Senior Project Manager Ron who had many years of experience in the industry, working in the Southeast of England. So, he had a wealth of experiences and opinions about onsite multilingual communication to share. Firstly, discussing the span of the timeline of a construction project it became clear that often the language barriers are present throughout, with suppliers in other countries, for example. This prompted me to narrow the focus specifically to communications onsite. In this company, several practices to aid onsite communication have been developed, such as having posters and induction leaflets in four languages, pictorial signs, and colour-coded hats. Yet the oral communication onsite had not been well considered. For example, the video used in induction was not subtitled or with voiceover so was summarized on the spot by an informal interpreter, who also helps with activities as diverse as medical checks. Although it was mentioned several times that work was re-done because instructions were not followed, the prevalent attitude was that 'we get by', and 'it is what it is', yet after some discussion one of the managers said 'we should think more about translation'. These discussions confirmed what I had read in the literature on the informal nature of language practices, and my focus on oral communication. The plan to use an ethnographic approach was also solidified by these site visits for several reasons. Firstly, physical objects often play a key part in the communication. For example, the interpreter may refer to drawings or artefacts, or use technology to fill gaps in terminology, and being sensitive to these forms of communication requires the researcher

being there to understand these practices. Secondly, it was necessary to be able to visualise a site and work patterns and relationships to understand the interview responses. He then offered for me to have a walk around the site with him so after donning my PPE for the first time (yes, I did feel a bit daft, partly because the kit was for men, so it swamped me) we walked around the site, with Ron pointing out who different people were as they went about their work. After this site visit, I felt like at last I had made a breakthrough – I had access to a convenient site and via someone who was open to speaking about their experiences with migrant workers.

Southeast England, 11am, 20/05/19, project 0

I met with Ron again and was then shown around by Assistant Project Manager Tom and Site Manager Rob, who work with the walls and ceiling subcontractor. This was a great opportunity to talk to two professionals in a more relaxed and natural manner than an interview and this access to the setting helped me focus the research objectives before the core period of data collection. As they knew I speak Spanish he introduced me to one of the workers who was a Spanish speaker from Colombia, the only one among various British guys, some from different Eastern European countries, and an Algerian. The Algerian guy could speak some Spanish so would interpret for the Colombian guy when necessary. This brief introduction wasn't an opportunity for the type of data collection I was after but a chance for me to get a feel for the way the teams work and then when I came back my face would already be familiar, easing the start of the data collection period and building rapport.

Again, I left the site feeling positive, it seemed like I might even be able to observe and interview a Spanish speaker interpreting – just the data I was hoping for. However, when I followed up on this possibility, I first received an automated email from Ron – he was no longer working on the project. Argh. Then I got hold of the assistant project manager – phew! – oh…the Spanish speaking workers have moved on, and no they do not have contact details for them. Negotiating access and building rapport is a tricky balancing act – too pushy and you are turned away or accepted warily and unable to have truthful conversations, yet it is vital to be insistent and to seize opportunities as and when they arrive because the nature of the industry does not allow for a steady and cautious build up to a strong rapport.

I was then able to carry out some interviews in October 2019. I spoke to five people on a large residential construction site in London. Access was negotiated through a colleague who

was the previous PM. The participants had different positions onsite and provided diverse perspectives and experiences surrounding onsite communication. All interviewees noted the need to have someone in the team who could act as an interpreter and talked about other important communication methods such as using photos, drawings, Google translate, and gesture. Overall, the opinions expressed and situations described by participants confirmed the need for the research and the use of the translanguaging lens. Moreover, the analysis of these initial interviews developed possible analytical themes such as linguistic make-up of the teams and gesture. Therefore, although the study was small scale it served to confirm parts of the project design and prompted me to further develop others. For example, it confirmed that the theories I had chosen would be useful, but also made me more interested in identity and aware that gatekeeping was going to be a difficulty in the research. My contact point was management in both of the first cases. They chose people that they thought would be helpful for me to speak with. While these people offered a useful perspective, I was not accessing many migrant workers. The migrant workers I did speak to were those able to speak English, and so often acted as informal interpreters. Only on later walk-arounds was I able to speak to informal interpreters out onsite where their communicative capabilities were a stark contrast with some of the other guys, who I could only talk to briefly through an informal interpreter. Moreover, these initial interviews were shorter than I had intended. At the time I asked all of the questions I had planned to ask, and the participants gave varying lengths of response to this. I had expected some difficulty in accessing the type of information required through interviews, which was part of the rationale for also using other methods. Nonetheless, it was more difficult than anticipated to keep the conversation going. This was perhaps because this was my first experience interviewing. However, I suspect that some of the difficulty also stems from how access was negotiated. Despite talking through the study and gaining consent with the participants, they were perhaps reluctant to participate fully. In these cases, despite attempting to make the participant at ease, the interviews were shorter, more responses relating facts about their work life than telling stories, giving opinions or showing emotions. These answers are nevertheless very useful, not only for adding accounts of the context and communication practices, but also as a contrast to other participants who engaged more extensively in the interview. It is specifically this contrast that led to interesting findings about the identities of informal interpreters. To improve the interviews for the next sites I created rapport more successfully with the gatekeepers, was more confident, and re-considered slightly the questions, to probe for more general descriptions of daily communication.

London, 10am, 15/11/2019, project 1

Residential project in central London. The manager had half a dozen people in mind for me to talk to. We went upstairs to the office. I was relieved to have a quiet place to conduct the interviews. The manager gave me his number and we agreed that I would give him a call after each interview and that he would then direct someone else to me. Here I did 5 interviews. Although it was great to speak with this range of workers the gatekeeper was doing this as a favour for his mate and was more hesitant about me being there. The project was also near its end so there wasn't going to be a chance to sit in on inductions, the fieldwork often feels like grasping at straws. Some of the participants were really not interested and it was difficult to engage them in the interview. This seemed to result from the unfamiliar situation of being interviewed with the consent process and presence of the recorded augmenting this. One participant suddenly opened up much more once the recorded was turned off. The dynamics between us didn't help, with me gaining access through their boss to research a potentially taboo topic and me being an outsider. It also didn't help that I was uncomfortable- anxious to make the most of this data collection opportunity and feeling out of place in an environment that was totally foreign to me- especially after hearing sexist 'banter' outside the office door – "there's only room for one pervert here" ((laughter)).

In January 2020 I proceeded with the main period of access negotiation and data collection. I visited a re-cladding project in London and interviewed six participants there. After the interviews I walked around the site with my gatekeeper, who was the PM.

London, 11am, 30/01/2020, project 2

A re-cladding project in central London. Here it was easier to speak with participants because we were introduced by a mutual contact (the same gatekeeper as on the previous site but he was physically there this time) which seemed to put participants at ease. However, although I had a walk around site, again this wasn't really an opportunity for observations given the nature of the project - it wasn't really possible to 'hang around' when the workers were hanging off the side of the building which was still occupied, plus there was some difficult politics surrounding the project due to the recent Greenfell scandal and besides, the pandemic hit shortly after this visit.

Following this I carried out interviews with interpreters via Skype and Zoom, as I was not able to go onsite because of the first nationwide lockdown. In the summer of 2020, between lockdowns, I managed to carry out a couple of site visits but was never able to spend the extended periods of time I had planned to. These visits were carried out on a large hotel and housing project in central London, and access was negotiated through a supervisor who I reached out to after he wrote about Covid safety communication on an online forum. This supervisor as well as the other participants recruited through the forum were most open to participating, because they had shown interest in the topic from the start. I informally interviewed one of the supervisors and a manager in the site office before going out onsite. As the supervisor was the gatekeeper this allowed us to build up some trust and for him to understand the research better. This way when I went onsite he was able to introduce me to people that he thought would have interesting experiences and different perspectives on the topic. I used voice notes on my phone as I was leaving site to record my impressions or snippets of the conversations I had onsite. This allowed me to record this information more quickly than writing so I forgot less. It was also more practical as I could do this as soon as I walked off the site and then sit down and flesh them out later as I transcribed the voice notes. I followed an observation guide to ensure that I was taking notes as thoroughly as possible. For example, recording notes on the physical setting, describing the participants and the interactions (Merriam in Kawulich, 2005 , p.15). The note taking was also structured by keeping the research questions in mind to focus attention on the most relevant participants, activities and interactions.

Before beginning the interviews, I went through the information sheet and consent form with the participants (available in the appendices). I then began recording using an audio recorder. Some interviews were face-to-face, others on the phone, and others using Skype or Zoom. I always began the interviews with an open question along the lines of ‘to start please can you tell me a bit about yourself and the work that you do?’ From there I either followed up on points of interest raised in the participant’s answer or referred to a pre-prepared list of broad topic areas. I created such lists for the general different types of participants: informal interpreters, professional interpreters, supervisors, and management. These questions can be found in the appendices. The participation in interviews of people with different positions on construction projects created a composite understanding of the informal interpreters’ work. Opportunistically for my research, their status of being stuck at home during a pandemic might have facilitated more in-depth interviews, as participants were keen to engage with

someone and often not in a rush. They were also in their own homes and me in mine, with Zoom or Skype communication perhaps creating a more neutral and private space than interviews carried out on construction projects. On the contrary, the couple of interviews I did by telephone were more difficult because of overlapping each other talking, pauses feeling longer than they really were, and perhaps less rapport being built by not being able to see each other. Another difference between the remote and in-person interviews is that it seemed likely that the participant forgets about the recorder if we are not in the same place. Of course, in both situations they consented to the recording, but in person the recorder was sat obtrusively on the table between us, so it was likely in the back of the participants' minds. On the commentated walks I did not record, which might have contributed to more natural conversation, but also meant that I had to rely on my memory, recording general gists of the conversation and paraphrases of significant sentences. The impact of space on interviews is not a new consideration, with Quinney et al. (2016, p.4) arguing that 'the role of the participant, the language they used, and levels of trust and rapport are all directly influenced by the space in which the interview is conducted'. I found that when doing the interview from their own home, participants were more active, giving longer more narrative answers and that sometimes their body and verbal language were more relaxed. Moreover, some participants in the online interviews commented on the fact that they enjoyed the interview as an opportunity to reflect on their language work, because it is often 'invisible' work, and in the case of professional interpreters also solitary.

As Tutt et al. (2013a) suggest, 'ethnography is a methodology that develops in practice' and a method that developed spontaneously in the fieldwork was the use of 'commentated walks'(Rouleau et al., 2014). I walked around site with one of the participants, which facilitated insights that would not arise through static interviews, and I would not gain walking around the site unaccompanied. The space stimulated different impressions and feelings for myself (Rouleau et al., 2014 , p.30), different conversations with the principal participant, but also with others who we found on our walk. This was interesting to see how people reacted to and interacted with both myself and the monolingual supervisor who accompanied me. This method also led to two occasions where two different informal interpreters facilitated conversations between myself and a worker that did not speak English. This gave me a great deal of unexpected insight into how informally interpreted interactions work in reality, as the informal interpreter engaged in their own conversation with the other interlocutor and then relayed the information he thought was important, saying 'he said…'. It was also an opportunity to see

how it feels to rely on an informal interpreter; essentially, I felt I no longer had agency in the conversation and wanted to ask more questions but it was too much to ask the informal interpreter to continue helping us and was left wanting to know what the communication that he did not relay to me was. Commentated walks are different to other similar methods because of the importance of the ethnographic approach, whereby the researcher must 'note his or her own emotions or surprises during their interaction with the person observed'(Rouleau et al., 2014, p.31). In terms of evolving methodology, my interviewing technique also changed and improved over time. I also changed some of the questions, for instance when I reached saturation on that topic or discovered an area I had not thought to probe. Moreover, as Oswald and Dainty (2020) argue, 'the flexibility of the ethnographic research approach can be fundamental to its success, because even planned research designs have to be changed around the time for fieldwork.' This was certainly true in this research, as the initial intention was to do audio or video recordings and longer periods of observation, however, it was necessary to change this because of the pandemic and access. Nevertheless, it was possible to fulfil the same research aim but focusing more on the social than the linguistic.

Table 1 below shows the pseudonym given to the participant, their sex, position hired for when the experiences discussed occurred, whether they were individual participants or part of a set of interviews on a project that was visited, the languages the participants have in their repertoire, and if they acted as an interpreter onsite and in what capacity.

Participant	**Male/Female**	**Job position**	**Construction project?**	**Languages in repertoire**	**Interpreter?**
Aleksander	M	Contracts manager	1	Bulgarian, English	Untrained informal
Daniel	M	Site supervisor	1	Romanian, English	Untrained informal
Lei	M	Project manager	1	Chinese, English	No
Matei	M	Supervisor	1	Romanian, English	Untrained informal
Andrei	M	Site supervisor	1	Romanian, English	Untrained informal

Stefan	M	Assistant site manager	2	Romanian, English	Untrained informal
Marius	M	Site manager	2	Romanian, English	Untrained informal
Ivan	M	Supervisor	2	Bulgarian, English	Untrained informal
Jack	M	Project manager	2	English	No
Sean	M	Assistant site manager	2	English	No
Paul	M	Site Manager	N/A	Romanian, English	Untrained informal
David	M	Project Manager	N/A	English	No
Hannah	F	Senior Site Manager	N/A	English	No
Fernando	M	Labourer>office assistant	N/A	Spanish, English	Trained informal
Lanfen	F	Interpreter	N/A	Chinese, English	Untrained professional
Amir	M	Architect	N/A	Arabic, French, English	Trained professional
Elena	F	Superintendent	N/A	English, Spanish, Catalan	Trained professional
Amal	F	Interpreter	N/A	Arabic, French, English	Trained professional
Greg	M	Interpreter	N/A	Japanese, English	Trained professional
Karl	M	Interpreter	N/A	German, English, French	Trained professional
Farah	F	Interpreter	N/A	Arabic, English	Trained professional

Olga	F	Interpreter/consultant	N/A	Russian, Kazakh, English	Trained professional
Ulla	F	Interpreter	N/A	Finnish, English	Untrained professional
Demitri	M	Project manager	N/A	Greek, English	Untrained informal
Johnathan	M	Interpreter	N/A	German, English	Untrained professional
João	M	Labourer>supervisor	N/A	Portuguese, English, Italian, French	Untrained informal
Magda	F	Project secretary	N/A	English, Portuguese	Untrained professional
Ahmet	M	Interpreter	N/A	Turkish, English	Professional
Ali	M	Interpreter	N/A	Kazakh, Russian, English	Trained professional
Sofia	F	University professor	N/A	Romanian, English	No
Michail	M	Interpreter	N/A	Russian, English	Trained professional
Zane	M	Interpreter	N/A	Swahili, English	Untrained professional
Jen	F	Safety manager	N/A	English	No
Anna	F	Interpreter	N/A	Russian, English	Trained professional
Sara	F	Interpreter	N/A	Spanish, English	Trained professional
Toby	M	Innovations manager	N/A	English	No
Jake	M	Works supervisor	3	English	No

Constantin	M	Construction manager	3	Romanian, English	Untrained informal

6.4 Reflection: difficulties

Some of the difficulties encountered in the research process are explained here for transparency and because they affected the data that is presented in the next chapters.

Negotiating access was one of the most challenging aspects of the research. It involved perseverance, creative thinking and strategic persuasive writing. This is a difficulty shared by other construction researchers, with Nycyk (2018, p.320) claiming that construction organizations 'are almost clandestine in their secrecy' and Hammersley and Atkinson stating that issues with access is a problem that "looms large in ethnography" (Hammersley and Atkinson, 2019, p.41). Like Nycyk, I experienced 'the power people had over me in my research and that they had the ability to control, intentional or not, my access to data.' Most sites that I approached refused immediately to be involved in the research, and a couple would participate but only to answer set questions – which I did not proceed with. In fact, a couple of industry professionals opined that I would never be allowed onsite to research this topic. This is why reaching out through the networks to both construction and interpretation professionals was key, because the participants were approached directly, rather than being suggested by their manager, and by already being public online on these networks engaging with this topic it was more likely that they would be interested in being involved. The difficulty of gaining access was of course compounded by the pandemic. Even during the periods when restrictions were eased companies that had previously agreed to participate in the research now wouldn't allow me onsite because of policies of not having non-essential people onsite, or because of distancing difficulties. One of the companies was also based in the North of England and I was now unable to travel.

A further difficulty, that I had not appreciated the extent of, was how to interview well when we did not share a language that we spoke fluently. I had considered this for observation and recording but not for interviewing, as I was speaking with the workers who facilitated communication across named languages. The problems presented are both in the actual interviewing and in the representation. For example, one participant mistakenly used the word 'influent'; as he made frequent minor errors I was not questioning or correcting him as

we were able to understand each other well and highlighting linguistic errors would not have been conducive to rapport, and at this point I believed I had understood and that he meant 'not fluent'. As Ganassin and Holmes (2020) found, 'a non-judgemental acceptance and accommodation of participants' language skills are fundamental in building rapport and trust.' Nonetheless, he repeated the word 'influent' later in the discussion, where this could not be replaced with 'not fluent'. By not asking for clarification at the time I made this data unusable.

Another issue that arose during transcription was of the best way to present the data. On the one hand, it seems preferable to transcribe as faithfully to the original as possible, to include features such as pauses, laughs, self-corrections and instances of translanguaging. However, on the other hand, as Reyes explains, this creates concerns about the impression of the participants that the transcripts convey, 'given the dominant discourse about the importance of language proficiency'(Gibb et al., 2019, p.185). This is a dilemma also acknowledged by Goodwin (1994, p.607) who states that in transcription practices 'politics of representation emerge as a practical problem'. Ultimately, the transcription is verbatim in so far as all words are transcribed and grammar is added to make sentences for readability. However, some other notations are included because how participants formed their answers to the questions is of interest. Nevertheless, it was not necessary to include other levels of detail such as of overlapping talk and speed. This method of transcription was chosen to highlight particularly noticeable features of talk that have a bearing on what is being discussed, see appendix 6 for a transcription key. In this way the data shows the participants' accounts in their own voice giving the level of data needed for the narrative analysis without needing a closer conversation analysis style transcript, which would make it difficult to access participants' voices.

The language barriers between myself and those whose experiences I was trying to document were problematic, but I decided that this was preferable to using an interpreter. As Brochgrevink (2003) argues, certain subtleties are not noticed by the researcher if an interpreter is used, such as 'statements that are not shaped as direct responses to the anthropologist's questions; the way some aspects are made explicit and others are taken for granted or politely passed over in silence; the use of different styles of speech to acknowledge social hierarchies; and so on.' Brochgrevink also observes that 'loss of direct contact between the anthropologist and the informant may make the communication process

more formal, tending more towards a formal interview than a normal conversation', using an interpreter might have created a sense of distance in the interviews and also made it impossible to engage fully with the data afterwards (Ganassin and Holmes, 2020 , p.846). Being able to transcribe the data without the assistance of a translator allowed me to become more familiar with it and was when initial analysis began. Additionally, it was useful to have access to elements of the interviews beyond the words, such as tone of voice, laughter, pauses etc. Furthermore, not using an interpreter made me more aware of translation issues in the research and how 'meaning is made through more than language'(Krzywoszynska, 2015, p.312). The most significant disadvantage of deciding not to use an interpreter is that the perspectives and experiences of migrant workers who do not speak English, and who rely on an informal interpreter, are not covered. However, witnessing and experiencing a language barrier onsite with these workers was insightful. In one instance, an informal interpreter I was talking to took it upon himself to include his co-worker, who did not speak English, in the conversation. I did not sustain the conversation because the worker was visibly uncomfortable, with very closed body language and eyes downcast, but even just a minute or two of speaking through the informal interpreter made visible the impact that this barrier has on relations as well as how much agency the informal interpreter took in this instance, to ask follow-up questions and not fully interpret answers.

Like Gibb et al. (2019, p.23), I found that demonstrating my own imperfect language skills helped build rapport and stimulate interest. In some of the interviews with both informal and professional interpreters, by exchanging even just some words in a common language that was not English, I built more common ground with these participants. In the cases of Swahili and French it was just a few words, but I believe it helped relax the participants. It showed my interest and commitment to understanding but also perhaps made them more confident speaking in English. Using my Spanish and Portuguese had the same effect, but we could build more complicity and on three occasions it created conversations that wouldn't have been possible otherwise; one where the participant did not speak much English, one about a misunderstanding that had occurred over a word in Portuguese, and another over variations of Portuguese from different countries. On a couple of occasions onsite using Portuguese allowed me to have much richer conversations than had we stuck to English. My Portuguese is riddled with grammatical errors and limited to conversational vocabulary, even so, using the skills I do have helped in a couple of ways. Firstly, with one Brazilian engineer I simply wouldn't have been able to talk to him otherwise as he did not speak much English.

Secondly, choosing to switch between Portuguese, Spanish and English with a Brazilian safety manager created an interesting dynamic. She chatted very openly with me, an openness which I think was facilitated by her experience with linguistic issues onsite, perhaps by us being the only females onsite, and perhaps also by being able to have a conversation that those around us couldn't understand. Also, demonstrating my experience with overcoming blocks in communication, through translanguaging, I think led her to reflect more on her own experiences with this more than just by asking questions.

6.5 Reflection: my-self in the research

With this type of in-depth qualitative methodology, which is inevitably subjective, it is important to be reflective about the process. Hence this section describes particular factors about the researcher that shaped the research.

The role I played onsite was largely pre-determined by myself as a British female with no practical skills that I could use in construction, therefore my position as an outsider is open to all from entering the site. This will have a negative effect in terms of the Hawthorne effect discussed above. However, being such a 'stranger'(O'Reilly, 2008) allowed me to observe and come to understand uninhibited by preconceptions, and participants were more likely to explain to me what is happening as they see it, rather than assuming a shared knowledge. This outsider feeling also made it easier for me to describe, reflexively, and to be inquisitive, which is necessary for ethnography. As O'Reilly (2008) maintains, 'difference can be a resource in ethnographic research, enabling the researcher to ask naïve questions that an insider…would never consider.' However, it has been argued that there are some situations where participating is required for understanding (Kawulich, 2005). Unfortunately, for this type of research it would not be possible to fully participate. The profile of the person being studied is very specific and different to mine in terms of their identity as a migrant, a construction worker, and a bilingual informal interpreter. In a further study it would be useful to do a case study of a migrant worker that the researcher shares a language with, but with research as wide reaching as this thesis with many participants there is no single 'community language' to use. Marchand similarly explains how certain types of knowledge can only be accessed by doing: 'my knowing how to carve a brick of type 'A', which I learned at the building site through mimicry and practice, is not entirely translatable into a propositionally constituted form of knowledge. Much of the practical experience that constitutes the knowing how eludes being 'fixed' by language

and is therefore filtered out in descriptions' (Marchand in Pink et al., 2012, pp.9-10). To an extent communicating is also this form of knowledge, especially in natural interpreting when the bilingual has learnt to transfer from one language to another through life experiences that necessitated this rather than by being taught (Pérez-González and Susam-Saraeva, 2012). Nonetheless, being there and speaking with participants affords a degree of participation. Importantly, my experience learning a new language abroad as well as my experience as an interpreter helps me to understand the communication practices.

I have already mentioned how later interviews were more successful than the earlier ones as I improved my technique. This is one demonstration of how the interview is co-constructed (Barkhuizen, 2013). Particularly in the more narrative interviews, it is important to highlight how my questioning influenced the telling of the story, as well as myself as the audience. While I attempted not to ask leading questions or make evaluative statements, it is inevitable that to some extent the participants' responses were shaped by their awareness of me as a university researcher, a linguist, female, not from construction, not a migrant, etc. Moreover, it is also true that the geographic location of the onsite interviews and other personal factors sometimes impinged on the rapport I was able to build with participants; while I am more out of place on a construction site, my status as a British citizen, first language speaker of the official language, education level and affiliation with a university caused unequal power relations in our interactions.

6.6 Reflection: ethics

As mentioned, I did two stages of ethics approval. Then when gaining consent at the beginning of an interview, with several participants I also ran through the document orally if I thought that they might not fully understand the written English. Some participants have learnt English by being here and through the job so do not necessarily know how to read and write it. I did not take translated versions of the information because I was speaking to the workers who are informal interpreters and so know enough English, or with English speaking management. The interview data is stored securely, pseudonyms have been used in the data presented, and I did not collect demographic data. Interviews rarely covered sensitive issues. Those that did come up, for example on witnessing serious accidents, were brought up by the participants and I was especially cautious at these points to let the participant guide the conversation and not pressure them into speaking through questioning.

Observations were brief so did not intrude much on their work. The documents collected are stored securely and do not contain personal information. Likewise, most of the photos are of signs. Where these have been used, I have removed the company logo. There is only one photo of a person, and this photo captures only the back of the participant and I received his consent before taking it.

While the ethical considerations largely concerned protecting participants, I also took precautions to safeguard myself, such as wearing PPE onsite and ensuring that someone knew where I was going.

6.7 Data analysis process

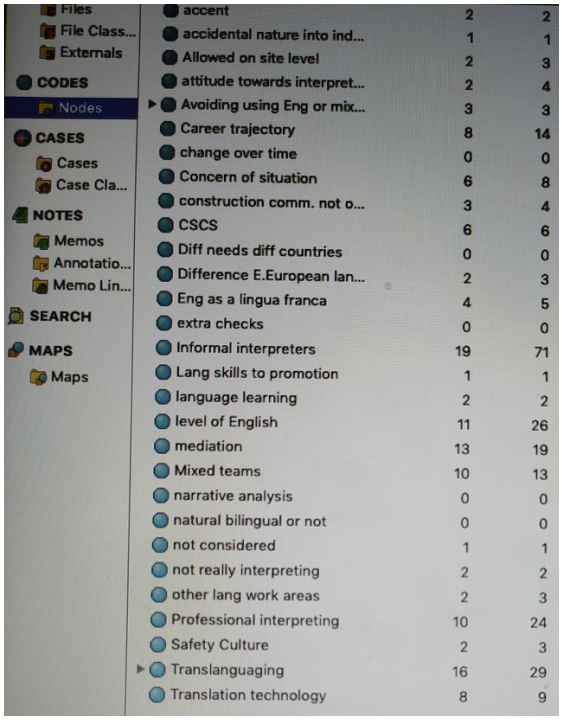
The analysis of the data was an on-going iterative process with many stages. I firstly transcribed the interviews using Inqscribe. It is important to note that, as Copland and Creese explain, 'in a sense rendering a spoken text into a written text is both an act of translation and transcription because both involve adaptation and interpretation' (Copland, 2015). I certainly found that transcribing and proof-reading the transcripts was inextricable from data interpretation and analysis. The transcription was naturalistic, and I then checked them against the recording for accuracy. Although time consuming, this process ensured the quality of the data and made me more familiar with it. Throughout the transcription I noted down links before the main analysis stage had begun. Through this process I became aware of how thematic analysis alone would lose a lot of interesting insight from certain interviews, hence the decision to do some narrative inquiry. This method of data analysis, and use of theoretical constructs related to identity, respond to the statement of Tutt et al. (2013b, p.519) about 'the importance of looking beyond the research focus to attend to how participants identify their own roles.' The combination of a thematic content analysis on the wider data set and narrative inquiry on a subset was fruitful for several reasons. An advantage of the thematic analysis approach is 'the sensitivity to recurrent motifs salient in participants' stories and thus to themes that are important to L2 learners but may not have been reflected in previous scholarship' (Pavlenko, 2007, p.166). However key disadvantages are that an overreliance on repeated instances may lead to overlooking events or themes that do not recur, an exclusive focus on the contents of the text when what is excluded may also be significant and a 'lack of attention to ways in which storytellers use language to interpret experiences and position

themselves as particular kinds of people' (Pavlenko, 2007, p.166) Therefore, the iterative analysis and data collection process intended to profit from the advantages of these different analytical methods and minimize the disadvantages of them.

As noted, transcription is inextricable from the analysis phase, and as Pöllabauer argues that transcripts reflect the decisions of the transcribers because researchers have to decide on adequate transcription conventions and the degree of detail (phonological transcription, paralinguistic phenomena, non-verbal behaviour) they want to include in the transcript' (Pöllabauer, 2006, p.239). Whilst this is inevitable, by being aware of the impossibility of an exact replicate and making decisions taken in the process of data analysis clear the reader is able to see how conclusions were reached, be aware of other possible interpretations, and ultimately to agree or not with the argument presented.

The transcripts were then uploaded to NVivo and coded according to themes that arose across the interviews, with each interview also being annotated. NVivo was used to help organise the data and made it easier to reference back to it. However, most features of the programme were not used because the aim was not to have comparative data sets, but rather to learn from the rich unique data. As the research progressed NVivo was used mainly for storage because as the data set grew and more themes emerged the relation between them was less clear and codes needed to be changed. The growing list of codes can be seen in the image below.

Image 2, showing an early list of codes created in NVivo.



So, then I found it more effective to create a large spider diagram on paper, allowing me to see and create connections between the emerging themes. For the analysis of observation notes I used Microsoft Word to initially colour code the notes according to themes and add analytical comments (Copland, 2015). This approach is best because events, quotes etc. are not removed from context (O'Reilly, 2008). As explained by O'Reilly, coding involves exploring the data and assigning codes such as names, categories, concepts, theoretical ideas, or classes. I then wrote the notes up fully, including analysis and applying theory.

Some of the interview transcripts were also analysed narratively, making it possible to retain characteristics of the interview. This was done by hand and using Word. Analysing data narratively is different from other qualitative analysis approaches which can lead to 'a loss of participants' unique experiences within the larger social, cultural, familial, linguistic and institutional contexts' (Nasheeda et al., 2019, p.2). Narrative inquiry is appropriate as a method of analysing some of the interviews in this project for several reasons; some of the interviews are in-depth and some are very story-like in nature, and this type of analysis works well alongside the use of the language and identity approach to understand the participants. Namely, 'narrative inquiry has as its central concern the stories narrators tell about their life

experiences'(Barkhuizen, 2020). Stories are used as a window into the participant's identity construction, as Kramp explains, stories 'assist humans to make life experiences meaningful. Stories preserve our memories, prompt our reflections, connect us with our past and present, and assist us to envision our future' (Kramp, 2004, p.107). The interviews selected for analysis through narrative inquiry all come from interpreters, not from any of the management participants. Within the narratives there are chronologically connected events which stemmed from the open questioning, such as 'tell me about yourself and your work.' Some of the short stories (Barkhuizen, 2017) are from within the data, and some of the stories I configured from the data in order to make a coherent story from an interview that was not chronological in nature. The process of narrative knowledging was key to creating some of the findings. Barkhuizen describes narrative knowledging as 'the meaning making, learning, or knowledge construction that takes place during the narrative research activities of (co)constructing narratives, analysing narratives, reporting the findings, and reading/watching/listening to research reports' (Barkhuizen, 2011, p.395). While some interviews lent themselves better to this type of analysis it is also true that narrative analysis requires a closer reading of the text and therefore smaller samples. Presenting narratives makes it easier to see the macro, meso and micro scales that emerge in the analysis, such as the social and economic influences on informal interpreters, not only the immediate site context and interactions.

As the data collection and analysis progressed the identities and the narratives of the participants became a focus rather than being secondary to the language practices. As a result, in the first half of chapter eight, three participants' stories are presented. The data set is too large to allow this approach on all of the transcripts, and some of the transcripts are less story-like, with shorter and less personal answers. Whereas these transcripts are revealing because of the way answers were given or require the narratives in the interview to be 'emplotted and made into a coherent whole'(Nasheeda et al., 2019, p.2). These longer more informal interviews also made it possible to get closer to an emic perspective on the informal interpreter position, because as Fenstermacher says, it is through narrative that it is possible to understand the participant's reasons for action and possibly to make sense of their actions through their eyes (Fenstermacher, 1997). Informal interviewing has allowed the participant to take the lead, meaning that in the data it is possible to see how some participants view themselves as informal interpreters and some do not.

In this chapter I have described the research process, from negotiating access, to collecting data, and analysing the data. The choice to use this combination of methods has been justified and I have reflected on the difficulties encountered in the research process, on my own researcher role and how this may have affected the data, and on ethical considerations taken in the process.

In the next chapter findings concerning the relationship between the work environment and the position of informal interpreter are presented and discussed.

7 Findings and discussion part one: the relationship between the work environment and informal interpreters

Findings from the data analysis are presented in the following three chapters. 39 informal interviews were carried out. 26 of the participants were male and 13 were female. The interviews lasted between fifteen minutes and an hour and twenty minutes. Some were carried out in construction site offices, some online, two by phone, one in a café, and one by email. The languages spoken by participants in this research and used on construction sites, in various countries, include English, Bulgarian, Romanian, Chinese, Spanish, French, Arabic, Japanese, German, Russian, Kazakh, Finnish, Greek, Portuguese, Italian, Swahili, and Turkish. The participants' professional positions discussed in the interviews include PMs, contract managers, site supervisors, interpreters, labourers, assistant site managers, a project secretary, and an innovations manager. Many of them also took on informal interpretation work or relied on informal interpreters. Observation notes, photographs and material data were also collected during five site visits. I collected paper versions of the induction documents. The photos are of translated signage and visuals around the site, covering waste disposal, graffiti, coronavirus rules, safety, mental health, advice for EU citizens and public facing information about the project.

To better understand the data, those participants who carried out language work have been loosely categorised as trained and untrained professionals and trained informal and untrained informal interpreters. 'Professional' here means that they are trained interpreters hired as such. 'Untrained professional' means that they were hired in the capacity of interpreter but not trained for this. 'Informal' means they were hired for another position in construction that involved informal interpreting work, within the category of informal interpreters there are also trained and untrained participants. These definitions have evolved from the analysis, which demonstrates that the concepts of 'informal' and 'professional' are not nuanced enough. For instance, it was found that occasionally some construction workers are trained interpreters but are not hired in this capacity, it was also found that sometimes people hired to interpret do not have training in this.

The analysis of this conglomeration of interviews reveals trends that are illuminating for understanding communication in the CI, creating a composite understanding of the issue. The analysis of the interview and observational data develops themes around operational and

communication strategies, which can be understood in the context of the relevant linguistic composition of the workplace and personal profiles of the participants. The findings concerning context will be discussed first, in chapter 7. These describe aspects of the construction site context such as language levels, language initiatives, the linguistic makeup of work groups and concern and frustration surrounding communication difficulties. The analysis will then zoom in on informal interpreters in chapter 8, where an identity and language theoretical approach is adopted to understand the individuals who carry out this language work. Then in chapter 9 the language work itself is examined through a translanguaging lens. A thematic analysis was conducted on the entire interview data set and on my observational notes, while in chapter 8.1 some of the participants' stories are presented and these have also been analysed using narrative inquiry.

Analysis of the data reveals that the work of an informal interpreter is partially shaped by the environment they work in, and reciprocally the informal interpreter also affects the work environment. Some of the strategies that alleviate communication difficulties onsite can be considered operational strategies. These include extra checks on the work being done, avoiding the need to use English by not mixing teams, setting minimum language requirements to be allowed to work, and sometimes sourcing translations and interpreters. Most of these measures are individual or site level initiatives. However, as will be seen, several strategies appear to be universal, whether they are formalised or not. Understanding these strategies helps to scope out the work done by informal interpreters. Other aspects discussed in this section are not operational strategies but rather are effects of the communication onsite not being managed. For instance, a lack of strategies to manage communication results in widespread concern surrounding safety communication, in time being wasted due to miscommunication, and in frustration from poor communication. Attitudes towards the issue also become apparent in the interviews, notably a prevailing attitude of acceptance rather than effort to improve the situation, and a tick box attitude from management who provide training that won't be understood as well as from workers who feign understanding.

Firstly, this chapter discusses the environment in which informal interpreters work, showing that the language work is constant and vital, and that communication is usually a significant concern for project members. Different views on what informal interpreters are expected to do are considered in section 7.3, which is related to the next subsection, on language learning

and levels onsite and how this affects an informal interpreter's work. Various initiatives for managing communication are then explored, and the relationship between communication and site culture is discussed in 7.5. The current research found that communication is managed differently in different sectors, as explained in 7.6. The linguistic make up of workgroups and how an informal interpreter's work may change accordingly is discussed in 7.7. Similarly, the operational strategy of implementing ratios of official language speakers (as informal interpreters) and non-official language speakers is evaluated in section 7.8. Finally, some linguistic difficulties encountered by participants are reviewed in 7.9, with explanations of how these are sometimes dealt with. The findings presented in this chapter are largely descriptive and contextual, nevertheless, there are inevitably overlaps also with questions 1 and 2, about who the informal interpreters are and what language work they do.

London, Thursday 10th September 2020, project 3

After chatting in the site office, Jake and I started on our 'commentated walk' (Rouleau et al., 2014) around site – 1st stop the kitchen. He introduces me to the H&S manager, Juliana, who is microwaving her lunch. There are three other men in the small room. She is the only female I've seen. She's also the only person wearing any protection against COVID-19. We talk for a few minutes – once I explain the research, she gives examples of interesting ways she has seen during her career of managing to work in multilingual teams, like using picture flashcards. She also says how much of a challenge working in multilingual teams is, beyond H&S she talks about how you can accidentally end up in an uncomfortable situation because of unfortunate linguistic differences. Once she was in a van with another Brazilian and a couple of Polish workers, while the Brazilians were talking about the "curvas" in the road the Polish men got angry- "kurwa" (pronounced similarly to the Portuguese "curva", meaning bend/curve) is a vulgar and offensive term! Juliana and I switched between English and Portuguese a little before sticking with Spanish as this was the most comfortable for us. Jake returns and we leave Juliana to eat her lunch. I make a note to try to speak with her more later and ask if I can observe her work for a while.

We headed out onto the site, which at this point was still a bare structure open to the air and sounds of central London. We pass the waste disposal and get in the construction elevator. The operator pulls the metal door across behind us with a clang, Jake signalled to him where we wanted to ride up to, I don't know where the worker was from, but he couldn't speak English

and worked alone, using gesture. As we go up Jake points to the tower crane and describes the intense training he did recently to be able to scale it to perform a rescue. We get out and Jake stops a Romanian supervisor he knows who is with two other workers. Jake introduces me and briefly explains why I'm here. I address them as a group, but only the supervisor answers at first. One of the workers is nevertheless taking part in the conversation, following it, nodding and saying 'yeah, yeah'. However, the third man is not at all engaged in the interaction, not verbally, but his body language is also closed, and he doesn't make eye contact. The supervisor talks about his own experience and opinion about using English at work and then directs a question to his colleague in Romanian, his colleague answers and the supervisor interprets what he said into English for us. The supervisor explains that in their experience those Romanian workers who can speak English have had to make a significant personal effort to do this because they work and live with Romanians so have to search out opportunities to practice and improve their English, and they only do this if they want to stay and establish a career here in the UK. We thanked the men and left them to get on with their day.

Jake then stopped a man on our right, a Polish supervisor with conversational English which he told us was vital as he had different men of various nationalities in his team, with some of them he spoke English and with some he resorted to Google translate. He was rushing back to his team. Jake and I moved on.

We continued making our way through the site. At times I hung back, aware that my hovering could interfere with their work and interactions. At one point Jake bends down to pick up something metal from the floor, he curses and looks up. He grabs the attention of the guys working on a platform overhead, alerting them to their mistake and the risk it caused. Then he stops another worker, realising he won't be able to make himself understood, he calls over the supervisor- there is a disagreement about whether the RAMS required for this work have been done. The informal interpreter is needed to clarify the situation so that work can continue.

Later we come across Juliana again. This time she acts as an informal interpreter, allowing myself and Jake to talk with a Brazilian carpenter who doesn't speak English. Juliana interprets between him and us- having long independent turns at talk and then turning to us and saying: "he said…" and briefly summarising. She transferred what she determined were the key points of the message – that he works alone and can usually get by using pictures when he has to communicate with someone else and if not then he will ask her for help. Through the

interpreted message it was impossible to access how he felt about this, as not only were words missing but also his tone of voice, intonation, gestures and facial expressions.

Jake comments that the supervisors have radios to coordinate between them and that they try to keep this communication channel all in English, but he says that in reality this separation of languages doesn't happen- walking around the site is giving us more points to talk about that hadn't come up in the office.

Later, while Jake took a phone call, I chatted to three men taking their break in the smoking area. These three Bulgarians work together, they were all wearing dusty trousers and work boots and high vis vests, one of them had 'translator' written on his vest and a Bulgarian flag. These guys also remark how difficult it is to learn English as they all live together, but two of them want to stay here and they try to learn.

In several of these cases it is clear that the motivation for workers to learn and practice English does not stem from their current situation. In fact, in their current circumstances, they not only can get by without English, but they have to actively search out circumstances that mean they are exposed to English. Furthermore, the workers' imagined futures were directly referenced as reasons for investing in their language skills, or vice versa, as reasons for not making this investment because they intended to return to their countries of origin.

From the above discussion onsite with Juliana comes an illustration of how building relations required for teamwork can be more difficult when misunderstandings because of language differences occur. This is especially significant considering that open communication and co-operation are regarded as vital for teamwork and consequent project success (Phua and Rowlinson, 2004).

The above incident when Jake had to call over a supervisor to interpret for him when he needed to check with a worker who didn't speak English whether the necessary risk assessments had been made shows how cumulatively these incidents likely add up to a significant impact on productivity because the workers have to stop what they are doing, the supervisor come over and interpret and the other party wait to deliver their message.

Further, the experience of being interpreted for by Juliana suggests that building the relationships required for trust and co-operation to exist will be severely inhibited by the communication having to be facilitated by informal interpretation.

7.1 Interpretation: a constant necessity

Stepping into a construction site in London a multiplicity of languages can immediately be heard and seen. The dominance of English ends with the public facing noticeboards along the fence at the site entrance. From there onwards language use is multilingual and multimodal, it is a translanguaging space (Bradley and Simpson, 2020). On project three there is an abundance of signs, most of which are repeated in two or three languages (Romanian and Turkish) and many of which are accompanied by colour codes, pictograms or images. Passing by the kitchen and changing rooms I could hear snippets of conversations in other different languages. Walking round site it seemed that groups were working either silently or in groups of speakers of all one language. English was only used when the supervisor stopped to ask someone a question or to draw their attention to a hazard. Notably some workers did not engage or interact with the supervisor or me at all. They would have been entirely dependent on an informal interpreter if they needed to interact with management.

The current research found that the need for interpretation on construction sites is constant and vital. Respondents say that ‘it’s everyday’, ‘it’s constant’, ‘you always need to have the person who speaks English’. An informal interpreter is the only link between workers and/or between workers and management; when asked how they manage when the informal interpreters are not there one supervisor said they ‘hardly’ do and that he would call the interpreter. An illustrative case of their importance is given by João, on a pipeline job in Portugal they could not do without his language help, so he had to travel an hour and a half to the headquarters to interpret the morning briefing then back to where he had to work for the day. Similarly, Spanish superintendent Elena describes having to return to work soon after giving birth because they needed her to interpret onsite, as the guys she had left in charge only had basic English skills.

This research found that professional interpreters are not usually hired. The professional interpreters interviewed worked on either nuclear, oil, or gas projects full time or were hired for a few hours for safety training or testing. Even so, the majority were hired for key

moments such as meetings or trainings, and more informal interpreting by workforce members would happen in between these times. Even on projects with full-time in-house linguists these were hired for the main two languages spoken and more informal solutions would have been used for the other languages and in moments when the professional interpreters were occupied elsewhere onsite. A couple of professional interpreters discuss their experiences with informal interpreters. For example, when asked what happens onsite when Ali, a professional interpreter from Kazakhstan, was not there to interpret, he answers that:

> At least there will be one or two people in each crew … who would at least know some technical terms or words, this way they can just utter that word - say 'grinder' or 'welding' - … they may not be able to build the sentence grammatically correct, but they will use those words and get the- the others side to understand them.

In such situations, where the purpose of an interaction is to convey practical technical information, translanguaging is a useful language practice, and understanding is indeed more important than "correctness" of the language use (Paulsrud et al., 2017). Further, the fact that the use of informal interpreters is ubiquitous, even on sites where professional interpreters are hired as Ali describes, begins to answer question 2, because what language work informal interpreters do may be reduced to more informal everyday interactions when a professional is hired for more formal interactions. This on-going informal interpretation will only be required in mixed language teams, often informal interpreters are only needed when there is interaction with management. The experiences documented in this research suggest that in larger mixed language teams there will likely be a principal informal interpreter, probably the supervisor, who works between the local language and one of the others, as well as 'sub' interpreters for each language.

7.2 Communication: a concern?

Concern about communication is relevant to informal interpreters' work in a couple of ways. Firstly, as they are relied on to facilitate communication it is likely that they are expected to ease or remove the concern of not understanding. Secondly, in cases where an informal interpreter cannot or will not convey the information well this creates concern, or even if they can the other interlocutors have no guarantee of this. For most of the participants in this

research communication onsite was a significant concern, which likely negatively impacts on trust and teamwork. However, many of them also had an attitude of reluctant acceptance that this is simply the way it is. For instance, Daniel, a Romanian site supervisor working in London, seemed to have an attitude of accepting the situation, which he strongly disagreed with, perhaps because of being powerless to change it. At the end of the interview, when asked if there was anything that hadn't been covered, he said:

> Personally, what I think about this whole thing, it's shouldn't happen because in an emergency you know people panic, they don't - you know when we have a fire marshal shouting, he doesn't understand, and and - you know it's - it's - it can happen bad things. Personally, I think they shouldn't be here, but they accept it so it's fine…

He refers to the workers who do not understand and to the local management in charge both with 'they', implying that he is not part of either group. Similarly, in response to a question about how an informal interpreter is identified as the person to do this work, he answered, 'whatever I have I need to work with, and you know sometimes it's complicated because the people don't understand, but that's how it is'. The tone and words of this participant show that he is stressed about the risks he sees of having people working together on a construction site that cannot communicate clearly, such negative feelings will make building trust and teamwork more difficult. In the following extract the supervisor also expresses concern about having workers onsite who cannot understand each other:

> basically I have one…foreman which speaks English yeah and which - I don't -I don't- I don't have people which doesn't speak English and I do not communicate with them- to be honest no we have onsite which is -, but I do not communicate with them in the majority of the time. I just speak with one person who understands and that's it because you know it's- if you communicate with them it's a misunderstanding and then mistakes …

The participant corrected himself, perhaps because he started by giving what he felt was the correct answer and then changing to answer truthfully, or perhaps because he does not communicate with non-English speaking workers, he simply was not taking them into account. Either way, it is clear that this topic is difficult for him. Like the previous

participant, Romanian Site Manager Marius expresses concern about the issue of communication onsite but also accepts it: ‘we just have to make it work’. He explains:

> most of the times, as you would expect, there is a bit of, I wouldn't say necessarily an issue but a miscommunication, if you will, between myself and the Bulgarian team or even the Moldavian team at some points. Just because, as you would expect, a construction worker would not have a perfect level of English most of the times, just because they're focused on something else, and they know that they need minimal English to do the job. And that's what we get to be honest. Which most of the time it is an issue because it makes my life hard when I'm trying to send the message to them, just because of them misinterpreting maybe what I say or … not fully understanding the message that I'm trying to transmit. It happens, it happens on a daily basis in the construction industry but at the moment it is what it is. That's the job, you just gotta make it work.

He affirms that communicating with people who do not share the language is the job and that he just has to make it work, the sense of responsibility for understanding is clearly with him at management level and he is understanding of why the workers do not speak English. As a bilingual site manager, he has experience of being able to communicate directly with the Romanian team but also of struggling with the Bulgarian team. In contrast, the British managers only worked with teams they did not share a language with and wouldn’t have the insight gained by managers such as Marius who themselves pass on information from English to the team. Nonetheless, he acknowledges that a multilingual workforce makes his job much harder and causes problems daily.

Two specific examples arose in the interviews that demonstrate that concern over communication onsite is founded. Firstly, Fernando is a Mexican interpreter who was working as a labourer in the US and became an office assistant there because his language skills were recognised. Here he is commenting on the language work done by another worker informally interpreting: ‘he wasn't really communicating what the safety manager was trying to - to communicate.’ When Fernando started working onsite nobody knew that he was trained as an interpreter, so he is bilingual and was witnessing the informal interpretation from the perspective of someone able to fully understand all parties in the communication. This is a rare case to be documented where someone can pinpoint the lost communication to

poor interpretation, whereas often this is speculation and it could be that the message was not transmitted clearly by the first interlocutor, or the receiver misunderstood, forgot, or chose to ignore, information that was well explained by the interlocutor and interpreted accurately. He continues:

> It was a lot of issues going on. I mean I was present in a training, in a sexual harassment training, where a video and everything was going on in English, the audience was purely Spanish, and then and then the trainer asked the participants 'Do you have any questions?' I almost laughed because I thought do you really seriously think they were gonna... ((laughing))

He affirms that the issue is more than the interpretation, it is also the working practices. Sometimes workers simply are not given an opportunity to try to access training in their own language. The second example came from a British PM, David, who explained how ‘a guy that I was explaining to, his foreman I told him not to do something, and they kind of didn't understand what I wanted them to explain. He went into an area that he shouldn't have… fell four metres, broke his back, fractured his skull’. This is an important example of when the method of using an informal interpreter failed, with tragic consequences. The PM was the first aider and explains how communicating with the victim of the accident was made much more difficult because he was a speaker of English as a second language, and when he went into shock, he lost the language ability he usually had. The PM then struggled to assess where the pain was and to give information about the ambulance. This PM, as well as two other participants who had experience with communicating in emergencies, have consequently developed their opinions and practices regarding how to manage migrant workers. Such anecdotes provide learning opportunities as some aspects, such as losing L2 communicative abilities when in shock, may not be thought through otherwise.

In contrast to the preceding data, Chinese PM Lei’s account is notable for the lack of concern about communication onsite in London. He is not concerned about workers’ understanding of safety information at induction:

> Me: Ok so for example, at induction, can you explain to me how the communication happens for the ones that don’t understand much English?

> Lei: … let's say 8:30 induction started, they will have a TV screen, show some videos, tell you the health and safety things onsite. If you don't have English, you can see.
>
> Me: Right
>
> Lei: Yeah, it's not a big deal to be honest.

In contrast to the supervisors on the same site, he is not concerned about communication difficulties generally:

> Lei: Maybe not very good English, yeah some of them are really bad, but they can understand but they can't speak- they can speak some words and with the body language, and usually we should understand what he is trying to say to us yeah. So, I'm not worried too much about this, their language, they're all right yeah because as I said most of the time I just talk to their supervisors.

On the one hand, he recognizes that workers often do know English but are receptive not productive bilinguals. However, on the other hand, as a PM he has less daily communication with workers than the supervisors on this same project, who certainly disagree that it 'is not a big deal.' Although as a PM he may have less contact, other PMs in London had a very different opinion. This anomaly seems more due to the individual, who demonstrated a lack of understanding generally about who his team were and the linguistic challenges they faced, saying for example that they are 'from the same place' and 'most of them are from East Europe'. He generalizes, not considering that the different countries within Eastern Europe have languages that have nothing in common. This example brings up an important question about responsibility and whether, as the PM, being aware of the language barriers on the project and considering how these should be managed are part of his job.

Some participants' observations and concerns go beyond the immediate language barrier to how not being able to communicate affects both the work and the safety culture onsite. This will be discussed in section 7.5.

This atmosphere of concern and uncertainty over communication is also demonstrated by how often participants mentioned the need to double check workers had understood, something that was not asked about specifically. Double-checking increases to account for the possible increase in misunderstandings with a multilingual workforce. When asked whether the supervisor/interpreter had good enough language skills to ensure the communication, one PM, David, replied:

> I like to walk around site as well quite often. So, if I see someone that's not doing what they're supposed to be doing I will call them up. Tell them to stop. I will also get their foreman over and tell them to explain why I've stopped them and why they are doing what I think is not right. … you have to make sure that the information is being passed on to the guys that don't understand. And the only way to do that is to make sure, walk round, check.

David's description demonstrates that checking on the workers is a time-consuming task that involves the manager and the foreman/interpreter as well as the worker(s). It also demonstrates that information not being passed on or not being understood is a common occurrence in his experience, which has resulted in such checks. The negative effect that having to do this will have on productivity must be considered when weighing up the possibility of investing in language management strategies. The same participant shows a need to check that the foreman has passed on the information correctly:

> We'll speak to the foreman, and then the foreman will pass that information down. We'll have a walk round and keep an eye on them to see that what we've asked the foreman to do is what they're gonna be doing, and you kind of tend to keep a watchful eye

He displays uncertainty about the likelihood of information being transferred, from his previous experience of this way of working going tragically wrong.

> <u>David's story</u>
>
> I met David one afternoon in Starbucks on Tottenham Court Road. Over a cup of coffee, he told me about his initiatives to improve communication onsite between

different nationalities, and the tragic accident that motivates his efforts. He is British and started working in the industry at the age of sixteen. He now has thirty-four years of experience and has worked as a labourer, carpenter, foreman, site manager, and is now PM. He explains that over the last twenty years he has been working in Central London and has seen a huge increase in the number of workers of other nationalities, which has made his job harder. The informal environment of a coffee shop and recruitment of the participant through a channel where the participant demonstrated concern about the research topic and pride in this work facilitated a frank and detailed discussion. He described an accident that occurred four years prior to the interview, the accident described above. Following the accident, it took a long time for the participant to come to terms with it, but last year onsite he could see the same situation developing and had an idea to alleviate it. The initiative aims to get workers to understand the basics and emergency phrases in each other's languages (described in 7.5). This manager is notable for having a more cautious attitude to risk and overall concern for the relations and communication between and with the workers. This may have developed because of the accident; however, he explains how he worked his way up from labourer to PM and perhaps has more direct experience of the difficulties that can occur than other managers who are less involved with the workers.

Romanian Assistant Site Manager (ASM) Stefan also explains that he gives instructions to the supervisor, to be passed on, and then: 'probably going there to check their works after one hour or two hours, not later than that, just to make sure that they understand. If they didn't, I'm trying to explain the supervisor again how the things are work. …'. Similarly, PM Jack describes how he types up a toolbox talk, and the supervisor then relays that into whichever language is necessary, when asked whether this usually works he said:

> there's a few instances- nah they'd come back and ask. Cos what I'll do is, once that toolbox talk is done, I'll then have a walk around the site and ask the question 'have you had the toolbox talk?' And then if they stand there and go ((gestures blankly)) then I know nothing's been done … so it's things getting checked.

This manager seemed reluctant to disclose any difficulties he had encountered with this, as can be seen in his change of course, 'there's a few instances, nah...' Also, the gatekeeper for this site said it would be useful to talk to this manager because he had struggled with

communication and they had had a few incidents, but the participant did not mention these in the interview.

The incidents recorded and alluded to in the data combined with this constant need for checking suggests that currently communication onsite, through informal interpreters, is often not fully successful. The fact that supervisors and managers describe a need to constantly double check reflects their expectations of informal interpreters; they are aware that not all of their information is getting transmitted. These examples suggest that there is currently a significant gap in the discussion of productivity in construction management, namely that multilingual communication relates directly to productivity.

The concern caused by communication difficulties is mostly about safety, however multiple participants also related communication difficulties to lost time, and therefore lost money. The interpretation itself is time consuming, as is the double checking, but a significant loss of efficiency also comes from mistakes and having to re-do work because of instructions not being understood. Indeed, interpreter/assistant Fernando believes that the repetition of work plays a big role in why the construction projects he worked on were behind schedule, 'it wasn't until the interpreter was present in the field when the job was done. I'm not, I'm not gonna take credit for everything but I'm very sure that that has a huge play a huge play in the entire you know the entire construction site' In his opinion, when the project was relying on untrained informal interpreters there were many problems, which were largely solved by him interpreting, as he had advanced bilingual skills and was trained in interpreting. These findings are consistent with Loosemore and Lee's, who concluded that their respondents relying on 'cultural gatekeepers' to communicate 'often caused rework on site due to the mis-interpretation of instructions' (Loosemore and Lee, 2002 , p.521). The significance of this should not be underestimated given that the cost of rework in construction has been estimated to be more than 10% of project costs (Love and Li, 2000).

Safety Manager Jen also expresses that the management of migrant workers and communicating H&S are a significant challenge and concern:

> It's hard. I mean it is, it's really hard, there's a lot of in the industry that just won't accept translation at all, they find it too much of a hazard, a risk onsite … We do have clients that don't accept our umm our model because they want to be able to stop

> works, which is why we say we must have a basic understanding of English, and then more critical stuff will be translated. It is really really hard because it's what your labour pool is. You have to adjust your systems to meet the people that you've got working. Not expect them to be able to just comply with what you're doing (Me: yeah) because that's how accidents happen onsite, because they don't. So yeah, it's a hard one out there.

Jen explains having to adapt working practices depending on the labour pool available, she shows communication with migrant workers to be a concern in the industry, and one which some believe cannot be sufficiently mitigated by using bilingual workers as informal interpreters. Her company however does use this way of working but also requires workers to have a basic understanding of English.

That communication onsite is such a cause for concern is significant in several ways; firstly, it suggests that current strategies for communicating with migrant workers are not enough, secondly it underlines the importance of the work that informal interpreters do but also shows that this needs to be better managed and the practice better understood. If the interpretation practice were regulated, interlocutors would have more confidence that workers understood them. This would have implications for projects financially, by saving time, and potentially improve relations and trust, and reduce the stress caused by miscommunication and some of the concern about safety.

7.3 Expectations of informal interpreters

The current study found that others' expectations of what the informal interpreter responsibility entails were very varied, partly as a result of the practice not being regulated. It is useful to know what those relying on an informal interpreter expect them to do and whether the informal interpreters see the responsibility in the same way, especially as expectations may affect the performance of the work. Expectations found vary from expecting word to word translations, expecting summaries, or not trusting that the informal interpreters even aim to translate the message, this uncertainty partly stems from the lack of management of responsibility for multilingual communication. Mapping the expectations and the work in its different forms provides a starting point from which to consider how the position could be formalised.

Site Manager Marius has a more developed opinion than others on what the informal interpreter that he uses should be doing, and feels strongly about the importance of this:

> the interpreter, the person that's translating to Bulgarian in theory, or by my understanding, he translates the exact same things that I've said…

…

> Me: So, you think for the guys who don't understand (P: yeah) English, do they kind of pick up these specific words, say you're talking about something physical...
>
> Marius: … most of the times yes ... cos you they do more or less the same thing every day … so it is easy for them to learn the specific terms in English… But again, just as a preference, I want to make sure that that guy, even though he should know the term… I'm still asking to the supervisors to translate in their own language (Me: right) just to be 100% sure that got the message, cos he might know the term, or he might not know the term. Or he might know that I don't know 'pen' and he first thought 'pencil' and in his imagination a pencil is equal to a pen, while a pencil is not equal to a pen, you know what I mean? (Me: yep) So I wanna, I'm just trying to make sure that they make these differences, because everything matters onsite, a little detail can damage last week's works (Me: work, yeah you have to do again yeah) so every little detail is very important, at least in jobs like this.

He expects the informal interpreter to interpret accurately and completely. This contrasts with multiple other participants who expect interpreters to distil the information (see examples in 8.1). In cases such as the example he gives of Bulgarian workers, translating everything could be unhelpful, as they may not have all the relevant vocabulary in Bulgarian in their idiolects, as some of them only work in construction in the UK and have learnt these context specific terms in English but not in their L1. Therefore, the interpreter should adapt to the interlocutors, as the interpreter is the only one in a position to assess the ability of workers in both languages. The above manager seems uncomfortable with translanguaging and prefers to delineate languages as he feels more reassured that people have understood. It is necessary to raise awareness of the current linguistic practices of all the migrant workers, bilingual or not, for these to be managed in the most effective way, which often might not entail sticking rigidly to named languages. If the interpreter were formally in an interpreter position, and

ideally trained, they would have the agency to make the decisions about communication, which arguably they are usually in a better position than management to make. His words show how important it is for details not to be lost in translation as ‘everything matters onsite, a little detail can damage last week’s work’, miscommunication could easily lead to jobs having to be redone, affecting productivity.

In terms of expectations, professional Kazakhstani interpreter Olga clarifies these with the client before she begins the assignment, which she believes is important. Zane, a professional interpreter, also confirms what they expect him to do. Such discussions may be fruitful in increasing the trust of the interlocutors in the interpreter, an important consideration as several participants showed a lack of trust in the interpreters. Furthermore, professional interpreter Sara explains that interpreting in construction is different to other fields because it is more informal and so the expectations of the interpreter are different. For example, she would not introduce herself and explain the interpretation process as would be expected in other environments: ‘working in construction (Me: yeah) right so they just wanna get things done.' If this is expected even when someone is hired specifically to interpret, then often an informal interpreter will probably be expected to get the main points across but not take the time to interpret fully.

Zane’s story

Zane is a Tanzanian linguist. He works as a translator, interpreter, editor, and writer. He did a languages undergraduate degree and a Master’s in Political Science and African Studies. His interpreting experience includes in healthcare and legal settings, and in construction. He explains that the need for interpretation in construction in his country is often because of Chinese companies working there, who hire him. Consequently, the engineers and executives are Chinese speaking, and the workers speak Swahili. It is therefore necessary to use English as a lingua franca. Usually, the Chinese participants would speak in English, and he would interpret this into Swahili for the supervisors, who then pass the information on to the workers. This caused difficulties for him, especially at first, because it was not easy to understand their English. Zane describes discussing expectations before starting to work and using gesture to communicate, but he says that for him the most important aide to his work is being patient, giving the interlocutors time to convey their message and to

> understand. This participant describes modifying what the engineers say, when interpreting into Swahili he simplifies so that the workers can understand, he says: ‘I speak in the simplest way possible for them to understand’. While he already had interpreting skills, he did not have prior knowledge of construction, but he underlines the importance of reading to gain terminology in the field. Zane is usually hired for a few hours for a crucial activity; he does not accompany the construction professionals throughout. In Zane's experience in Tanzania the workers are all locals, and so there are not language barriers between them. What is more, he is hired only on bigger projects because they are international, whereas on smaller projects interpretation is not necessary.

A few supervisors and managers showed concern about not being sure what the interpreters were interpreting. This mistrust indicates that this supervisor is not expecting that the interpreter will interpret fully. For example, Marius expresses:

> I'll send the message in English, and I'll ask one of the supervisors to translate in Bulgarian, to translate my message. Obviously in terms of control of the message that he's transmitting, there is no control, cos if I don't speak Bulgarian, I don't know if he says the exact same thing that I've said. It's a bit of a trust game at sometimes.

Issues of trust arise when the participant does not understand the other language being spoken, this is one of the reasons why a professional interpreter reproduces everything that is said, avoiding any side conversations. Likewise, ASM Sean is unsure that the interpreter is transmitting the correct information, or even how much English he understands, which makes him uneasy:

> you don't know what they are saying to them, cos I don't understand the languages that they are speaking either. So, we've …a lot of Romanian lads onsite and some Polish, so I don't know anything really other than English ((laughs)), so that puts me at a loss as I could be saying something to them, and they could just be saying ‘sit back and be quiet’ like ‘don’t say anything’ …
>
> Me: Ok and do you ever have outside interpreters come in or they're always the...

> Sean: It's generally either their ganger man or somebody in the induction there that they have come together but one lad doesn't understand English, and the other guy does…And then at the same time you don't know how much English that one translating does understand...

This participant suspects that some informal interpreters deliberately don't transmit the message. These issues are largely caused by the work being kept informal. If the responsibility was formalised the interpreter would have more incentive to interpret fully, the interlocutors would have more confidence in their linguistic abilities and in their motives to interpret accurately and completely. In future research it would be useful to talk to some of the workers being interpreted for to find out their experiences of receiving interpretation. Trust is important for the communication because as Fernando observed: 'for a lot of people not understanding what others are talking it creates fear'. The above extract is also interesting as it demonstrates how on UK sites sometimes it is the English speakers that are unable to understand the interactions and English could be considered the minority language, an observation also made by English PM Jack, and by superintendent Elena about English in the US. This observation could have various implications, particularly on the work informal interpreters need to do. It may be assumed that the L1 speakers of the country's official language will not have any difficulties with communication, but if everyone else in the team speaks one language, that is not official in the country, then the L1 speaker might require an interpretation. In short, it should not be assumed that because someone speaks the official language of a country, they cannot be linguistically isolated.

Essentially, as this work is kept informal there are inevitably differences in both how the work is carried out and what is expected of the person carrying it out. Clarifying expectations and formalising the position should reduce concern about messages being relayed, increase trust between the interpreter and the other interlocutors, and reduce tensions caused by mismatched expectations. Given that trust is considered to be vital for teamwork and hence also for productivity (Loganathan and Forsythe, 2020), this matter should not be overlooked.

7.4 Language learning and levels

The results of this study show that several operational strategies regarding communication with migrant workers contribute to shaping an informal interpreter's work. The operational

strategies reviewed in this section are requiring minimum language levels to work onsite and opportunities for language learning. As discussed previously, beyond these examples there is a lack of management of communication.

One strategy in the UK is to require a certain level of English for workers to be allowed onsite. This strategy is implemented to varying degrees; whether strictly by sitting a level test or by trying to get the subcontractor to bring only English-speaking workers, or it is not used at all. For example, innovations manager Toby, who works on a large construction project in the UK, said that his company has a competency test to make sure that workers can understand instructions in English; he describes the test as 'fairly straightforward'. Indeed, some participants on sites that don't have such tests think that there should be a minimum requirement for speaking English to be allowed onsite, as Site Supervisor Daniel says: ‘personally I think they shouldn’t be here’, his use of the pronoun ‘they’ refers to workers who cannot speak English rather than migrant workers, as he himself is a bilingual Romanian. He distances himself from this group. Such tensions caused by the lack of management of onsite communication likely negatively impact teamwork and co-operation, there is a potential role here for interpreters to help improve these relations by facilitating better communication. Romanian Site Manager Marius has a strong opinion about the need for minimum requirements and believes that the correct approach is for the migrant to learn the language. The participant’s tone and repetition suggest that communication issues are a source of considerable frustration and concern for him as a manager:

> Me: … well that's all the questions I had unless there's something you think that I didn’t pick up on that's important?
>
> Marius: …it's a pretty clear situation. We're all coming from different backgrounds, we speak different languages, different mentalities, a lot of things are different. It's normal that you will have communication blockages …What I think is missing in the construction industry, and it would make my life and any other manager's life much much easier and less stressful, it would be a minimum of language skills required in order to be able to work on construction site. … if you come into the UK you have to speak English. If you're gonna go to work in Italy, you're gonna need to speak Italian, if you're gonna go to Spain, you need some Spanish. …one of the reasons for which I chose UK is that's the other language that I can communicate in … I think this is how

> everybody else should do the choice because you would avoid certain things it's happening, and they will keep happening …

It is interesting to note that in the above extract the participant attributes communication blockages not only to language barriers but also to the workers having different 'mentalities' and 'backgrounds'. His comments also demonstrate that he believes the view that the solution is to require workers to speak the local language is widespread, claiming: 'any other manager's life'. The difficulties caused by having workers who speak different languages are practical, 'avoid certain thing happening', as well as related to relations and stress. These repercussions will negatively impact teamwork and cooperation which are regarded as vital for project success (Phua and Rowlinson, 2004). Sometimes the question of learning the local language causes tension between workers, and reluctance of those who are bilingual to interpret for the rest, who they may perceive as lazy for not learning the language themselves (Oswald et al., 2015), as Loosemore (1999) suggested, conflicts often arise on construction projects when responsibility is not clearly delegated. However, the manager's expectation that workers learn a new language is not realistic without support, particularly for older or illiterate workers.

In the literature on L2 use and identities some relevant issues about using an L2 are discussed. Particularly, it is argued that often learners who are using their L2 to communicate are not able to present the image of themselves that they would like to because of imperfect language skills. Consequently, 'learners often reject or reduce their interactions in the second language in order to maintain and protect an ideal self-image'(Aveni, 2005, p.2). Subsequently they have less opportunities for learning the language. Aveni and Pellegrino describe using a second language as an activity that involves personal risk. They argue that when interacting learners subconsciously decide whether 'it is worth risking the costs to gain the benefits' (Aveni, 2005, p.26). They conclude that if speaking is not deemed to be worth the risk, then the learner is unlikely to pursue the communication but that if 'the value outweighs the cost or the value is sufficiently high to motivate the learner to communicate despite the cost, the learner will be more likely to attempt communication' (p.26). Similarly, Bui argues that language learner's investment relies not only on the attributes and intentions of the individual but also on if their knowledge and experience is valued by others (Bui, 2018, p.345-6). In the construction context, this gives weight to the argument that improving attitudes towards

languages onsite, by implementing exchanges and formalising the language work for example, has the potential to improve communication in the long term.

The following participant, a safety manager, describes her company's attempts to create a workforce that is able to communicate well. Jen explains that the site induction is written in English which she says allows the company to 'ascertain that the operatives have got a basic level of English understanding', yet she adds that there is somebody there to help translate and fill out the paperwork. She says that if they are agency workers the arrangement of having one team member who can translate is agreed with the labour provider. Interestingly, she emphasizes that this is only required for agency workers because 'our own people they tend to have already the basic level of English that we need.' This suggests that workers contracted through agencies have less language skills, and consequently those that are kept on with a company have better language skills, as was found by Tutt et al. (2013a). Therefore, whilst language skills are secondary to trade skills, they are also a condition for the worker to be able to improve their employment conditions. This is reiterated in her response to a question about whether most of their workforce is made up of workers who do not speak English, she said:

> so, we try to keep umm our own, all our own guys are bilingual in that they can understand. We've got about, I don't know, fifty of our own guys, and they will, they understand English, read English well enough that you don't have to have a translator present (Me: mmhhmm) apart from some words maybe. Umm but our agency suppliers do tend to be umm -they're much newer into the country, newer into the industry, so which is why we need to have more - we have a translator on every site because of that

Similarly, Kraft found in Norway that ‘migrant workers do not become permanently hired without speaking ‘the language’’ (Kraft, 2019 , p.12). Frequently it is the younger workers who have better English skills because they have grown up in a time when English is taught in many countries and because when they arrive in the UK, they are able to learn it more quickly. However, these younger workers usually have less construction experience than their older co-workers. If this is indeed the case across the industry, which requires further investigation, this practice could be contributing to a skills problem in the field. It is possible that the most skilled workers are not being used in supervisory positions because the issue of communication across languages has not been sufficiently addressed, which has potentially

far-reaching consequences in terms of lost skills and efficiency. Additionally, if workers who can speak English are kept on to work for one company together, consequently those who work with agencies are likely to have less strong linguistic skills, so an informal interpreter sent by an agency with a workgroup also will not have as advanced skills.

Another participant is undecided about whether there should be a minimum language level requirement to work onsite. Nonetheless, he is concerned that the current level of language ability is not safe, unless there is only one language other than English and an interpreter:

> Sean: I've been on jobs before where you had to sit an English test before you sat the induction. … they only had English speaking safety men onsite, their inductions will all be through English, and if you didn't understand English you weren't allowed to sit the induction. Errr, I get that, I understand it and I think that's fair. Unless you have somebody onsite and the gang is going to speak through one language and they have a translator, that's probably the safest way to do things… When I do the inductions some mornings, I'd be sitting there, and everyone is just sitting there blank faced looking at ya and you say 'do you understand?' And they just go 'uuhhh' ((nodding))

It seems that this participant finds that groups of workers who all share one language and have someone who can translate is a workable alternative to having all English speakers, but that in his opinion it is not safe to have more languages mixed or not have the help of the interpreter. Although it could be that some workers understand the information given to them but cannot speak, this cannot be checked without an informal interpreter. Sean explains his efforts and willingness to speak slowly, repeat things, and answer questions, but the workers just nod through so they can get out onsite quickly and make money, confirming the findings of McKay et al. (2006) and Pink et al. (2010). Sean says that piecework is a problem for H&S, complicating the issue of interlingual communication further. Oswald et al. highlighted that workers being paid like this caused an issue for H&S and translation in another way, in that informal interpreters are reluctant to spend their time interpreting if they are getting paid for their productivity in the construction task directly (Oswald, 2019). This is another example of how poor management of onsite multilingual communication may negatively affect teamwork and co-operation.

The language level of workers is an important factor in understanding the rest of the interview analysis and the informal interpreters' task. In general, the level of English on the UK sites was very low. Even with the informal interpreters/supervisors/managers their English had many errors, in the interviews some had to stop often to think of a way of saying something. For the purposes of the research, we could almost always understand each other. However, in an emergency there would be no time for reformulations or clarifications.

Although it may seem that the workers have no English as they are not able to respond, many of them are able to understand but not to speak, in other words they have English as a 'passive' language and are receptive bilinguals. Andrei, a Romanian site supervisor, explains that although most of his team do not speak English, they all try and 'they understand but they can't reproduce what they want to say'. British Senior Site Manager Hannah also explains that many operatives understand but cannot produce spoken English. The distinction above between passive and receptive bilingual is small but important. Essentially, both terms refer to a person who can comprehend a language but not produce it, however, as discussed throughout this thesis, these workers use their communicative repertoire in many diverse ways, and the word 'passive' refers to a conventional limited view of language and speakers. Furthermore, among those that can speak English many of them will not be able to write, sometimes due to illiteracy but largely because they will have learnt English naturally through living in the country but will not have learnt English reading and writing. In the UK, the operative has often worked for many years and is able to understand to some extent what you are saying but is unable to speak back to you, as Site Manager Paul says: 'some people they - how I can tell you - they know what you want to talk with them, they understand, but they can't talk with you. (Me: yeah) It's - I don't know, it is a barrier.' Further, PM David estimates that 25% of the workforce does not speak English, adding that this varies between sites. In the following response by the same manager, it is interesting to note that he sees understanding as more important than producing. The manager also explains how if they are not able to understand and it is not possible to use an interpreter, then they will not be allowed onsite. Not only because of the risk to themselves but also to others:

> Me: … for the management of a team, what are the things that you have to take into account or change when you're starting a project with a mixed team?

> David: You have to take into consideration the communication. That is massive. You know if that person is able to understand what you're trying to explain to them that's the be all and end all really…they'll put themselves at risk and put others at risk as well…

Sean continues to weigh up the practice of using language level tests before starting work onsite, expressing concern for what can happen in a pressured situation if individuals are relying on others to be able to understand:

> Well I don't fully agree with the English test but I also don't fully disagree with the English test …What like, if you have a community onsite that like only speak Romanian, like, they're segregated first of all … they can all communicate with each other on a health and safety point of view and work and everything but then you'll have people telling them - like when I walk around onsite some of the lads that we have don't have very good English, and I'd walk by them and I'd be like 'ah can you do this or that' like and then they'd look at ya and … then you shout at somebody else and they come halfway across the site to do something or to translate for the lad that you've asked to do it in the first place (Me: yeah so), so you're like, you're wasting time like more than anything else. And if there was something happening and he was say in danger and I'd be like 'you have to do this' or 'you have to move', he's be looking and he'd be like 'I don't know what you're saying' you know and that's sometimes the danger that you have, especially with the language barrier but sometimes if you shout at someone they know they're in trouble so ((laughs)) …

This extract contradicts slightly his answers quoted above in so far as he accepts teams of workers with one language that is not English as a safer way of working, yet here he highlights several other difficulties that this causes, demonstrating the complexity of managing communication. Notably he emphasizes segregation, which will be discussed later, decreasing productivity because of lost time by stopping the interpreter from doing their construction work to interpret and waiting for this, and that the potential for not understanding in emergencies still exists. It is clear that for Sean miscommunications cause frustration and tensions:

… and then when you are shouting at somebody- cos you do shout at people, I get frustrated quite a lot, especially when you ask somebody to do something and then they don't do it and you go back and you're like why is it not done? And they're like well... and then then they tell you they didn't understand, instead of saying when you're finished talking to them, you're like 'do you know, do you understand what I'm asking you to do?' And they'll be like 'yeah yeah yeah yeah' then you go back twenty minutes later, and it's not done and you're like 'why is it not done!' ((laughs))

Me: And you think they're saying yes-

Sean: Because they'd feel stupid if they said no (Me: ok), you know? Or maybe it's just like they don't even know what you're asking them, 'Do you understand?' and they're like 'yeah yeah yeah' do you know...it's little things like that, but it causes - or miscommunication like you might ask them to do something then they think it's something else. I know it happens with English speaking people as well like (Me: yeah) but when it goes drastically wrong and you're like what did you do? ((Shouting and raising hands to head))

From this interview with Sean, it is clear that miscommunication negatively impacts relations onsite by causing stress, frustration and tension. Consequently, these are issues that could be alleviated by requiring minimum levels of local language comprehension to be allowed onsite and relying on the interpreter only for the more complex interactions, likely improving teamwork. Sean raises the question of whether participants feign understanding not only to get on with the work they are paid for but also because of a stigma felt about not understanding English. Supervisor Jake also suggested that workers may feel embarrassed about needing help to understand, as he has had workers refuse the help of an informal interpreter but then be unable to understand the induction. This aligns with findings in previous research of migrant workers pretending to understand (McKay et al., 2006, Tutt et al., 2011). Jake also explained that as a company they tried to hire workers who had some English but said that as a principal contractor they would have confrontations with the client for slowing down productivity if they refused to use workers. Raising awareness of interlingual communication as well as the local language speakers also learning some of the other language can be useful because, beyond the practical use of vocabulary, this can help to create relations between linguistic groups and perhaps combat such stigma.

A lot of participants mentioned swear words as the first vocabulary they learn in other languages, interesting because it suggests that from the migrant workers' perspective the importance of languages may often be as much about integration as about learning basic language skills and terms important for safety on the job. Therefore, such informal interactions may be important for teamwork, and it is necessary that there are opportunities for such communication. Furthermore, PM David felt that the language exchange was having a positive impact on relations, and Jake says that he learnt some phrases in Romanian for the same reason, he states 'I think it's important like not just from a work side perspective but if a group of Romanian guys see an English person trying to learn their language, they're going to sort of interact with them more.' Jake describes the induction as a key moment for identifying communication difficulties, the workers must answer ten basic questions about onsite rules. Occasionally a worker has not written anything and been turned away but in his opinion 'it's down to the subcontractor or trade contractor to ensure that they're putting their translation procedures in place.'

An additional consideration that affects the scope of the work of informal interpreters is that workers in certain professions are more likely to have better language skills. Matei, a Romanian supervisor working in London, explains that to be a carpenter in the UK you will have spent some time there already to do the NVQ, and so will probably know some English. Additionally, some trades require more communication skills than others. For example, Ivan is a cladder, and he explains that all the information that he needs is in the drawings. Further, any trade where workers largely work alone won't require so much interpretation as those that require group co-ordination of tasks. Knowing this information helps to understand what language work is required of informal interpreters and that this varies with the project (question 2).

The language level of the workers is a contextual factor that affects the scope of the work that an informal interpreter needs to do. On sites that implement a minimum requirement such language work will be reduced, perhaps only to key moments involving documents or more technical vocabulary, whereas on sites with workers who speak little or none of the local language the need for interpretation is constant.

A finding from this research that is discrepant with previous studies concerns opportunities for language learning in the CI. In general, language learning in the industry, where it occurs, was informal. None of the participants mentioned language classes provided by the employer, in contrast with several previous studies (TUC, 2007, Jaselskis et al., 2008, Tutt et al., 2011, Williams et al., 2010). However, one participant, a PM, was actively testing strategies to improve communication onsite and in turn the safety culture. In the language exchange initiative discussed previously, the focus is on phrases that are needed in an emergency. The participant said that this was vitally important because even if the workers know some English, they may revert to their mother tongue when in shock, as happened in the accident he attended. Therefore, it is important for workers to be able to use key phrases in the other languages that are spoken onsite. The participant recognises a need to learn the workers' language(s) not just for them to learn English, a need he believes is growing as he notes an increased number of migrant workers on London sites over his career. He comments:

> which makes my job harder, cos obviously with health and safety people need to understand what- where I'm coming from, what I'm trying to explain, and that was initially the reason behind my thing with the ((exchange initiative)), that's how it came about, from someone else's accident.
>
> Me: Oh, right ok.
>
> David: So yeah unfortunately.
>
> Me: From not understanding?
>
> David: Pretty much yes…

The participant suggests that it is important that workers understand the reason behind safety information as well as the practical information itself, 'where I'm coming from'. He had been relying on the foreman to interpret the safety information he gave. This extract is significant as it is the first recorded instance of a communication breakdown having direct and significant negative consequences for safety and involving an informal interpreter. He continues:

Me: And that was when the initiative about teaching each other's languages...

David: It's taken a long time for me to kind of accept it- well not accept it but come to terms with it. And then I was working on the site last year and it was like kind of the same sort of thing, and I could see what was happening… that's where the initiative has come from. So, it stemmed back from the accident, but it was only the last year… I thought it was a very good idea and it seems to be working.

In this participant's experience it takes time and familiarity with communication difficulties to recognise the gravity of them and devise ways of dealing with them. Essentially, his team do not focus on learning English basics but on what they need to know in an emergency. For example, asking to call for help, about the emergency exit, about pain etc. The workers sit down together to do this for half an hour to an hour every two days. They started with ten phrases in English which they then write in their own languages and teach to each other. The next week these will be revised, and they will add another set of phrases. This is useful because it is in these urgent instances where it might not be practical to rely on someone else to communicate, whereas an induction or briefing can be facilitated by an interpreter. In addition, the exercise itself is an opportunity to regularly work on building relationships within the team to improve trust and teamwork. The participant continues:

Because if someone's in trouble… they tend to go back to …their mother tongue (Me: mmhhmm). And then trying to speak to someone while they're panicking is very very difficult. So, if you can try and communicate as much as you can in that short amount of time, 'do they need help?' 'Is it painful?' that kind of stuff, you can kind of get the gist of it. Because I was the first aider with this guy that had the accident, he reverted back to his mother tongue, so he just wasn't listening to what I was saying and I couldn't understand what he was saying, so it made the situation even harder. But if you can try and communicate, even if it's only small stuff, can get an understanding of what that pain is, what they're going through …

The participant's initiative by no means strives for everyone to become fluent in another language, however the small amount of language needed is not the usual basics and would have to be taught rather than picked up naturally. One of the great things about this initiative, as the participant says, is: 'it can be as big as you like or as small you know, it can be on any

site.' These workers also wear a badge with a flag on so that people can recognise what language they speak. Initiatives such as this one may change the scope of the work that informal interpreters on these sites need to do. For instance, if workers can communicate with each other using the key phrases they have learnt, then the interpreter would not need to come in those moments but only for longer or more complex interactions.

Many other participants discuss their attempts to learn languages. This has all been through their own efforts, whether paying for evening courses or reading newspapers and watching series in English with subtitles or trying to socialize with British workers. This aligns with what Kraft found in her case study of an informal interpreter (Kraft, 2020). Essentially, in contrast to the examples of language learning above, a top-down approach, these individuals choose themselves to learn the language, investing their time and money in their language skills. For example, one Romanian ASM, Stefan, knew basic English from school and describes his own effort at improving it, which in turn raised his job opportunities. In other words, his investment did indeed enhance his economic opportunities (Group, 2016). He watched TV with subtitles and made an effort to be in touch with English people, even though onsite he was with other Romanians. He explains that when he first came to the UK, he did not understand anything because of the different accents, meaning that the effort at learning the language must be continuous. Fernando, an interpreter, also taught himself English, which he saw as an important step to improve his job prospects:

> I had never had the opportunity to go to the school to learn English, all of the English and the imperfect English that I - that I speak, it comes with me just talking, learning, reading, educating myself because umm- that brings different issues. Immigration for Mexicans in the United States it's very extremely difficult to- to- to regularize status, so (Me: yep) by being Mexican descendant my opportunities to do something else were- were really little. Minimum. So, I have to decide whether I work, or I study. And I don't have anyone to support me you know. So, I have to work, I have to work, but at the same time I wanted to- to be able to do better in life, so I start learning the language you know, as I said, just watching TV, reading, translating books, you know my- my process was really slow but- but it also gave me the skill.

For Fernando languages are very deliberately pursued as a route to opportunities, 'I wanted to be able to do better in life, so I started learning the language'; he invested his time in learning

English because his imagined community was as a skilled bilingual migrant, which he believed would afford him better opportunities, in other words, ‘greater economic or social mobility’ (Group, 2016). Fernando’s English is much more advanced than other participants and yet he describes it as ‘imperfect English’, perhaps because to him this is an important and difficult skill that he is always working on. Like João, who up skilled by learning languages, Fernando is proud of his achievements. In Fernando’s situation his motivation to learn another language for work came from his permanent migration, whereas many of the workers on sites in the UK do not intend to stay so may not feel the same pressure or incentive to learn English. Their imagined community may be in their home country, as was the case with the workers I encountered onsite, discussed above.

Like all the other participants who had learnt English, informal interpreter João learnt English of his own accord, not through work. For instance, he read the Italian football newspapers and through knowing Portuguese and English could figure out enough to learn the rest. As with Ivan, a Bulgarian supervisor who went to English classes and watched TV to improve his English, these efforts eventually lead to promotion, the investment paid off. However, while language skills are often likely part of the reason for promotion they do not ever seem to be formally recognised or often encouraged.

The age of the worker will also likely impact how quickly they learn the language, and on top of that younger workers are more likely to invest in a bilingual identity for their future opportunities. Opinions about learning languages differ significantly between participants. Some, such as Site Manager Marius, believe that it is the duty of someone who migrates here to work:

> Me: and yourself did you learn English before you came here or?
> …
> Marius: I don't have my level now but yeah, I'll - my mentality is, my personal mentality is, that if I'm gonna go into a country I need to speak the language cos otherwise why am I going there? But that's my personal mentality (Me: Ok). Most people they see this matter differently, I'm sure you understand what I mean.

The final line suggests that he has found this to be a controversial opinion in the industry. The lack of provision in most companies for improving languages that has been found in this

section is one of the significant contextual factors that affect the scope of work of an informal interpreter. This finding can be generalised as a norm in London because of the sample and their experiences with many companies but is not conclusive elsewhere. Where there is impetus for workers to learn languages, informal interpreters may have less language work to do and would be required to interpret less often over time as workers were able to communicate between themselves without assistance. In this data there are many examples of individuals making efforts to learn the local language, which helps to answer question one about who becomes an informal interpreter.

One facet that differentiates the professional and informal interpreters is whether they are a natural bilingual or not. Those that work primarily onsite as construction workers have usually developed the bilingualism naturally through living in another country in adulthood. This can lead to a restricted bilingualism where they know the language used in the industry but may not have a general fluency. Meanwhile those who have studied languages formally or are lifelong bilinguals, mainly, but not only, the professional interpreters, have a broader fluency and understanding of languages and communication even if they have not studied interpreting specifically.

7.5 Language initiatives and site culture

This section will detail some initiatives found in the research that were aimed at managing communication with speakers of different languages. Some of these are discussed in terms of their interrelation with site culture, a contested term that requires some definition. A distinction is made between site culture (related to the organisational culture) and site safety culture; site safety culture is one part of site culture. Site culture refers to the environment at the workplace, how people interact with each other, or 'the way we do things around here' (HSE). Whereas the HSE defines safety culture as 'the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's H&S management. Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures' (HSE). The HSE's emphasis on importance of 'communications founded on mutual trust' for a positive safety culture justifies the previous discussion concerning the need to improve trust in the interpreter. In her review of the safety

culture literature, Sherratt found that the factors commonly suggested as characteristic of a positive safety culture include: 'top down management commitment, worker engagement with formal and informal communications on safety matters, safety training, encouragement of safe behaviours, and a 'no-blame culture' to encouraging accident and near miss reporting'(Sherratt, 2014, p.231). Moreover, she argues that the dominance of normative and pragmatic conceptualisations of safety culture have removed social aspects and found that these conceptualisations did not address all the concerns of the participants, who felt that the present function of safety culture was to 'reach those who are not currently engaged' (Sherratt, 2014 , p.236). What is more, the study concluded that the use of transient labour in the industry, through agencies, destabilised the workforce and inhibited the growth of positive safety cultures (p. 234). Most of the factors cited as necessary for a positive safety culture are interrelated with the findings discussed in this chapter, specifically management commitment, communication of safety matters, trust, and safety training.

Having a positive site culture generally is clearly inextricable from being able to communicate, a matter broached by some participants. One of the most developed communication initiatives found on a construction site is the language exchange discussed previously. This initiative illustrates how the concept of translanguaging is not only helpful for understanding how communication occurs currently but how we can view this practice as something that can be utilised by all workers. The initiative stands out by recognising the utility of British workers learning from others, not only expecting the migrants to learn English. The participant stresses that not only is this vital in case of an emergency but that it improves the day-to-day working relationships onsite. His plan for the next step is to have a respect day, focusing on different cultures, by people bringing in their traditional foods. The manager said that while it is a slow process it did seem to be working, creating a good work culture onsite with people interacting who did not before. This is significant because increased interactions and a more positive culture onsite will likely improve co-operation and thus the productivity of the site. He emphasized how the initiative could be adapted to different sites and be as big or as little as people want. The PM argues that just putting language posters up they might be ignored, but if people have to interact and are interested then you will get more results. This manager is planning other ways of improving the site culture. He explains:

> We have a respect day, so people from that- whatever culture they come from, they bring their national dish in, so people get to taste that as well. So, it's kind of intermingling and bringing them all to one… a lot of people are taking it on board, other people don't you know, so it's- it's a slow process. But for me it seems to be helping you know, and it's creating a good bond between people, cos people that don't normally talk to each other and they're having a laugh, smiling, becoming more friendly, and so it's a good culture onsite as well.

The informal interpreters' work bridges the communication gap in the immediate and practical sense. However, this PM has recognised that more than this is needed to improve the overall communication and site culture. Similarly, João described how speaking different languages improved relations and reduced isolation: 'I was maybe the only Portuguese that was having a good relationship with Italians because I was one of them you know, I could speak their language, and it was only one month we made very good friendship', this is a clear example of how improving communication between speakers of different languages increase co-operation.

The most developed practice related to creating a positive safety culture within a multilingual workforce that was found in this study is hiring a consultant. Two of the professional interpreters interviewed also act as consultants, one on Japanese culture and how to work with it, and the other worked as a site safety consultant and interpreter. Here Olga describes her experience as a cultural safety consultant:

> I worked for a consultancy who helped operators or project owners or construction companies to umm to change their safety culture, so nobody would get hurt onsite. And of course, this whole principle, especially when you're dealing with multiple languages, is in itself challenging. Because of our own beliefs I suppose, and how do we kind of value ourselves or each other… How do you bring everyone on board in terms of common human value and bring it into safety at work… people die on construction sites, a lot unfortunately, and a lot of it to do with our understanding of safety culture and kind of not just applying of rules I suppose.

Again, overcoming the language block is not enough to harmonize values and beliefs involved in the safety culture, some of which are rooted in different cultural traditions.

A further interplay between safety culture and language is that participation is deemed as important for learning to work safely (Dainty et al., 2007). Instances such as nodding through induction have implications beyond missing the spoken information, it is a missed opportunity to develop a sense of responsibility for safety, for workers to engage with it and for safe working to be encouraged as well as open communication about this. To enable this opportunity, it would be necessary to have small groups of workers to each trainer and informal interpreter, and for bi-directional interpreting to be facilitated with time, not only communication passed down from management. Beyond the key moment of induction the separation of teams by language signifies that workers are unlikely to learn the desired, local, safety culture (Wasilkiewicz et al., 2016).

A couple of relevant initiatives were shared by Innovations Manager Toby. Their project has an equality, diversity and inclusion manager (EDI). Therefore, responsibility for communication with migrant workers is shared between them and the PM. He explains: 'her role specifically is making sure that everyone is aware of EDI and what it means to the project and how to manage that better as an individual and as a team'. This manager also explained that pre-Covid a best practice sheet was used in project briefings. Part of the purpose behind this was to improve communication with team members whose first language was not English. There were five things that should be done. 1 – Introduce everyone around the table so that you know where they are from and don't assume that they speak strong English. 2 – Try not to use abbreviations or acronyms. 3 – Speak slowly and clearly. 4 – Take time to listen and give everyone a voice. 5 – Be aware of cultural differences, for example Ramadan. This is clearly an easy to adopt initiative that would raise awareness of linguistic difficulties and perhaps decrease them. Considering that the people attending these meetings that are bilingual are those with more developed skills, as they are supervisors or managers, they are likely to be people who informally interpret. His consideration of how to communicate clearly with them shows how it is a difficulty even in these situations, and a significant one given that he estimates that over 50% of people on the project are not L1 English speakers. Nonetheless, beyond this he stressed that the company placed a big emphasis on communicating safety yet did not have any other examples of how this was dealt with.

A novel example of a language initiative is given by Safety Manager Jen. She discusses a method that arose from the need to work around 'poster blindness', e.g., an overload of visual information, especially for L2 speakers. The participant explains that she wanted to make the posters interactive using augmented reality, but that as a small company the ideas were restrained by their budget. Given the positive conclusions in recent research on using augmented and virtual reality technology in safety training, such ideas are promising (Sacks et al., 2013, Ahmed, 2019, Li et al., 2018). Such technological advances could drastically change the way information onsite is communicated, an example given by the participant is: 'I was looking at ways that you could scan the poster and then go onto other websites and see - say for example it was a poster about a scaffold, how to erect scaffold towers ... you scan it and then it will show you a video of doing it.' For the time being they are using a simpler solution in her company, using QR code technology to access translations of the posters read out. The participant hoped that using posters in this way would help workers to learn English by reading it whilst also hearing a translation. The participant conjectures that the short duration of projects that this company does, often as a subcontractor, has been a barrier to the success of this initiative and the company can only put their posters up where they are the principal contractor. Barriers such as this one limit the effectiveness of many initiatives in the industry. Another impediment for a small company was that using free versions of technology meant that workers had to sign up using their personal details, which put many of them off using it. The trial poster for Romanian was translated onsite by a supervisor, then for the rest of the posters and languages with QR this will be outsourced to a translator. She cites one complication that she found during this process was that there are various Romanian dialects that are not necessarily mutually intelligible, saying that it is 'tricky to work out what's the majority that you've got'. Audio is also created for an English version of the explanation, helping both L1 English speakers who struggle to read and speakers of other languages who can understand spoken English but not read it. Her company are also in the process of translating their onboarding system, so that workers can download and read this before coming to site. If this initiative were successfully implemented, it would reduce the work of informal interpreters onsite.

On one of the sites visited the subcontractor uses high vis vests that have ‘translator’ written on them, making it easy to identify who can be used to interpret or translate, as can be seen in the photograph below.

Image 7: An informal interpreter wearing a 'translator' high-vis vest, with the Bulgarian flag to show what language he speaks

In discussion with the H&S manager on the same site she mentioned seeing picture flashcards used to communicate on an oil refinery, she believed this was a good idea that could be used in many places, but it was not yet implemented on the site we were on. Another communication method she evaluated positively was having subtitles in the induction in different languages. Such conversations highlighted that there are a wealth of ways that interlingual communication can be made easier but that this knowledge is usually not shared and so they are not widely used.

What is more, in discussions with managers and supervisors many acknowledge that they have not fully considered the issue of multilingual communication and ways it could be improved, a problem that arises because no one is clearly given responsibility for this. For example, ASM Sean had not considered ways of improving the language skills of the workers onsite, despite displaying great concern about the potential risk of not understanding:

> Me: And do they have any way that is kind of encouraging them to pick up English, I mean do you have any, I don't know, like classes or phrase boards or ...

> Sean: No. To be honest I wouldn't have even thought about it ((laughs)) but that is quite a good idea, to have something like that...

PM Jack also does not appear to have considered how the language barrier affects the operatives beyond just the conversational level: 'that's actually a good point actually, cos the signs that's out there maybe it's like 'warning do not enter' it's written in English. (Me: mhhmm) But someone who can't read English is probably looking and thinking 'What?' It's like me trying to read Romanian.' Yet the examples of good practice regarding communication within this data and the literature are largely simple to implement, for example teaching key phrases, asking supplementary questions and providing information clearly etc. This information is useful for question 2, as when such efforts are not made to improve communication then an interpreter is needed more. An interesting motive for formalising the language position would be to give one person agency and responsibility for developing practices around language.

Another finding regarding onsite communication which helps to understand the environment in which the need for informal interpretation work arises concerns CSCS cards. Taking the Health, Safety and Environment Test to get the CSCS card is one of few examples of industry wide initiatives that impact onsite communication. It is also something that divides opinions in relation to different language speakers. ASM Sean highlights the paradox created by allowing the test to be taken in many languages but not providing for language differences at work:

> So, the CSCS card at the minute…you can do it in any language which is already-when somebody gets to site and they've done a CSCS card in Bulgarian say, they get to site without a word of English but yet their induction is all tro English. You ask somebody to interpret it, but they don't have any interpreters. Like you're denying that person a job. And it may be classed as being a bit racist, cos you can't give him an induction in Bulgarian cos there's nobody there to translate it for him, but he has been allowed to get a CSCS card from the safety authority in the country through a language that he understands but a lot of people don't...

He uses the CSCS as an example of how more complex safety plans are undermined by not dealing with the foundational issue of language onsite. The tests are provided in multiple

languages and the HSE provides translated safety information on their website in multiple languages, giving the impression of an inclusive industry, yet the reality faced by many workers is constant barriers. For instance, as the induction is the responsibility of the principal contractor (set out in the Construction Design and Management Regulations 2015), but the workers sitting it may come from a subcontractor or agency, it is impossible for the person running the session to prepare it in an accessible way, Senior Site Manager Hannah says that they usually don't know what nationality workers are coming onsite. The fact that the workers have a CSCS card gives the contractor no knowledge about the workers' ability to understand and they don't have a guarantee that the team will have someone capable of interpreting. Another problem inadvertently caused by allowing workers to take the test in languages other than English is that not everyone is aware that this is possible, creating a false assurance that workers will understand English, as demonstrated in PM Lei's account:

> Me: … when you are starting the project is that something that you think about in recruitment? About their language skills, their ability to communicate?
>
> Lei: They should have some basic language, English skills, basic very basic otherwise they won't have the CSCS card see? If they can pass the CSS card- sorry the -how to say - the test, yeah, it's in English so they should understand something, otherwise how can they get this card?
>
> Me: Ok
>
> Lei: Yeah, so I'm assuming they should have some understanding of English. Maybe not very fluent but at least they can communicate so. Because having a CSS card and all the, all these certificates, is the key thing before you enter site and to work. So, if you have that card that means you already passed the test, you understand basic health and safety things onsite yeah.

In other words, the manager does not consider the workers' ability to communicate with each other because he assumes, mistakenly, that they all speak basic English. In terms of the extent of this concern, one Site Manager, Marius, thought that most operatives had taken their tests in another language, given that in his team of forty, all of which have the CSCS card, only about six had a good level of English. This is one example of a misplaced assumption on

behalf of management, which has the consequence of underestimating the communication barriers onsite, and thus the workload of informal interpreters. Further failures to understand the profile of their workforce will be discussed later. One manager also mentioned the problem of fake CSCS cards, this is a particular concern in terms of the workers who do not understand English because their prior understanding of safety has not been checked and they may not be receiving the current information onsite fully either. It is for this reason that said manager thought that being able to take the test in different languages is a good thing. According to safety manager Jen, these rules are changing so that people have to understand a level of English to take the test, she says that CCDO no longer allow workers to take the test with a translator and that 'CSCS are taking their time, but they need to umm demonstrate a level of English because of the issues and the safety out onsite.' Periphery issues, such as is the CSCS card, impact on informal interpreters' work in terms of what is expected of them. Firstly, occasionally managers will have unrealistic notions of their workers' ability to communicate in English because they believe they have passed a test in English when they haven't. Secondly, it might be overestimated how much safety information workers know if they have fake cards. Allowing the test to be taken in other languages was deemed necessary so that workers understand the information. However, perhaps it should be recorded what language the worker took the test in. In addition, if a worker has English as L2 and passed the test in English this could be an initial gage to show that they may be able to facilitate communication between English and their L1.

Several initiatives for improving communication onsite that were found in this research have been outlined in this section, adding to those described in previous research (Tutt et al., 2011, Oswald et al., 2015). Some of these are creative and easy to implement solutions which could be capitalised on. If they were used more widely then some of these strategies would significantly reduce the informal interpreters' workload. Capitalising on current practices may be necessary considering that there are several reasons why the blanket use of communication aides such as interpreters may not be an adequate solution, due to the presence of multiple languages, the cost, the potential long-term effect of reducing language learning, and the possible lack of interpreters specialised in this field.

7.6 Communication management: sector differences

How communication with speakers of other languages is dealt with, and consequently how this affects informal interpreters, varies significantly by sector. This research supports the findings of Tutt et al. (2011) that internationally professional interpreters are not often employed to work on construction sites, despite many languages being spoken and problems arising because of this. Frequently, by promoting workers with language skills to more senior positions that require communication with different language speakers, companies assure a level of communication that allows work to progress without needing to employ linguists from outside the company or create a recognised separate position for the language work. Nonetheless, there are some areas where professionals are hired.

There are various reasons why the company might invest in interpreters, including being high profile or high-risk projects, because the project is more technically complex, or because the languages and cultures involved are very different to each other. The professional interpreters interviewed had only been hired for oil and gas or nuclear projects, with a couple of exceptions, which might be explained by the fact that the languages and cultures involved were more distinct than others. This is illustrated by the narratives in the appendices. One manager's (Sean) experience corroborates the pattern in the data of different sectors having different standards with regards to language and safety:

> it depends on the sector, like when I was working in the rail sector… if you didn't have strong English, you weren't on the job. … railway is very health and safety conscious anyway so it's a lot higher than you're looking at with civils, it shouldn't be, but it is. … Then I got into civils, and they weren't … as pushy with the English speaking. They were kind of like once you kind of understood it, you got a little test at the end, if you passed it the test you were allowed on the site. Umm then I got into developers … the induction, you could print off in different languages, so you didn't even have to verbally give it to them, you just hand it to them on a page, it was like read this, sign it at the bottom, you sat the induction, you understand it, that's fine. Then I moved to this company and it's a bit more make sure there's somebody there to translate for them, so it's that in-between.

Within this research, none of the four sites visited hired professional interpreters and none of the interview participants that were recruited through construction networks had experienced working with a professional interpreter. Nonetheless, fifteen of the interview participants had been hired to interpret, and sometimes to translate, on construction projects. All of these participants were recruited through an online language network. The pseudonym of the participant and the type and location of project they interpreted in are shown in the table below. All these participants were hired as linguists. However, their types and levels of training vary significantly, see their biographies in the appendices for more information.

Table 2: participants who were hired to interpret on various construction projects

Name	**Project type**	**Country project located in**
Ahmet	Various construction projects & training sessions	Turkey
Ali	Oil & gas	Kazakhstan
Amal	Computer assisted construction for the MOD	Algeria
Anna	Oil & gas	Russia
Farah	H&S training and tests	UK
Greg	Nuclear	UK
Johnathan	Hospital renovation	Germany
Karl	Training sessions	UK
Lanfen	Chemical plant	China
Magda	Chemical plant Oil	Brazil Angola
Michail	Oil	US
Olga	Oil	Kazakhstan
Sara	Mining & oil	Peru
Ulla	Various construction	Finland
Zane	Various construction	Tanzania

It can be seen from the table that professional interpreters are hired in projects that are likely high risk and high cost, such as oil, gas, chemical and nuclear plants. Searching online for

interpreters in construction shows a similar trend (see for example the interpreting services offered for construction companies on the following websites: https://www.satislang.co.uk/interpreting, https://www.tjc-global.com/construction_translation_interpreting_worldwide). In contrast, residential and commercial construction projects seem to usually not employ professional interpreters at all, or if they are employed, they are not used to interpret onsite but for training sessions in a classroom-type environment. The exceptions in this research are Johnathan, Ulla and Zane. Johnathan was hired to help with languages on a hospital renovation project in Germany run by a British firm. However, he actively attempted to get more jobs interpreting in the CI afterwards but did not find any openings. He points out that this experience was before there was easy access to internet, perhaps explaining why it was seen as necessary to have him to liaise with different parties, he also got the job because he knew some of the local construction workers, suggesting it was a case of making the most of contacts rather than actively seeking to hire a linguist. In the case of Ulla, she professes that in Finland because the TUs were strong when she was interpreting there, interpreters had to be hired to ensure workers' rights, she suggests that this practice is specific to Finland or perhaps the Nordic countries. Zane's case is also different than would happen in English-speaking countries such as the UK, US and Australia because of the languages involved. The company is Chinese and the local workers Tanzanian. The employees cannot speak each other's languages and while the Chinese staff could use English as a lingua franca to some degree the Tanzanian workers could not, so it was necessary to have an interpreter from outside the project.

A theme often common to both professional and informal interpreters is the accidental nature of getting into the industry. This is likely a result of the nature of the CI and will have implications for the work carried out as well as for the people doing the language work. For instance, Fernando describes how he was working as a labourer and a foreman heard him talking and he was moved to the superintendent's office as an assistant and then as an interpreter. Sara and Anna describe changing their work practices because in the site environment time was not allowed for them to work as they usually would, so they would skip introductions and instead of interpreting would converse with the interlocutors and then once they had understood they passed on the information that they saw as necessary.

The work of professional interpreters in the CI will be discussed further in section 9.8. This discussion now turns to the linguistic make-up of workgroups.

7.7 Linguistic make-up of workgroups

One of the aspects of the work environment that has the biggest impact on the informal interpreters' work is the linguistic make-up of the workgroup. Some teams are made up of workers who all speak the same language, some have people who speak two different languages, and some have speakers of many different languages. In this section, findings concerning the different linguistic make-ups of the working groups will be explored, including the use of English as a lingua France, language families, and country differences.

On a project with a team of all Romanians the PM, Jack, describes avoiding talking to the operatives and only speaking to the supervisor, who is bilingual:

> Me: And this line of communication that yourself you speak to the supervisor and them to the workers, is that always the same or do you think that has come up- so if it was a British team, it would be the same or that's come up because those people don't speak...?
>
> Jack: Yeah, it's come up because- it becomes that way because the supervisor's not gonna send his operator to see me- or I'll say to the supervisor there's no point in sending your operative to see me, cos he can't speak the language. So, you may as well keep him doing the work and you come and relay it to me. So, they'll always tend to be the supervisors - oh 'can I have a drawing can I have this can I have this', there's no point in sending the operative to -to me, and he stands there and goes ((gesturing, pointing)) (Me: yeah) 'what do you want?'

From this account it is clear that there is a language barrier onsite, which management avoid, rather than overcome. This results in no communication between management and workers, perhaps causing a stricter sense of hierarchy and negatively impacting the site culture. The final line of the quote might show that this PM experienced failed attempts at communicating with gesture and little English. It is also interesting to consider the phrase 'operative... keep him doing the work.' In the site context manual work is valued as real work and in contrast the language work is dually not appreciated as real work yet is the realm of more skilled workers, supporting the findings of Kraft (2020). It is possible that if there was someone

onsite dedicated to communication, to interpret as well as to oversee other language initiatives, the segregation need not be so extreme. It is probable that eliminating this segregation would lead to enhanced co-operation and be beneficial for the success of the project.

An undesired effect of not mixing languages within a team is that workers are unable to improve their language skills. Elena describes the situation in Miami, where the need to assimilate has almost disappeared with whole neighbourhoods and workplaces that are only Spanish speaking. Similarly, Site Manager Paul explains how his team are all Romanians, so they speak Romanian at work and at home, making it very difficult for them to learn English. He also says that this issue is the same in many countries. In conversation with Jake and Constantin on project 3 they described how migrant workers often secured a job through a friend or relative already in the UK meaning that they may end up working in a team of one nationality, they say that these workers probably also live together. Separating teams by language helps communication in the short term, but in the long-term means that workers can live in the country for many years and not learn the local language, as explained by Wasilkiewicz et al. (2016).

In mixed teams, even with few or no L1 English speakers, operatives often need to use English as the only common language to operate in. Site Manager Paul says that even if the teams were mixed with other nationalities that were not L1 English speakers, they would have to use English. For example, for Romanians and Bulgarians to communicate they use English. As an example, Ivan, a supervisor, has been in the UK for 8 years and it is the first time he has worked in a team that is not all Bulgarian. This separation means his English hasn't advanced that much, although he invested in his own language skills with a course. He comments on his level of English: 'sometimes, especially when I'm working with British guys with hard accents sometimes on the phone, I can understand nothing.' And at the beginning of the interview he warned: 'just to let you know, my English is very basic, so I understand about 60-80% but it's a little bit difficult to talk, obviously I speak broken English, but anyway, you understand me.' On this project he has been practising his English more as the only possible common language.

Participant Andrei, who is a site supervisor, describes that it is easier to have teams of all one language:

> Yeah, so for us it's not an issue cos we're all Romanians- it's not about we're not going to greet a guy that's from another country. We will struggle a bit cos if the guy doesn't understand or speak English my guys don't, most of them don't, understand or speak English, you imagine how the information would be passed, would be quite difficult but yeah.

The participant was keen to iterate that the segregation of teams by language on that site was not because of intolerance but because of the language difficulties. He has worked in mixed teams in the past, which was difficult, but they tried to teach each other their languages:

> Me: Ok and what about in previous projects, did you have any mixed teams?
>
> Andrei: Oh oh yes, yes yes yes yes. My previous job in Tottenham stadium was very mixed yeah, people from Africa, English… It was a big - a bit of an issue with in between the colleagues - but was nothing racist or we tries to understand each other. But well, us Romanians usually teach people Romanian ((both laugh)) so you expecting an African guy to start saying things in Romanian- like good things, not bad things, and you're like what ((both laugh)).

This participant's answers seem restricted by impression management, for example he felt the need to say 'nothing racist' and 'good things not bad things'. This interview was conducted in a site office, where the participant was probably highly aware of his identity and answers in relation to the company and the site, rather than as an individual. So, in teams made up of people who all speak the same language, but not English, communication with managers etc. is avoided, or facilitated by an informal interpreter when necessary. However, when teams are mixed and workers cannot use English as a lingua franca, this causes a lot of difficulties.

The use of English as a lingua franca in many countries, and certainly frequently here in the UK, of course facilitates communication where there are people with many different L1 languages. However, it can also cause difficulties for the interpreter. Many report that interpreting someone who is not speaking their first language is much more difficult. For example, Greg, a professional interpreter, says:

> most of the meetings were conducted in English. But if you imagine you'd got so many different nationalities involved, for me that's actually one of the hardest things to translate was actually the non-native English speakers sometimes (Me: yeah). Because of the sort of the idioms they use, you know. Sometimes they would translate things into English that made - perhaps made perfect sense in for example… Arabic but you know when they translated into English, they didn't make any sense (Me: yeah, just direct). And you have to put that into Japanese somehow. Lots of cases like that. As well as very very strong accents, not least of which was our CEO who had a very strong Glaswegian accent, of course that was very very hard for the Japanese (Me: yeah blimey), it was very hard for me. And that was another reason they really needed the native British translator/interpreter to do that work because it was really important that what was said in English was captured correctly into Japanese (Me: yeah definitely). And with the nuclear industry all meetings have to be recorded, so the minutes have to be taken for safety and liability reasons later on, hence the need to capture everything that was said.

He highlights that people may use English, which they are not competent in, and directly translate their thoughts, which often don't make sense in English. In this account another consideration is highlighted. Professional translators often only translate into their mother tongue, and for unidirectional interpreting a L1 speaker of the target language is often preferred because it is considered that the quality will be better. However, in some cases when understanding the source language might be difficult and is paramount, then this has precedence over style. As explained by Greg:

> The majority of my work was actually writing umm translating into Japanese. Now I know that's not the usual thing, you usually translate into your own native tongue, but for the reason I just gave the Japanese head office wanted to make sure that everything was captured correctly that was said … by the English speakers and therefore they were more concerned that everything was captured correctly rather than actually the final output of the translation or interpretation

The difficulties caused by idioms and accents are common and will be discussed further in 7.9. Although the nuclear industry is unique in having information records kept of spoken discourse, the example demonstrates that even with a budget for this and planning some

difficulties are still present. One way Greg tries to ease difficulties is by highlighting to the interlocutors how they can facilitate his task. Raising awareness of intercultural communication is an aide that could be considered.

Professional interpreter Karl also discussed facing difficulties interpreting English for LX speakers, as there will not be an interpreter for all languages:

> Me: So, the people you are interpreting for they are German workers, but they are based in the UK?
>
> Karl: … most of the time they're German workers often actually not just German but kind of non-Germans living in Germany who use German as their working language. Lots of you know people from Eastern Europe …. it's easier for them to be trained in German than finding another interpreter for Polish or Lithuanian or whatever.

Similarly, Olga says:

> Me: and the groups that you were interpreting between, was it English and one of your languages or was there a whole mixed team of different speakers onsite?
>
> Olga: Mostly I would say it was English and either Russian or Kazakh (Me: mm ok). There were some instances of course when an English-speaking person is not a native English speaker. Like for example it could be from India or, I don't know, Poland or whatever … and then of course he would be dealing himself with trying to say something in English and then that needs to be interpreted and then it has to be going back to him, so I think that also adds a little bit of a layer (Me: difficulty) for understanding and clarity.

The use of English (or perhaps another common language) as a lingua franca is a solution used in many countries to the complication of having teams of construction workers from different countries. Farah explains that her son-in-law works in Dubai as an engineer in the CI. She says that they use English as a lingua franca, so do not use interpreters for Arabic. Meanwhile, Zane works as a professional interpreter on construction sites in Tanzania with Chinese companies. The engineers and executives are Chinese speaking, and the workers

speak Swahili. English is used as a lingua franca by the Chinese interlocutors, and he would interpret this into Swahili for the local supervisors, which proved difficult:

> Me: ... as you're using English as a lingua franca do the Chinese normally have enough English that you can understand them fine?
>
> Zane: That's one of the biggest challenges because actually most of the Chinese people cannot speak English. … So, I have to listen to them several times and, you know, at first it was really tough for me to understand them because, you know, I was not familiar with the way they speak and well- but over time I became familiar with it. (Me: mmhhmm) So not say- I cannot say that the challenges are over … but I'm trying my best to -to adapt you know to the way they speak and to the way they - I mean their level of English language.

As well as the difficulties he recounts here for interpreting, another consideration is that some of these Chinese workers are directly speaking in English but some of them may be acting as informal interpreters for colleagues who do not speak English at all, causing relay interpreting from the original Chinese worker to the Chinese informal interpreter, to Zane, to the Tanzanian workers. Similarly, Professional interpreter Michail describes that in his experience it is sometimes necessary to have relay interpreting onsite in Uzbekistan. Relay interpreting is when one interpreter interprets from the source language speaker's language into a language that is common with another interpreter. That interpreter then interprets into the target language.

> Michail: Uh yes sometimes it's dual interpretation. We had a Chinese contractor onsite, and you can imagine that I would come to site with the client who speaks Russian and with the engineer who speaks English, and the project manager from China doesn't speak neither, only Chinese...

English was also used as a lingua franca in Magda's experience with projects in Brazil, not only in conversation but all of the legal paperwork was in English too. Likewise with Anna's experience in Russia:

> Me: So, were all of the -the engineers that came from non-English speaking and non-Russian speaking they were using their English?
>
> Anna: Yeah they were using their English kind of umm as a general means of communication ... so I would say that was definitely one of the challenges of the interpretation process... but sometimes especially some of the Russian specialists or workers would try to speak to people in English, even when their knowledge is very limited ... yes it's, it's a very delicate moment because errm it's a little bit challenging to not be rude and insist that a person speaks in their native language because they're clearly not capable of relaying the message in English err but it is also quite difficult sometimes to decipher the message that they're trying to say (Me: mmm). So that's- that was definitely something for me to look out for. To find ways to approach people and try to make sure- to make them comfortable with just talking to me, and that's what I'm there for and- or like talking through me but making sure that they're giving as much detail as possible to the other party.

Again, the use of English as a lingua franca can be problematic because the interpreter may struggle to understand what the interlocutors want to say. Furthermore, in Anna's experience, when people were used to the practice of using English as a lingua franca, they would continue this even when an interpreter was present, meaning that the interpreter has to use her interpersonal skills to manage the situation.

There also appears to be a relation, internationally, between the stage of development of a country and the linguistic composition onsite. In more developed countries it is likely that the majority of management employees are from that country and that a proportion of the trade workers come from other countries, whereas in less developed countries all of the trade workers might be local, and the management are more likely to be from other countries. For example, in the US and the UK management are often local and migrant workers are hired. In contrast, in the data from this research in Brazil, Peru and Tanzania the trade labourers were local, but the management were from the US or China. While the sample of the study was not large enough to confirm this hypothesis, it is worth considering. For instance, the communication needs in a country that hires all local workers will be distinct and probably easier to meet because the language barriers will be present at key points rather than throughout the working day and are more likely to only include two languages. In contrast,

where the labour force is made up of speakers of multiple languages the communication is more complex.

Furthermore, according to Ulla, Finns tend to know English pretty well as English is more or less an official language in business and therefore a reduced area for interpreters. If English is an official or a business language of the workers' country, they are more likely to know enough of the language to interact with workers from other countries without the need of an interpreter.

The linguistic make-up of the workforce varies not only from country to country, but overtime, because of changing migration patterns. João explains the changing migration and language dynamic in Portugal, when previously migrants came from the African countries that speak Portuguese now there is an influx of people from Pakistan and India. Similarly, in the UK, the prevalence of eastern European workers currently will likely change with Brexit, changing the linguistic nature of the construction sites. This underlines the need for up-to-date research and awareness by management of the language needs on their project, allowing the management of communication that is most effective in the current conditions.

Another important consideration about the linguistic make-up of teams and the interpreter's work is language families. Aleksander discusses differences between languages and how this affects whether the workers can get by. He explains that Bulgarian is similar to Russian and Serbian, as it is a Slavic language, but Romanian is more like Italian and Spanish. Therefore, in a mixed team of Bulgarians and Romanians they have to speak in English. This refutes some managers assumptions about eastern Europeans being able to communicate together, such as PM Lei on the same site. In terms of the different languages spoken onsite, the manager, Lei shows a lack of understanding about how workers work together:

> Me: And the team that you work with, do you have a lot of people with different languages, and how do you communicate?
>
> Lei: Sure, sure, we can see that most of them they are from East Europe, yeah Romanian, Bulgarian, these kind of people.

He explains that there is a chain of communication through the supervisor and that he does not need to speak to the operatives: ‘and then they can tell them guys whatever using their own language or something yeah’. He groups all Eastern Europeans and their languages together.

Internationally, language families also affect an informal interpreters’ ability to learn the other language enough to interpret, and may determine the countries they work in. For instance, informal interpreter and Project Secretary Magda could work in the US, Brazil and Angola using Portuguese and English, there were just some differences in vocabulary and formality that she could adapt to. Moreover, for João starting off with some language knowledge allowed him to springboard and learn other languages from the same root. João already knew English and Portuguese, so could then learn more languages more easily, compared to people who only have their mother tongue. He describes:

> João: Yes, Italian and French I learnt when I was there. …when I arrived there everything started to make sense, all the grammar and very similar grammar regarding the verbs. … They wanted me to learn Dutch, but I didn't learn Dutch, I ended up going out of the country to go to England.

João is a Portuguese construction worker who described learning Italian as he worked on a project, he read the football newspapers in the morning and because of the similar grammar and Latin roots of the words he was able to pick it up quickly. In contrast he would probably not have been able to upskill on his own this way with languages with different roots. Doors opened to him not only because of his skills and determination but because those languages are used in Europe, where he is able to travel freely to work. These factors establish the limits of investment and imagined communities to encourage and empower workers. In contrast, Amir highlights that it would be much more difficult with languages as different as Arabic and English.

This section has explored the different requirements that come with different configurations of language speakers on a project and how these are managed. The next section will explore the related practice of having language speaker ratios.

7.8 Ratios of language speakers

One aspect of the linguistic make-up of the work groups that shapes the work of an informal interpreter is the ratio of language speakers. This research confirmed previous studies which found that companies, at least in the UK, often have a ratio of how many people who do not speak English there can be to every informal interpreter (Tutt et al., 2011) , stemming from the Management of Health and Safety at Work regulations 1999 which suggest 1:4. The accepted ratio varies, for example, one ASM, Stefan, said that this should be 1:10, while one PM said 1:2 or 1:3. However, it is likely that the first case is referring to having one supervisor/interpreter to every team of ten non official language speakers, while the PM, David, is referring to a ratio of 'sub interpreters', meaning that within the larger team, with the supervisor as interpreter, each smaller working group should also have an official language speaker. Therefore, the linguistic make-up of teams may sometimes be a deliberate strategy for managing the workforce. However, it is sometimes simply a result of not being able to hire English speaking workers, and the ratio a matter of chance.

On one large project with a lot of workers from different places it was discussed with management whether this scale and access to resources gave them opportunities to deal with language barriers in different ways. Some positive initiatives were discussed and are reported later. In relation to the formation of teams, the participant said that they would not want to separate them according to languages (Toby):

> because the whole point of equality, diversity and inclusion is you want to create diverse teams (Me: yep). And you have a lot of benefit when you integrate different cultures and people from different backgrounds … you can umm have a more complex or full view of a problem and ultimately diverse teams are more high performing than non-diverse teams. (Me: ok) So I don't think we'd move to try and pigeonhole certain cultures together, (Me: ok) it sort of goes against the ethos of our team

As it was not possible to visit this site it is not possible to know how workers worked alongside each other in reality. This contrasts with previous research where workers were found to work in linguistic ghettos, segregated by language (Trajkovski and Loosemore, 2006, Wasilkiewicz et al., 2016). Even if management attempt not to separate teams by

language the workers speak this might be impossible because, as mentioned, often workers doing one trade are of the same nationality because they are recruited through informal networks and the labour pool is limited.

In his work in the site office in the US, Fernando was involved in hiring staff. In his experience, the communicative ability of the workers was not considered at this initial stage:

> Me: ... when they were hiring workers was there any consideration of we try to get a ratio of this many people that have some bilingual skills or it -the communication wasn't...
>
> Fernando: Not necessarily, not necessarily. That wasn't a topic that we discussed. Of course, we identified those that were more able to communicate in both languages, and if they were- if they have that skill and they also skilled at work we start put them in more leader positions

His account shows how, in his experience, the solutions to communication difficulties are improvised depending on the team and the project, rather than planned for in advance. Understanding this helps to answer question 1, about who does the language work. Of course, often the workforce will be whatever workers they can hire, because of a labour shortage. However, it is also clear that by maintaining this casual method of working the company is exempt from financially recognizing the extra work and responsibility that the bilingual worker has (Kraft, 2020). The position should be formalised, and a reasonable ratio determined.

7.9 Linguistic difficulties and how they’re overcome

Through the analysis of the interviews several linguistic difficulties were mentioned repeatedly. Difficulties encountered and discussed here include accents, language variants, homographs, and acronyms. Means used to overcome these difficulties are raising awareness of them so that interlocutors speak more clearly, paraphrasing, and preparing glossaries.

The variety of accents onsite is an aspect of the work environment that affects the informal interpreters’ task as accents are mentioned by several participants as a significant obstacle to

understanding. One of the Romanian informal interpreters, Site Manager Paul, explains that although he learnt English before arriving in the UK, he was not able to understand it once he was working in England, citing Scottish and Irish accents as particularly difficult, as did a Portuguese engineer onsite. This difficulty is not unique to migrant workers. Greg, a professional interpreter and L1 English speaker also has difficulties with strong accents, noting Glaswegian as an example. He adds that this variety of English accents was one of the reasons that a British interpreter, rather than a Japanese one, was preferred for that project. Similarly, ASM Sean, from southern Ireland, describes being aware that the workers are not used to his accent and using himself as a benchmark for finding out who has the best English and will be used to interpret. Likewise, Magda encountered regional differences of Brazilian Portuguese onsite, in terms of accent and some vocabulary. This is a difficulty that is not easy to overcome and improves with familiarity over time. Nevertheless, it is helpful when those interpreted for are aware and speak clearly and try to not use regional vocabulary.

A few participants highlighted language variations as potentially making the spoken communication more complex. For instance, professional interpreter Michail says that he had difficulties switching between British and American English because they often use different words for the same things in construction. He notes as an example that 'base board' in American English is 'skirting' in British English. Similarly, when asked whether he had any difficulties speaking Spanish with workers from different countries Fernando answered:

> that's one of the things that as an interpreter you need to learn how to do, how to communicate with different cultures. Because you know, every language has variations on it ...you have to be able to communicate in a language that is more general and understandable to people. And learn how or where's the need to clarify things.

Romanian Site Manager Marius reflects on the variation between Romanian and Moldavian, saying that he can work with both of these with some awareness and attention to the differences, in contrast to Bulgarian that is impossible.

> Me: And what about with the Bulgarians and the Moldavians, how do you speak to them?

> Marius: With the Moldavians, cos obviously they do speak Romanian only that the Romanian language that the Moldavian people are talking is a bit different than the Romanian language from Romania (Me: ok). So, you do have a bit of blockages if you will sometimes. But it's easier than if you would deal with a Bulgarian person for example, because you can use synonyms and you can explain in a different way or you can try and use words that they use. Being in the industry for a few years you get to learn the words that they … It's much more difficult with a Bulgarian, for example, because I don't speak or understand Bulgarian. So, it does make our life hard at certain times yeah, but again that's the job.

The official language in Moldova is Romanian however the dialect and accent are different; hence this participant encounters some difficulties. However, over time he has become accustomed to this, and he describes using his language skills flexibly to communicate with Moldovans, by translanguaging he can be understood.

One technique to overcome language obstacles that is employed by both professional and informal interpreters is paraphrasing. As informal interpreter Demitri explains in response to a question of how he managed when he does not know a term: 'you paraphrase and then the word comes out from them…so then you learn it, the next time you say that word.' Similarly, Johnathan says that the terminology was not a problem because when he did not know a term he paraphrased or asked for a paraphrase.

<u>Johnathan's story</u>

> Johnathan is a British languages graduate, as part of his degree he spent time living in Germany. As soon as he finished university in the UK he returned to Germany and was looking for work. He was approached by a construction firm that were doing a hospital renovation in the town he was living in. As it was a British firm all the plans and paperwork were in English, but they were using German subcontractors. Johnathan was hired to work with the English Site Manager who couldn't speak German so needed help sourcing materials, liaising with subcontractors etc. He was recruited through informal networks. He describes this informal interpreting experience as a 'baptism by fire' as he did not have any interpretation qualifications and just tried to 'bluff' his way through it. In his experience his responsibility did not

become one of supervision. This difference to some of the other participants is perhaps partly because he was hired specifically because of his language skills and was not a construction professional. He says: 'I was just the language man… I was his ((the Site Manager's)) mouthpiece.' For him this job was just a 'means to an end' to finance himself when he first arrived. Nonetheless, he says that it was enjoyable, working with people and overcoming new challenges every day. However, after that job ended, he 'tried to get myself a job but it never came off.' He returned to the UK, working in a bilingual call centre, then as a teacher, and eventually he returned to translation and interpretation. Reflecting on his informal interpreting experience he said, 'I think it stood me in good stead because I've ended up, you know, going back to that' and 'it did remain in my mind this is something I could look up in the future maybe.'

Another linguistic difficulty is homographs. An example is provided by Demitri, who explains the need to understand the specific context of the language in use:

> …it is difficult sometimes to find the words, unless you see both sides … they're talking about the slope in the ground where they make a room shower (Me: yeah) instead of having a basin they put a waste in the middle of the room and take the water away so they can use the whole room as a shower. And I gave an explanation that the slope in building, in construction, is called the 'fall' and you would be surprised what they told- what I was um commented on, even an English person, 'that's the last thing we want -falls in the shower' he said ((both laugh)) ... They're translators ok, but they've never been on the construction to- and they look at the dictionary.

It is necessary either to have a construction worker interpret, provided they have the language skills, or a professional interpreter that is prepared to work in construction, else they may not know the terms used. Another linguistic factor, which causes problems for professional and informal interpreters alike, is acronyms. Professional interpreter Karl highlights that there are a lot of acronyms and technical vocabulary in the construction jobs. On the one hand, people already working in construction will be more familiar with these, but on the other hand professional interpreters receive the materials beforehand and prepare themselves for the task.

Indeed, Professional Interpreter Anna found that jargon was a challenge in construction interpretation assignments, even though she was provided with a glossary:

> I find that a lot of times err site workers and engineers have their own jargon that … sometimes I would again just have to be a pause and some questions, making sure I understand what it is, or at different times it could be more of a -like gestures would be involved too, showing which parts they're talking about (Me: right) umm … I would say it's a very dynamic process in which all parties are very involved, and it's definitely an informal type of process

Likewise, professional Interpreter Sara also says that she sometimes encountered difficulties when labourers 'put a nickname to something'.

One related issue is that often, at least in the UK, management are monolingual. Frequently they therefore do not recognise either the communication difficulties or the good ways of dealing with them that their workers are involved in, contributing to not always facilitating good practices. This also implies that management are not aware of the specificities of the work that the informal interpreters are doing.

Another aspect of the site environment that complicates the communication is noise. Michail noted that working with the background noise of machines and other equipment can be very challenging, almost impossible if they have to wear ear defenders. It is vital that this is taken into account when important information is being relayed, as one study found that interpreters have to increase their attention when working in noisy environments and rely more on prediction of meaning. Significantly, by training they demonstrated greater predictive behaviour (Amos et al., 2020).

Although the initiatives found in this research may be unique, the other operational strategies discussed are largely dictated by the environment in which the project members operate, including the legal obligations and employment restrictions. However, the interpreter's work is above the common accepted way of doing things and much of the work is determined by the skills and identity of the individual. For this reason, the following chapter will zoom in on a few participants to explore different ways that individuals come to take on the interpretation task, how they perform it and how they feel about it.

This chapter has outlined a series of factors implicated in the relationship between the work environment and the work of informal interpreters. It has been verified that interpretation is required frequently and that interlingual communication is a significant concern that negatively affects cooperation and productivity. The findings from this research show that there is no uniform expectation of what informal interpreters should be doing and how because the responsibility is not contractually recognised. It has been possible to understand that overall, the knowledge of English that migrant workers on UK sites have is minimal. Where their skills are improved this is usually by their own investment. So currently the bilingual skills of those who invest in their skills are relied on for the project to function. Nevertheless, some of these were very promising. Such ways of working and of managing communication were compared to other sectors such as nuclear and oil, and their interpretation practices. Then the linguistic makeup of workgroups and the strategy of using ratios of speakers were explored, leading to understanding better how this can shape the informal interpreters' work. Finally, some linguistic difficulties and how participants overcome them were highlighted. While the findings presented in this chapter are diverse, together they progress our knowledge of the relationship between the work environment and the work of informal interpreters. Ways this knowledge can be used to improve management of communication in practice have been suggested and will be discussed further in chapter 10. With a better understanding of the situations that informal interpreters in construction are working in it is important to now investigate who the informal interpreters are, in chapter 8, before finally analysing their language work in chapter 9.

8 Findings and discussion part 2: The identities of informal interpreters

This chapter focuses on exploring who the informal interpreters on construction sites are and why they do this language work, to address question 1. This chapter zooms in on personal experiences with the aim of understanding nuances in the data on informal interpreters, looking at the migration and language stories of these people rather than just their practices. This extends the work of Dylan Tutt and, more recently, of Kamilla Kraft, rather than the more management focused approach of other key studies on the topic (such as Bust et al., 2008, Loosemore and Lee, 2002, Wasilkiewicz et al., 2018). Firstly, the stories of three participants are presented and explored in depth, in sections 8.1.1, 8.1.2, and 8.1.3. Then in section 8.2 the theme of language and promotion is examined, this theme is touched on in the three stories but also arose throughout the wider data analysis. Finally, in section 8.3 participants' attitudes towards the language work are discussed, which varied significantly.

The identity and language approach of Norton (2013) is used to explore how informal interpreters see themselves. In the first section this is through narrative inquiry. In the below examples, short stories are found in the data and biographical stories have been configured from the data. Barkhuizen (2011, p.399) argues that 'in telling stories, participants are performing themselves; they are doing their identities.' Narratives are the stories narrators tell about their life experiences, and according to Kramp, stories help to make life meaningful and 'assist us to envision our future' (Kramp, 2004, p.107).

The gap filled by informal interpreters is shaped by the environment in which they operate- the operational strategies, laws, and other contextual factors. Then the interpreter's work is an informal practice in addition to these regulated practices. Consequently, the work that is done and how depends greatly on the individual interpreter. For this reason, it is particularly useful to explore the topic in depth with them. As well as some operational strategies and contextual factors discussed in the previous chapter, there are some other more personal factors which may contribute to an individual becoming an informal interpreter. One of these is relations with management and supervisors. In a conversation onsite with an informal interpreter and his co-worker they explained that he did this task because he was friends with the manager who had asked him to do it, therefore having most advanced bilingual skills or being most willing are not the only reasons for someone taking on this task. In the case of Fernando,

discussed below, it was a matter of chance that he was heard speaking both languages and assigned communication tasks after that. Furthermore, sometimes it may be the individual's effort at taking initiative and facilitating communication when a confusion arises that leads to them regularly doing language work, as João describes below. Beyond these potential personal factors, the individual's language repertoire is of course always a factor.

In terms of who is responsible for ensuring communication of information onsite, this thesis confirms previous research (Phua et al., 2010) that the informal interpreter is usually the supervisor. However, many other people can also be 'sub' interpreters. Analysing participants' narratives with an identity and language approach has brought out personal complexities related to the individual and their work and migration trajectory that would be lost without this perspective, but which cumulatively reveal important trends. The identities of informal interpreters differ, and the performance of language work depends on whether the individual invests in the informal interpreter work with the hope of career progression and integration in the local community, or whether this is just an additional task. Those who invest in the informal interpreter position may upskill through this and be promoted within the industry but may move on to other sectors and be lost. The interview with Andrei is illustrative of the way most of the informal interpreters on projects engaged with the interview, which contrasts with the three more extensive stories below.

8.1 Informal interpreters' stories

8.1.1 Andrei's story

Andrei, a Romanian site supervisor working in the UK, is an example of an informal interpreter for whom language work is an additional necessary task and not personally significant. He gave short answers, for example answering the opening questions with just one sentence, rather than an extended biographical answer. Partially this may have been influenced by the circumstances of the interview, which took place at his job site during work hours, in contrast to participants who were interviewed online and from their own homes. However, it also seems that this participant, as well as several others interviewed, gave shorter answers because for them their construction worker identity is forefront, and they were not interested in sharing their experiences with languages. Furthermore, he identifies strongly with people from the same country, as can be seen in his defensive comments when he was asked whether information that he passed on also included written material, 'I'll be

there, translate everything…but I know my guys try, they all try, even though they are like middle aged they try…for me it's not an issue'. He uses the possessive pronoun 'my' to speak about fellow Romanians. During this first half of the interview the participant was not following the lead of the questions, he seemed to have a preconceived idea of the interview. Nevertheless, he strongly links language skills and good employment opportunities, 'so you can be very experienced but if you don't know the language you will find it hard to find jobs, really good jobs', again supporting the relation between investment in language skills and economic and social mobility (Group, 2016). However, for him investing in his bilingual identity is not personally important, he does not emphasize his skills in this or reflect on communication much. When asked for examples of his communication work, he said 'if it's English it's English, if it's Romanian it's Romanian'.

The stories below are chosen because they illustrate different ways of carrying out informal interpreter work and show how it can look when the work is recognised. They also show examples of how migrants upskill. At the time of the interview Andrei's migration trajectory would probably be classed as pendulum migration. In contrast, in the participants' stories below it can be seen that they have more investment in their new location.

One of the tenets of the concept of the 'trans' prefix is valuable when analysing the interpreters' narratives. As explained by Wei (2018, p.27), the trans prefix to languaging refers to 'the *transformative* capacity of the Translanguaging process not only for language systems but also for individuals' cognition and social structures'. Some of the participants' reflections on their language work and trajectories suggest that their flexible use of multiple languages has had a significant and transformative effect on them.

8.1.2 João's story

João is a Portuguese man in his forties. He responds to the first open question, 'tell me a bit about yourself and the work that you do', with an extensive narrative about his life and the trajectory of his work life. The storytelling nature of his response instantly suggests that what he has to tell me is important to him, to how he sees his own identity; clear for example in the quote 'it's funny for me to tell you this, I'm proud of the situation'. Through the story-making the participant constructs his identity as a skilled and opportunistic migrant. This conceptualisation of his self and justification for his work are solidified through the telling of

the story. The language brokering experience has a similar effect on him as the child language brokers in Cline's study, most of whom evaluated the experience positively overall; and the young adults reported an increased sense of 'confidence, belonging, and empowerment from doing the work, and respect from peers' (Cline, 2019a).

Initially, João highlights how he had to start his working life early because his parents got divorced, 'so I went to professional courses instead of going to university', he counterposes these options in such a way that highlights how he could have, and might have liked to, go to university, but he did not because he had to start working. From this background he builds a narrative that forefronts his ingenuity and 'go for it' attitude as key to his success and continues to differentiate himself from a stereotypical male migrant construction worker identity, from a 'rough man'. Throughout his short stories he goes into detail about wages and other factors of his improving life conditions, which contrast with the description of the beginning of his work life. He invested in his communication skills with the aim of improving his social and economic circumstances. His trajectory, as a migrant pursuing opportunities across countries, seems to be animated by stories: a rumour about the earning potential in construction jobs abroad prompted him to leave his country, and he related his tall tales about his relevant experience for a job to a Leonardo Di Caprio film. Within this response he directly signals stories 'So the funny thing that I want to tell you about the story Morwenna...'.

He also dramatizes his experiences by making analogies with epic moments in films; to describe the job he applied for as a blasting machinist, which he feigned having experience in, he said 'so just imagine the fireman in the movies', he then emphasizes the danger of the work- 'it can kill you', as well as his youth and inexperience, 'I was this young kid.' He admits that he was scared but that he wanted the money. When the employer realised that he did not know what he was doing he got moved and ended up carrying scaffolding all day, and claims - 'I was like a mummy, a zombie', saying 'it was like my military experience', he uses the rhetorical device of simile to exaggerate his endeavours. Directly following this explanation, he states how 'instead of me going to grab the hose... I passed directly to responsible of everybody.' He then draws attention to the crux of this short story (Barkhuizen, 2017) by asking the rhetorical question 'why?', answering: 'because I knew how to communicate in the language that was needed.' Again, he uses rhetorical devices to make the story he his telling

more exciting, which is important for validating his identity investment related to the work as interpreter, which he knows is of interest to me, his audience.

He continues to contextualise the scene, in this way ensuring that the impact of his up-skilling and facilitating the communication is understood. To achieve this effect, he uses the present tense and addresses the audience as 'you', saying 'you're a big team of Portuguese, nobody speaks Italian, in the beginning of the day you arrive in the dock...' etc. He gets involved in his storytelling, impersonating his boss saying, 'what the fuck are you doing?', but immediately apologizes for swearing, again highlighting his awareness of his audience. As he tells the story his audience is forefront in his mind - in this case me, the researcher interested in languages. He signals 'and then it came the part that I think you're gonna like, the part that you're covering', and proceeds to detail his experience learning Italian through reading the morning papers on football. This reveals the co-constructed nature of this particular version of his personal story.

By painting himself as a skinny computer nerd previously and dramatizing this manual labour experience he distances himself from an identity as a tough, macho, construction worker. He says, 'it was the first time I've been exposed to this industrial rough man.' Always pragmatically following the best opportunity, it was usually a financially motivated decision. Consequently, he goes in and out of the CI, tempted back to his interest in media and work as a graphic designer. For example, after describing a construction job where he says he spent three hours on the road and twelve hours doing physical labour every day he decided to study, but after a year the job prospects in his home country were not good so he went back into itinerant construction employment. This back and forth between studying and working in construction demonstrates that he was not invested in a future in construction, but when his efforts at moving into other fields were not successful his language skills gave him another avenue to pursue. When discussing construction jobs, he repeatedly asserts that it was not his trade ‘it was not my trade, like I told you Morwenna I was graphic designer’. João invests in his language skills expecting, as Norton suggests, that ‘the social and economic resources they accrue will increase the value of their cultural capital and social power. This, in turn, will expand the identity options available to learners, and their access to diverse communities’ (Early and Norton, 2012 , p.198).

The mini stories throughout the interview make sense of an event and explain it to me. One account illustrates how some Ukrainian workers wouldn't accept instructions from him because he was the youngest and these men were working in lesser qualified jobs despite being qualified, because they could not speak the local language. He explains that confrontations arose 'cos I'm young and they have their ego'. This highlights another way in which his identity is transformed through interaction and language, because of the interpreting he has a position of authority that he wouldn't otherwise have at his age. This is also an example of how conflicts can arise from the informal nature of the interpreting responsibility.

He recognizes that acquiring these language skills and facilitating communication in these construction contexts is significant both for himself and for the construction projects, saying 'I think it's very important, that's why I want to help you with whatever information you need.' He stresses that he always found a gap, a need for someone with his interpretation skills in construction companies, in various countries. He acknowledges that these gaps were what allowed him to 'climb quicker the hierarchy.' Yet after several such experiences he started looking for bilingual work in other sectors. He is aware of his position in a neoliberal globalised economy and works to ensure his mobility within it: 'I started to look for more of these kinds of jobs, ... the call centre industry, they need a lot of bilingual, trilingual people, cos they might be outsourcing maybe in a cheap country, and they need the whole different language.' Similarly, referring to making false claims on his CV he speculates 'this was very normal because people look for better conditions all the time, this is the law of life I think.'

He gives an example of a job he secured because of already having had onsite informal interpreting experience. As well as emphasizing the prestige of the project, he expresses: 'I was one of them you know, I could speak their language.' He describes how he was the only Portuguese employee who had a good relationship with the Italians. Here the crossing of boundaries between named languages, 'trans'lating, seems to contribute to a 'trans'formation of his identity; both his professional one because he climbs to a position of responsibility and his personal one as part of the Portuguese group of workers. In the following sentence the use of the word 'emerge' is also evocative of reconstructing or transforming into a different performed self: 'I'm very grateful to this gift to speak different languages and to be easy me to emerge in different languages.' The same thing happened in Italy, Holland, Portugal and the UK. He already spoke English, which was used as the universal language in Holland. So, he was bilingual before working in the industry and began to learn Italian and French on the

jobs. The connection between language and identity means that as he learnt and used different languages his identity shifted, through the process of mixing or switching languages (Nkadimeng and Makalela, 2015).

It is significant that he feels that his language skills were recognised, which may contribute to him being motivated to work on these skills. He says that he thinks that this communication is important 'else I wouldn't be appreciated, or they wouldn't give me good conditions to develop my work, if it wasn't that important.' In some of his experiences the translation aspect of his job was contractually recognised and in some it was not.

In his narration João provides an account of the effect of not being able to integrate through language. Describing his experience in Holland he says:

> I arrived and it's always err -you see in the small details when you're on the street, you're immigrant or you're on my conditions, you arrive there and I have better interaction I have- I receive more- more anti-stress situations or situations that make- make be more errmmm normal, sort of saying, in the normal dynamics because I can communicate. But the person who doesn't know how to communicate will feel alienated, doesn't know how to communicate, maybe doesn't know the language. So, it's two different things Morwenna, knowing how to communicate and knowing the language. So, if the person is not already with the big literacy level, so it's dumbass, it's a person with no education… already difficult for him to communicate and on top of that he doesn't know how to speak the language (Me: yeah it's...) things can go really really bad.

As an immigrant he felt that he was an outsider, but he succeeded in alleviating the stress and alienation of this aspect of immigration through his interactions. Again, he underlines the difference between language skills and communication skills, showing that it was the combination of these that he was able to take advantage of. The alienation he describes is perhaps the alternative to the path of identity transformation that he takes through interpreting, in other words, he finds that the language work helps him resist marginalization. He invests in an imagined identity and community, as migration changes his L1 identity and past community. He voices his awareness of the relationship between language and group identity - 'cos there's always the paradigma of the joking with the languages - being an

outsider, being an insider, an immigrant. But there's jokes and jokes eh, there's jokes that are really to put you down or to to make a gap between classes or then there's jokes just to bring you in'. He recounts how his communication skills allowed him to create good working relationships. He believes that these relationships improved the culture onsite and were the key to future jobs. Yet only on the more high-profile job, on the biggest pipeline in Portugal, was the language work part of his contract.

He proceeds to give an anecdote about being with a man who got in a fight because of not being able to communicate well, in that situation João stepped in to broker the tensions. He says: 'but many situations like this happen in industry also because … many people were not from there, so they were thinking about their family, thinking about their life, problems, their family problems and they're just to take the money cos if something happens outside of their comfort zone it's err it's like a trigger, they're very …picky to make big confusions.' In this quote we can see how while he is able to reduce his stress through communicating, according to him, this was not the norm in the industry. He suggests that this stress can often lead to tense situations, and that when such frictions did erupt, he would mediate. João considers the mediation as an important part of the interpreting work, he explains: 'a lot of situations like that, put the tensions lower, we're working in dangerous environments with dangerous tools, anything can go from zero to one hundred in a matter of seconds'. It seems that sometimes mediation and interpretation are fundamental to stopping co-operation from failing completely.

His separation of the language and communication skills is helpful for understanding how he utilized his language and interpersonal skills in his work as an informal interpreter. He says that he is 'talking about maybe a broader type of definition of communication (Me: mmhhmm) so it's not about the language, to speak the language, but to be able to communicate. …you have to come with that empathy so yeah communication is empathy'. Like with the theory of translanguaging, his focus is on relations and communication rather than on speaking a named language correctly (Paulsrud et al., 2017). Similarly, João related a story about when his father decided to join him on a job. He did not tell anyone that they were related and when the boss started talking diminutively about his father and putting him on the worst jobs, he had to interpret this but chose to miss out the offensive parts. Having described earlier joking and racist comments towards him, the tables now turned as he got promoted and respected by integrating through languages, but his father is on the receiving

end, he justifies to himself ‘nothing very wrong’ ‘joke a little bit’. In this instance, in order to carry out his informal interpreting work he had to temporarily disidentify with his father.

João also uses metaphor, again it is to promote his self in contrast to other workers:

> I have a theory sometimes that it's football metaphors life, … you just have to have maybe a strong background, somebody to advise you well, if you don't have you cannot take. And it's the same thing with the football players, if they don't have a strong background, they won't be able to take with the stress of the trade, of the exposure of the trade. So yeah, I was lucky. I had racist situations things like that, but I was lucky that my mum was always telling us ‘João you are there to earn your money, so just ignore those people you're not less of a man if you turn your back.’ … in the end the- that was gratifying to see that they then saw who was going- the one that was working, who was the one that had the skills, (Me: yep) and they gave me the job opportunity

The narrative presented here aligns with Brown et al.’s description of sensemaking narratives. In their study of a project team the authors found that the narratives participants told were significant to themselves because they ‘reduced participants’ uncertainty regarding their history and capabilities’ and ‘permitted people to attach themselves to ‘desirable’ ends, think well of themselves in moral terms, supported their needs for autonomy and control, and promoted feelings of self-worth’ (Brown et al., 2008, p.1053). Indeed, this is true of several of the participants in this study, as will be discussed further. João says that he was never interested in the CI and that he was not strong, in this way he is probably not typical of an informal interpreter onsite and other people might be more reluctant to spend their time interpreting.

The circumstances of the interview must be taken into account in reviewing the data. The three participants whose stories are presented in this chapter were all interviewed on a video call from their own home. As mentioned, this created a more informal situation than the interviews carried out in workplaces. These participants seemed most at ease, not in a rush. Given that all participants knew the purpose of the research their comparatively increased emphasis on language learning and use is due to its importance for themselves as individuals and not because of researcher influence.

8.1.3 Fernando's story

Fernando is of Mexican descent. He never had the opportunity to go to school to learn English so taught it to himself through reading and translating books and watching TV, he explains that as an immigrant he did not have many opportunities so although he had to work and not study, he wanted 'to do better in life', which is why he started pursuing languages, investing in those skills, motivated by an imagined future identity and community. He explains:

> even my English, I had never had the opportunity to go to the school to learn English, all of the English and the imperfect English that I -that I speak it comes with me just talking, learning, reading, educating myself because umm that brings different issues. Immigration for Mexicans in the United States it's very extremely difficult to- to- to regularize status, so (Me: yep) by being Mexican descendant my opportunities to do something else were were really little. Minimum. So, I have to decide whether I work, or I study. And I don't have anyone to support me you know. So, I have to work I have to work, but at the same time I wanted to- to be able to do better in life, so I start learning the language you know as I said just watching TV, reading, translating books, you know my- my process was really slow but- but it also gave me the skill.

For sixteen years he worked in public health in California on prevention intervention programmes targeted at the Hispanic community. On this job he did his first interpreting course and lots of translation. He then moved to Georgia and noticed the need for trained interpreters there. He took another interpreter training short course and became a certified medical interpreter. He now runs his own language business. While this business was getting started, he got a job as a construction labourer on a power plant to support himself. Like with João, he did not identify as a construction worker, he said 'my original trade wasn't exactly as an interpreter I was entering as a labourer. And it was a challenge for me because I I've never done any physical work in my life you know.'.

He explains how he changed position, and negotiated his identity, on the construction project through his language skills:

> so when I was working as a labourer, one of the foreman's hear me talking you know with other people and tryna catch me and say 'hey you seem like you had a little bit of education', so just to make the story short I was umm hooked with the superintendent, the superintendent was needing an assistant and they- they put me in the office, not as an interpreter yet, but as an office assistant (Me: ok). Through that -that's when I start gaining trust with them. And I told them, you know, I'm an interpreter, and so they start trying me as an interpreter. Later on, I was hiring, I was doing different types of trainings for them in Spanish and English, you know, I was basically doing most of the hiring and firing work and a lot of the training you know, that they have to do. I was doing them, including interpreting at the safety meetings during the mornings.

One of the foremen heard him talking onsite, which led him to be moved to work as an office assistant for the superintendent. He explains how, as they started building trust, he told them he was an interpreter and they started to use him as such. His duties ended up including hiring and firing people, interpreting trainings from English to Spanish, and interpreting during the safety meetings in the mornings, his language ability improved significantly his social mobility (Peirce, 1995). He had to take the OSHA (Occupation Safety and Health Administration) trainings so that he could teach others, but he was never given the opportunity to take the class and test that was specifically for trainers. He underlines how this work was all unofficial and 'somebody else had the title and I was doing the job basically.' This aligns with the finding of Oswald (2019, p.6) that informal interpreters had too much responsibility because they received more training so that they could explain it in the other language and 'consequently they could influence significantly how tasks were carried out.' Fernando's story simultaneously resonates with and challenges Kraft's findings that for the informal interpreter she studied in construction 'language learning offers him an agency to control his own trajectory' (Kraft, 2020 , p.8). In his life more widely languages have certainly allowed him to negotiate a new identity, and within his construction experience languages allowed him to move on from the labouring work that he struggles with. Nevertheless, he is constrained by the construction company who do not value the interpreting work and exploit his skills in this without enough compensation or recognition of his work.

When discussing how the situation was usually dealt with, as they had stumbled upon Fernando's skills by chance, he explained that there was a guy helping before but that he was

summarising a lot of the information instead of interpreting it, ‘he wasn’t really communicating what the safety manager was trying to communicate.’ Yet it is likely that Fernando was the only person fully aware of this as other people on the project couldn’t understand both languages well. From his administration work with the company, he developed insights into language policy, essentially that language was not considered during recruitment. The resulting situation was then dealt with by identifying the bilingual workers onsite and putting them in positions where they could show others what to do and ‘communicate with both sides.’

Fernando says that being in the office he got the chance to point out to the construction managers the difference that communication barriers can have on cost and safety. He considers that the communication difficulties ‘play a big role’ in why the construction projects were so backed up. He also notes witnessing the fear created by not understanding what others are saying, which also applied to the safety manager but eased as he saw the positive effect of having someone facilitate the communication. Aside from this unique position that he was in in the company, he explains that they usually tried to have bilingual foremen to help with communication. The company kept him on like this for several projects, until he decided to dedicate himself to running his own language business. When asked whether he knew if anyone had replaced him in this new bilingual office position created for him, he said ‘I really don’t know if they appreciate the value of an interpreter.’, hence bilinguals like him move on.

8.1.4 Magda’s story

Magda is from Brazil but lives in the US currently and has worked in both countries as well as in England. She originally learnt English at a British language school in Brazil. She identifies as an artist and notes that she did these other jobs, using her languages, to support herself rather than as a career. From the participant’s answer to the first question, she distances her identity from her work as a construction professional:

> Me. So to start out with can you just tell me a little bit about yourself and the languages you work with?

> Magda: I'm an artist, but I worked in the construction business for many years because I needed to support myself.

Later she reiterates: 'I'm an artist, I'm here- this is a job it's not a career. I had to earn'

As a lifelong bilingual Magda's experience of the relationship between work, migration and languages is quite different to Fernando's and João's. Being bilingual was a prerequisite for her job as a project secretary. However, her story is similar to theirs and different to the other informal interpreter participants because her focus was not construction.

Before the jobs in construction, she had previously worked informally interpreting in immigration law in Florida. She has worked in the construction sector a few times. For two and a half years she worked on the construction of a chemical plant in Salvador, Brazil, with a US company. The Houston office sent engineers to Brazil. Her position on the project was project secretary, she confirms that bilingual skills were a requirement for getting the job. In the US company working in Salvador the scope of her work was extensive. Much of it was 'unofficial' and used her language skills as well as knowledge of the locality and culture, for example it included helping hire cars and even procuring female escorts for the management. She also worked for a US petrochemical company in Angola, as it is a Portuguese speaking country. She found many differences with the Portuguese language in Angola, but she was able to communicate and understand. As well as vocabulary differences she found Angolan to be much more formal than Brazilian, which she had to adapt to in order to make the communication successful. She later did construction translations about materials, quality control etc. She also worked on oil platform jobs in Rio where she worked helping the Contracts Manager by translating.

Magda reflects on the insider-outsider dynamics that arise in group situations where speakers of different languages communicate:

> when you are speaking to a person, you both speak the same language, what I've found, and what I see happening is, you have already a connection. A sort of complicity. Because you both speak the same language, this guy here doesn't. ((signalling to the right of her)) You know. He speaks English (Me: yeah) this person then needs an interpretation, we speak Portuguese ((gesturing back and forth between

> herself and to the left of her)). Or whatever language. And we already established that complicity in communication. You know. We have the same mata language, we have the same mother. In a way. (Me: yeah) this guy he is the strange one ((signalling at the imaginary person on her right again)). So, you know he is the sort of the enemy ((laughs))- or no he is the outsider let's say

This extract illustrates that, for Magda, being able to speak directly to someone through a shared languages means that they can create a sense of connection and participation which someone requiring interpretation wouldn't access. Moreover, her words suggest that for her it is easier to build a trusting relationship with someone who speaks the same language.

Like João, she emphasizes the importance of communication skills, beyond language skills. She describes how when she was interpreting, she had to consider who was receiving the interpretation and how to best formulate it in a way that they would understand. She was doing both interlingual and intralingual interpretation (Baynham and Lee, 2019), meaning that she would change the named language, from English to Portuguese, as well as the type of vocabulary. She says:

> So, you have also to make sure what you're communicating is something they can understand. In their level of understanding (Me: yeah). I'm not diminishing anything but what I'm saying is communication is the key. (Me: yeah, and it's different for different people) it's not about difficult words or about how well you are speaking the language, no. It's communication in translation. For me at least. (Me: yeah) The most important thing.

On top of this she had to consider cultural elements of the message, she highlights that 'a cultural adaptation is the key also. For communication you know.'

Interestingly, Magda expresses enjoying working in the CI but also has many warnings about it. She was not asked about the environment or her experiences as a female in a male dominated workplace, yet she talks a lot about this unprompted. She explains that 'you kind of develop a hard skin' because 'the guys are tough, it's a rough environment for women'. She shows how she has developed the ability to work in this rough environment and distances herself from a very female identity, adding 'if you are a woman and you are a kind of girly

girl, you're going to have a hard time working with the guys'. Yet despite there being 'lots of machismo there' she had a 'great time' in a 'great team'. While saying she was different, an artist and one of the few females, she was also able to adapt to the work environment. This is possibly due to her communication skills as she describes herself as a 'people's person' who tried to talk to the workers, in their language, and learnt 'many lessons, many different perspectives' which she contrasts with the attitudes of some other secretaries.

In another remark relating language and identity Magda says that bilinguals 'we have also a split personality' and 'you are not the same person. In you know you are one in your mother language and one in the language you adopted to be your second closest language…. it's not possible to be the same person'. This feeling is common to many bilinguals, Grosjean (1982) reports that some bilinguals described that they change their attitudes and behaviours when they changed languages (Grosjean 1982 in Aveni, 2005, p.13). Moreover, Block reviews identity research in the field of SLA and says that in learners' stories 'we see how these border crossing experiences inevitably and irrevocably destabilise an individual's sense of self-identity and how this destabilisation subsequently leads to struggle, the negotiation of difference, and the emergence of third-place identities'(Block, 2007, p.867).

Related to this connection between ways of being and different languages are differences between languages. Magda talks about how she had to adapt to the speech differences of different nationalities, for example comparing English and Portuguese 'more sort of romantic languages they have more emotion I think the way they treat each other it's very formal.' Beyond the linguistic differences she also notes changes between the language speakers in terms of formality and that when she was interpreting 'the Brazilian would you know 99% would interrupt you…say something else or add stuff…not like the British.'

On a personal level Magda feels that because she does not have an investment in American English 'it makes it hard to communicate'. She says she loves British English which living in the US can be difficult, 'I don't really feel open because you have to have an openness or maybe you know be able to communicate right. And maybe because I don't really want to open to their cultural uhh idiosyncrasies, or you know I keep my accent, so I keep my distance.'

Magda could be described as a transnational migrant; she has ongoing connections with multiple countries. Li and Zhu argue that transnational identities are social identities that can be created through translanguaging, they explain that as well as mixing linguistic forms from different language sources translanguaging 'involved a variety of identity articulations and negotiations within newly created social spaces' (Li and Zhu, 2013, p.532). It is partly because of this transnational identity that Magda has an interest in and understanding of languages. Unlike João and Fernando, she learnt a second language as a child. She also started her experience in the CI in a stronger economic and social position, from which it was arguably easier to negotiate a transnational identity, than for many of the other informal interpreter participants.

8.2 Language, promotion, and responsibility

This section explores the interrelationship between language, promotion and responsibility.

This study found that the most common way of working is for the supervisor to be an informal interpreter, supporting the findings of Phua et al. (2010). The question of how much language skills are implicated in promotion is considered below. Site Manager Paul explains that each language group has their own supervisor, this supervisor is the interpreter, and language skills are what make them become the supervisor, despite the responsibility for interpretation not being explicitly required or rewarded. However, in the data there were also people in other positions who carried out language work, including site and ASMs, contracts managers, office assistants, architects, labourers, PMs, and project secretaries. Nevertheless, usually the responsibility for ensuring clear communication is with the subcontractor's supervisor. So, if the language skills are a significant contributing factor to promotion, they are to some extent valued and valuable. Nonetheless, there is potentially still an issue for the industry in not recognizing the contribution of these language workers more explicitly because among the participants in this project those informal interpreters who have up skilled through a conscious language learning effort then left the industry. Essentially, this informal interpreting experience onsite acted as a stepping-stone for them in their careers. In contrast, those who were still doing onsite interpretation were primarily skilled and interested in construction not interpretation and had less developed English language skills, no qualifications in languages or interpretation, and tended to see this part of their work as a stressful necessity and not an interesting challenge.

While the supervisors are most likely to be the informal interpreters, there are accounts in the data when someone else had to occupy this position. For instance, Johnathan is British and was hired in Germany for his language skills rather than his construction experience, so the position was less supervisory than some of the others: 'I was just doing what I was told you know, it wasn't my job, … I was just the language man; you know the Site Manager was responsible for getting it done to- to his superiors and I was his mouthpiece if you like.'

Andrei, who is a supervisor and informal interpreter, also says that it is not always the supervisor who is the interpreter. He gives the example of a team of Romanians whose supervisor was Polish. This man was the supervisor because he was very experienced, and an informal interpreter always accompanied him. According to Senior Site Manager Hannah, 'it is the responsibility of the subcontractor's supervisor to ensure their operative is able to understand induction and if not arrange a suitable interpreter'. In Hannah's recent project experience, the informal interpreter was not the supervisor, but: 'was one of the operatives who was the most willing and able to help.' She notes that, in her experience, there have never been professional interpreters onsite, they have always been bilingual site workers. The question of this person being willing to do the language work is important, as some are not (Oswald et al., 2019). Indeed, Oswald et al. report that some bilingual workers were frustrated by having 'to combine language work with their other work that they valued more', they highlight that this is important for the 'standard of interpreting'. As shown in this thesis, the workers' investment in the language work affects how they carry it out.

Several of the participants say that it is at key points, such as when information on safety is coming from management, that an interpreter is needed, as maybe the person delivering the information is a manager with a different language, whereas the on-going task communication is often with workers from their own country. In these cases, the supervisor/interpreter facilitates more structured and formal communication, such as talks and inductions, while the sub interpreters or managers interpret in more everyday scenarios. For example, Aleksander is a Bulgarian contracts manager in the UK who does some language work himself. He seems to describe layers of informal interpreters and sub interpreters, so for every team of four or five there is one that speaks English as well as the supervisor:

> Me: These guys who help out with the translating, do they ever have to do a written translation of a document or is it all conversations?
>
> Aleksander: No, it's more- for them it's conversations, cos documents it's- on the construction sites the documents, paperwork, is down to the supervisor to obtain. And if there is anywhere where the guys is supposed to write, give a signature or something needs to be explained, the supervisor is the person who is translating in a proper way …toolbox talks… so the guys who are working with them it's mostly just for conversations, or signals, or things like this.

Supervisor Matei's team also have sub interpreters; non-English speakers are always in groups with someone that speaks English, usually the supervisor, but, for example, if there are just two people doing a small job, they will be paired so one can speak. When asked what happens when the supervisor is not there, he replies: 'I'll go to alternatives, phone, somebody else, another translator, second person that I know his English is pretty good. I'll ask supplementary questions to him and to the lads just to make sure that they get the message, or as much as I can.' Asking supplementary questions is a communicative strategy that is useful for informal interpreters to check that they got the message across. This quote demonstrates the fluid and creative problem-solving nature of the communication done by those such as Matei, and also how spontaneously someone can temporarily become an interpreter.

What is more, Ivan, a Bulgarian supervisor, explains that managers are sometimes used as back-up interpreters: 'I'm going in the office, because most of the managers they are Romanians, (Me: yeah) say 'guys I have problem, I can't explain these guys that thing, that thing, that thing', and actually yeah, we're using the managers sometimes like translator.'

In the case of supervisors or managers as interpreters many will consider it to be part of their work and responsibility, however, if it is a worker fulfilling this position this might not be the case. For instance, Marius finds the interpreting aspect of his job as a site manager onerous but very much considers it to be within his job scope:

> Marius: You can imagine that it's difficult most of the times cos you- I mean we're all human, we all have personal lives, we all have the issues at work, the things in our personal lives and everything… it's an effort, it is a considerable effort, but I just like

> to do my job as good as I can because my name is at stake… I want the results, I will do whatever it need, what's necessary to be done- obviously into the limits, to get those results, that's it.

Andrei also sees the communication work as part of his job as site supervisor: 'for me it's not an issue to pass the information'. This contrasts with Oswald et al. (2019) finding where a worker refused to interpret, and Site Manager Marius who believed the workers should learn the local language. Furthermore, the participants in this study were often signposted to me by the gatekeepers who were at management level, and it is possible that this filtered the participants so that I only spoke to the more engaged employees.

One interviewee, PM David, said that the supervisor, as interpreter, signs to show his responsibility for the sight translation, which clearly places responsibility with the supervisor:

> Me: Ok and what about- is there any moments when the information you need to pass on into the other language is written?
>
> David: Pretty much everything is written so that then they can sign it. So, once they've read it, once they understand it, we get them to sign it to say that they understand it. And we make sure that the foreman has explained that to them and that foreman then will sign it as well saying yes, he believes that they understand the principle.

In the following response from Andrei, signing seems conditional to understanding:

> Me: so, you talked about translating instructions, but what about things to do with administration or inductions?
>
> Andrei: … you have to reproduce everything, so whenever a new guy comes in you have to, like, tell him everything he needs to know, translate it if he doesn't understand, and then, for example, methods statement I have to explain everything and then he will sign, as long as he understands.

This contrasts with Tutt et al. (2011), Pink et al. (2010) and the suspicions of some participants in this study, such as Sean, that say about just getting through induction. Perhaps

Andrei was saying what should happen rather than what does, or perhaps this shows the effect of different individuals taking translation more seriously than others.

Fernando, a professional interpreter, was hired as a labourer in the US but was soon promoted to office assistant to make the most of his bilingual skills.

> Fernando: I was doing bilingual work at all levels. I started with the safety meetings in the mornings... I was doing a lot of the administrative work, I was hiring people, I was conducting the hiring orientations both in English and Spanish, I was conducting several of the trainings, like the sexual harassment training, safety in the work- in the workplace, I learned how to mix the chemicals and I started training people how to how to mix the chemicals, to work with the fiberglass, and I have to get myself and learn how to manipulate and took the- there's some trainings that are coming from OSHA.
>
> Me: So, the foremen were bilingual normally?
>
> Fernando: That's what we- that's what we're trying to do you know... if we identified a bilingual person and that bilingual person was showing good knowledge of the job, or good skills on the job that needs to be done, then we started putting them on those positions to show others, you know, and to communicate with both sides.

On this site it is directly cited that the aim was to have bilingual people in the supervisor positions. In contrast, Safety Manager Jen was more tentative in suggesting that, perhaps because it could be seen as discriminatory if those skills are not part of the job description, but in her company too the ganger or supervisor is usually the one who interprets: ‘we'd have a translator with us, so one of our - so a site manager would have to have a site ganger or a supervisor and then they would translate to the workforce.’ Yet her reply to the following question was cautious:

> Me: this person who you said when you have a toolbox talk or something -it's usually the supervisor who translates for the other workers, does that mean that for somebody to become a supervisor they're always somebody with bilingual skills?

> Jen: No no no. Our supervisors are promoted on umm basically their knowledge and understanding of the activity... about 90% of the time they come to us from- as an operative within the company, and then we look at them and we can see that there's potential for them. Cos it's not just about translating, it's being able to err plan and manage work, know how to do things safely, understand the controls and the hazards associated with the works. But it does tend to be- you can't get somebody better as a supervisor than somebody that's worked as an operative and they -they then -because it tends to be the majority of our supervisors are of the Romanian or Polish or whatever nationality that we've got working for us. So yes, it does obviously help (Me: yeah) umm that they speak it, but it's more to do with one they've got to be able to understand English, because myself I'm not a translator (Yeah) and I do all the health and training stuff side of things so they need to be able to understand English, be able to write it well enough so that they can write the necessary reports and stuff, but apart from that yeah they are then able to translate which is key- which is key to making sure that the message is received by the workforce so-

Her immediate response to the question was to reject the idea that bilingual skills lead to promotion, 'no no no', emphasizing that supervisors of course must have several other skills. However, she went on to say that the majority of the supervisors are of the same nationality as the foreign work group and have to have good English skills, and that they are able to translate is 'key'. As the position does not officially require bilingual skills, and these are not remunerated, then it is difficult to directly say that these skills are a reason for someone being promoted. Kraft argues that not labelling this language function and simply referring to these bilingual workers as ‘able to communicate’ or ‘to speak the language’ (Kraft, 2020 , p.6) ‘can be interpreted as a means of downplaying the status of the language workers, even while simultaneously emphasising and recognising language work’ (Kraft, 2020, p.6).

Combined, the findings of this thesis, Tutt et al. (2013a) and Kraft show the crucial role of language skills for communication on a project, as well as for promotions for migrant workers. However, the importance and the use of these language skills is consistently concealed, the informal language work is not formalised.

Jen suggests that in the scenario of having an English supervisor then they would have to make sure that the gang of workers from the labour agency came with a ganger that was able

to translate. This scenario might add another layer to communication, and subsequently more chance for lost information. For instance, if the PM passes information to the supervisor, who only speaks English, instead of the information being transferred into the other language at this point, it is then passed on again to the ganger who is able to interpret it to the rest of the group. In such a situation it is easy to see why having the supervisor as interpreter is a more straightforward working method. Jen explains that if they have an English supervisor then they ask the labour agency to supply a gang that would have one person able to interpret. The below question and response from informal interpreter Fernando, in the US, shows a similar hiring dynamic:

> Me: Yeah, and umm I'm interested -because you said that you were involved in hiring workers, umm was there, when they were hiring workers, was there any consideration of we try to get a ratio of this many people that have some bilingual skills, or it, the communication, wasn't...
>
> Fernando: Not necessarily. Not necessarily. That wasn't a topic that we discussed. Of course, we identified those that were more able to communicate in both languages, and if they were- if they have that skill and they also skilled at work we start put them in more leader positions, you know, umm among the groups, among the teams that we form. (Me: ok) We always have somebody that it was kind of able to communicate with the foremans. Well, the foremans were those that were able to communicate, mostly.

So those able to facilitate communication were identified to be a foreman, yet this aspect was not discussed. As Kraft concluded in her work about the trajectory of a language broker ‘the idea of language as option, however, entails that the responsibility for ensuring communication in the workplace is partly or fully removed from the employer and instead becomes the responsibility of the worker who wants to strengthen her/his employability through investments and skilling by and of the self’ (Kraft, 2020, p.4).

As well as having bilingual skills, a position of responsibility seems to be a contributing factor to the likelihood of having to act as an informal interpreter. There are other less stable factors that may contribute to someone acting as a 'sub' informal interpreter, such as in moments when the other interpreter is not available.

When explaining the different nationalities of workers on the project at the time, Constantin and Jake remarked that the majority of the principal contractor's workers speak English, in contrast to the agency workers, showing another way in which language proficiency can improve a workers' employment situation. Kraft's research in Norway found that speaking Norwegian was a prerequisite for permanent employment, given that several participants in this research in the UK claimed that the principal contractor's workers usually speak some English, but many agency workers do not, then this seems to be the same pattern.

João also gives examples of promotion through language skills, such as when onsite he became the supervisor without doing the operative job first. He describes that often he carved out his own job by spotting the gap where a good communicator was needed. He describes:

> When I needed the place that I could fit in and climb quicker through the hierarchy of the companies was through communication (Me: ok), always through communication.

He did this in Portugal, Italy, Holland and the UK. The Portuguese workers were sent out to Holland and Italy as a team from Portugal, but there was no pre-planning for language requirements. Yet João sees communication skills as a passport to work:

> I think it's- it's a very important part of the dynamics of any company, the communication, because I've always been looked for (Me: mmm). Like they've always left the doors open for me- or because they saw that there was a gap for it. For example, they called me, and they gave me the best position, the best job I had, not the one that I earned more money but the hierarchy, I was hired when I was a purchase responsible and translator of Italian in Portugal in the biggest pipeline of Portugal. … because I already worked as a- learned to work as a translator in that first experience…

There are some instances in the data where working as an informal interpreter in construction has led the participant to up skill and work as an interpreter specifically. For instance, Johnathan is a British language graduate but without interpreter training, he describes how he first got into interpreting, informally by being approached by a British construction firm doing a hospital renovation in the town where he was living in Germany:

> It was kind of a baptism by fire …I think it stood me in good stead because I've ended up, you know, going back to that thing later on and here we are now doing it.

Then after years as a teacher in the UK he became an interpreter and translator. It had been in the back of his head since the informal experience.

It is interesting to note the variety of areas apart from construction where the informal interpreters have used their skills. For example, after working onsite as an informal interpreter João used his language skills in other bilingual work such as in a casino, as a pub crawl tour guide, and in a call centre. Farah has worked informally interpreting as a transcultural mental health worker. Magda interpreted in a detention centre in Florida and later did construction translations.

This section has shown how bilingual skills are often, but not always, one of the reasons why someone is promoted. Language skills are also always tied to responsibility, responsibility for the workers interpreted for. However, they are not usually openly valued.

8.3 Attitudes towards language work

Attitudes on the part of the people doing the language work varied considerably, especially for those for whom this is not a paid position, or even recognised with a title or vest, then it seems that one of the major factors for these differences is the individual's identity.

One conversation onsite was particularly illustrative of the different attitudes towards language learning and reasons behind them. Three workers stopped to talk to us. One of them was the team's supervisor and spoke English fluently, one of the workers knew some English, and one of them couldn't speak any. The supervisor told me how he barely spoke English when he came to the UK four years ago but had learnt it here. He said he made an effort because he wants to build a career here which is his motivation because he wants to live here long term. He noted that learning had been difficult because he was always working with foreigners and his wife is Romanian. He said that many of his co-workers did not plan to stay. He then asked one of the guys next to him whether he wanted to stay, in Romanian, and interpreted the response to us. Apparently, this worker does not want to stay, he likes his

home and just wants to make money and go back there. It was clear that he did not understand the rest of the conversation and did not want to be part of it, he stood with his arms crossed and eyes downcast. So, for this informal interpreter, interpreting aligned with his personal life goals, it was not simply a work task. He was happy to do this. In contrast, the other migrant worker present chose not to learn English because his imagined community was in his home country. Norton's argument that in the language classroom she studied 'acts of non-participation were acts of alignment on their part to preserve the integrity of their imagined communities', can be applied to understand the reason why some workers do not participate in the dominant communication practices of the workplace (Norton, 2001Peirce , p.165). In other words, ability or opportunity to learn a language may not be the only factors that influence migrant construction workers' participation (or not) in communication.

In the participants' stories it is seen that their experiences of language work were largely positive, these stories are interesting and surprising, but the other informal interpreter participants' responses are also important, their near silence on how they feel about the language work is itself revealing, suggesting that it is not important to them.

For João, a Portuguese labourer who became supervisor thanks to his language skills, this translational ability that sets him apart from others gives him fulfilment, 'It's funny for me to tell you this, I'm proud of the situation'. He gets satisfaction from using these skills and them being recognised, the investment paid off although the process was not easy:

> João: In the end the- that was gratifying to see that they then saw who was going- the one that was working, who was the one that had the skills, (Me: yep) and they gave me the job opportunity … could have gone wrong if I had maybe a negative approach …ok just let me do my work … I would tap my ears if I hear anything racist or things like that.

As this participant was recruited from a language network it is not surprising that he was motivated by this part of his work. In contrast, interpreters onsite for whom their language identity at that time was secondary to their construction skills, such as Marius, describe the language work as something that they have to do to get on with the construction work, and do not display any pride or satisfaction that they identify directly with communication skills.

Fernando preferred the language and office work in the construction company to physical labouring, but he begrudged his linguistic skills being taken advantage of, he said: 'somebody else had the title and I was doing the job basically'. Fernando felt that when he was working in the office, he was able to show the construction management the extent of the impact of language barriers onsite:

> With me in the office I have more opportunity to talk about and to point things out to the superintendents, to the construction manager you know... showing them the examples and how the barrier of communication between languages can make a huge difference (Me: mmhhmm) not only to when you talk about cost, you know, but when you talk about safety. When you talk about having the job done…by him knowing that I was trained, and I knew what I was doing he started getting more and more confidence (Me: yep) and umm something -something I learned is that for a lot of people not understanding what others are talking it creates fear (Me: yeah) and that goes in every language. You know, that goes in every language, so that applies also for the safety manager, ((laughs)) you know so by him starting seeing little by little how I handle things and how, you know, we have less accidents, people were being more productive, with the job.

From this interpreter's perspective, management are not usually aware of how much of a difference breaking down language barriers can make, he notes safety and productivity as being particularly affected. This participant describes a change in the work onsite as well as on attitudes when an interpreter traversed language barriers. Nonetheless, his efforts and skills were not recognised formally through higher wages or a contract, so he left the industry and became an interpreter in other fields. He had been developing his language skills for his personal interest and not only for upskilling on construction projects.

Such insights into the experiences and attitudes of informal interpreters have implications for understanding the scope of the work that they do and the factors that contribute to someone becoming an informal interpreter. For example, informal interpreters with positive attitudes towards the experience may be more willing to help out in different scenarios and to continue to be the go-to person for interpretation than people with more negative perceptions of this interpretation work.

Nonetheless, developing language skills and seeking out opportunities to use them is not how all the informal interpreters come to be in this position. In a discussion in the smoking area onsite with a group of Bulgarian workers, we talked about how and why he came to be wearing the vest that declared he was a ‘translator’, while the other worker did not, despite being able to engage in the conversation well in English. The ‘translator’ said how he was carrying out this task because he was mates with the supervisor and the supervisor had asked him to. The other worker then teased him, laughing and saying that no he definitely was not chosen because of language skills, because in that case he would be the ‘translator’ himself. This raises the question, for future research, of what factors aside from linguistic competence are considered when appointing an informal interpreter. In this instance for example, it appears that for the supervisor trust in his mate, to get the work done, including transmitting the overall message, took precedence over linguistic ability.

In this chapter it has been discussed that interpreting is the means by which informal interpreters simultaneously bridge the social and linguistic gap between workers. For some it is perhaps also part of a 'trans'formation of their own identity positioning, using their language skills sometimes changes their professional identity, and their personal one as a migrant becomes less prominent as they become more like the local group. Although there are exceptions, this study largely confirms Kraft’s statement that ‘despite being a workplace need, the responsibility of becoming a broker is left with the individual worker’(Kraft, 2020, p.2).

9 Findings and discussion part 3: informal interpreters' language work

In this chapter findings that relate more directly to what the language work involves will be explored. Relevant themes from data analysis include mediation, visual communication, technological solutions, interpersonal skills, and differences between a professional and an informal interpreter's language work onsite.

The key to onsite communication, and focus of this thesis, is informal interpreters, but the work they do to facilitate communication includes methods other than interpretation. In section 9.1their main language tasks are identified, in 9.2 the flexible use of languages onsite is explained. Specific language modalities are then explored: visual communication in 9.3, gesture in 9.4, and technology in 9.5. Written translation is examined in 9.6. In 9.7 elements of informal interpreters' work that go beyond language are considered, such as mediation and using interpersonal skills to improve relations. Finally in 9.8 the work of professional interpreters in construction is reported on. Some of these communication strategies are used by a variety of participants, sometimes by or with an informal interpreter, but sometimes when having to communicate without an interpreter.

9.1 What is their main language task?

One of the main tasks of an informal interpreter is in the induction, which is a key moment for receiving safety information. Usually, induction is given in the local language, with an informal interpreter on hand to help interpret points from the presentation or translate the paperwork that inductees are required to fill in. However, in some cases if there are many workers who spoke another language then the induction might be given directly in that language, according to Jake.

London, 8am, Wednesday 23rd September 2020, project 3

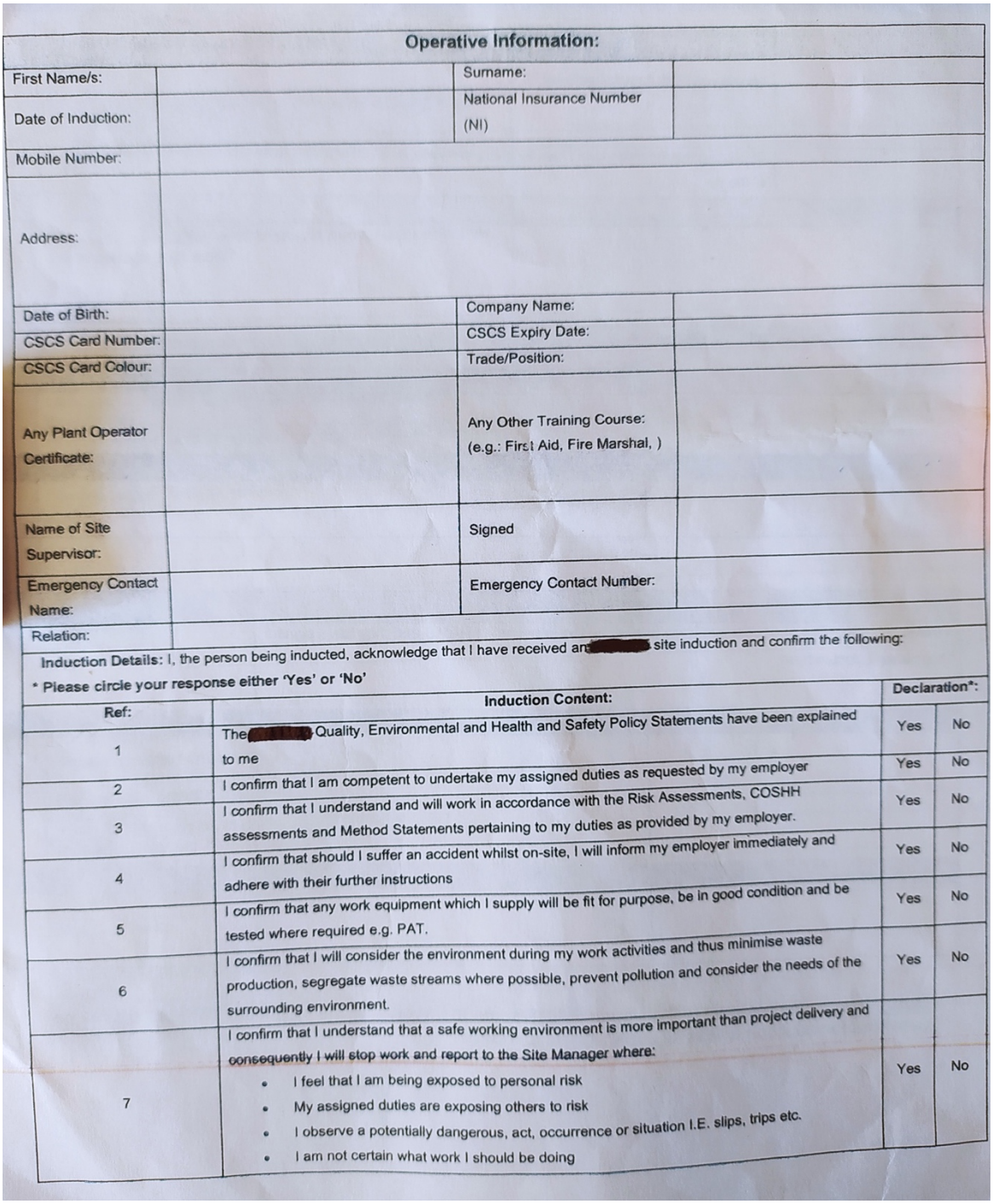
It's 5 to 8 on a Wednesday morning in London. I get off the tube and look up, above the periphery wall of the construction site I can see many people already at work on the building. The wall separates the construction site space from the public space outside. Signage on the wall is public facing, about topics of interest to the general public, like noise and pollution,

and all written in English, there is a hand sanitising dispenser by the entrance, I hastily use some, sign myself in at the site entrance again and pass through the turnstile once my temperature has been checked – fieldwork during a pandemic makes health and safety management even more complex. On the previous visit the supervisor, Jake, told me they were putting lads through induction daily at the minute as the project was entering its busiest stage. I asked if I could sit in on an induction and that's why I'm here today. Yet when I arrive, he says there is no one here for an induction today but that I can do it anyway… He shows me to the induction room and introduces me to Bruce. I am left wondering: is this really a coincidence that there's no one else here? Or did they do the real induction earlier? If so, why did they not want me to be there? Previously the gatekeeper was happy to help, even saying he didn't understand why others in the industry wouldn't – as after all it was useful for his CCS score.

So here I was, prepared to observe interactions between workers in an induction – yet there were no workers. Alone waiting in the induction room, I take the opportunity to examine and photograph the signs displayed. Bruce arrives, he is a Romanian who speaks English fluently, so we are able to talk together without any difficulties. He shows me the induction presentation on his laptop. He explains that he can interpret into Romanian when necessary but with other nationalities, such as Turkish, the subcontractor is responsible for sending someone with them to help. He also makes the signs and translates them.

In discussion with a supervisor onsite he described using interpreters 'to cover our back', linking communication of safety to migrant workers as a risk, he explained that they were able to sign through the induction thanks to the presence of an informal interpreter. The site induction is a legal requirement and key moment for highlighting risks on a project (HSE). Below are images of the four pages given as a handout in one site induction. These include a section to fill out on personal details and declarations confirming that the inductee received and understood the content of the induction (with yes/no answers) on the first page. The declarations conclude on the second page, where there is also space for signatures and a contractor declaration. Page three requires the inductee to answer medical questions and to sign to confirm their fitness to work. Page four is an induction test with ten questions which check comprehension of the contents of the induction presentation, the pass mark is eight.

Image 3: Induction form page 1



Operative Information:

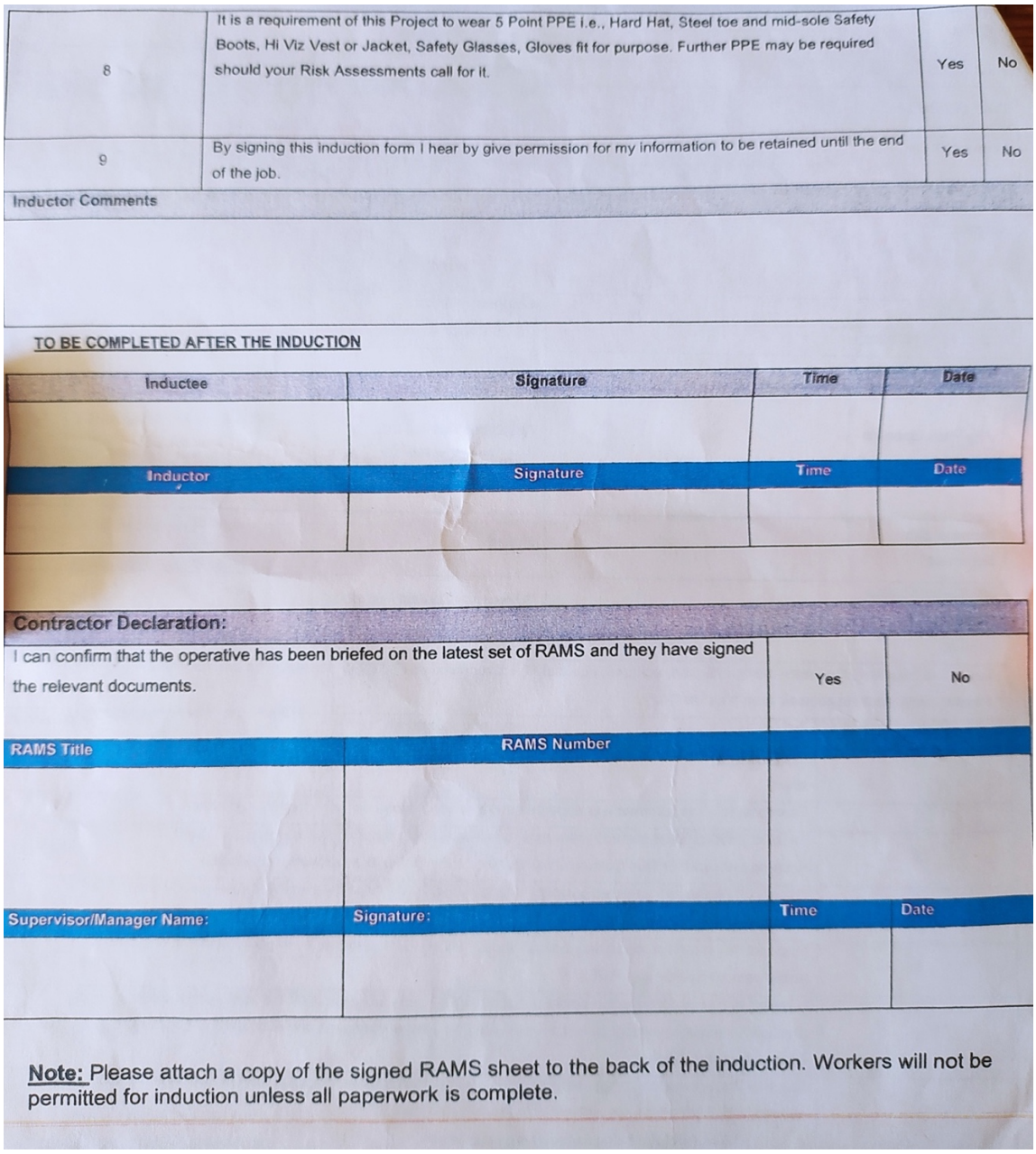
First Name/s:		Surname:	
Date of Induction:		National Insurance Number (NI)	
Mobile Number:			
Address:			
Date of Birth:		Company Name:	
CSCS Card Number:		CSCS Expiry Date:	
CSCS Card Colour:		Trade/Position:	
Any Plant Operator Certificate:		Any Other Training Course: (e.g.: First Aid, Fire Marshal,)	
Name of Site Supervisor:		Signed	
Emergency Contact Name:		Emergency Contact Number:	
Relation:			

Induction Details: I, the person being inducted, acknowledge that I have received an [redacted] site induction and confirm the following:

*** Please circle your response either 'Yes' or 'No'**

Ref:	Induction Content:	Declaration*:	
1	The [redacted] Quality, Environmental and Health and Safety Policy Statements have been explained to me	Yes	No
2	I confirm that I am competent to undertake my assigned duties as requested by my employer	Yes	No
3	I confirm that I understand and will work in accordance with the Risk Assessments, COSHH assessments and Method Statements pertaining to my duties as provided by my employer.	Yes	No
4	I confirm that should I suffer an accident whilst on-site, I will inform my employer immediately and adhere with their further instructions	Yes	No
5	I confirm that any work equipment which I supply will be fit for purpose, be in good condition and be tested where required e.g. PAT.	Yes	No
6	I confirm that I will consider the environment during my work activities and thus minimise waste production, segregate waste streams where possible, prevent pollution and consider the needs of the surrounding environment.	Yes	No
7	I confirm that I understand that a safe working environment is more important than project delivery and consequently I will stop work and report to the Site Manager where: • I feel that I am being exposed to personal risk • My assigned duties are exposing others to risk • I observe a potentially dangerous, act, occurrence or situation I.E. slips, trips etc. • I am not certain what work I should be doing	Yes	No

Image 4: Induction form page 2



8	It is a requirement of this Project to wear 5 Point PPE i.e., Hard Hat, Steel toe and mid-sole Safety Boots, Hi Viz Vest or Jacket, Safety Glasses, Gloves fit for purpose. Further PPE may be required should your Risk Assessments call for it.	Yes	No
9	By signing this induction form I hear by give permission for my information to be retained until the end of the job.	Yes	No

Inductor Comments

TO BE COMPLETED AFTER THE INDUCTION

Inductee	Signature	Time	Date
Inductor	**Signature**	**Time**	**Date**

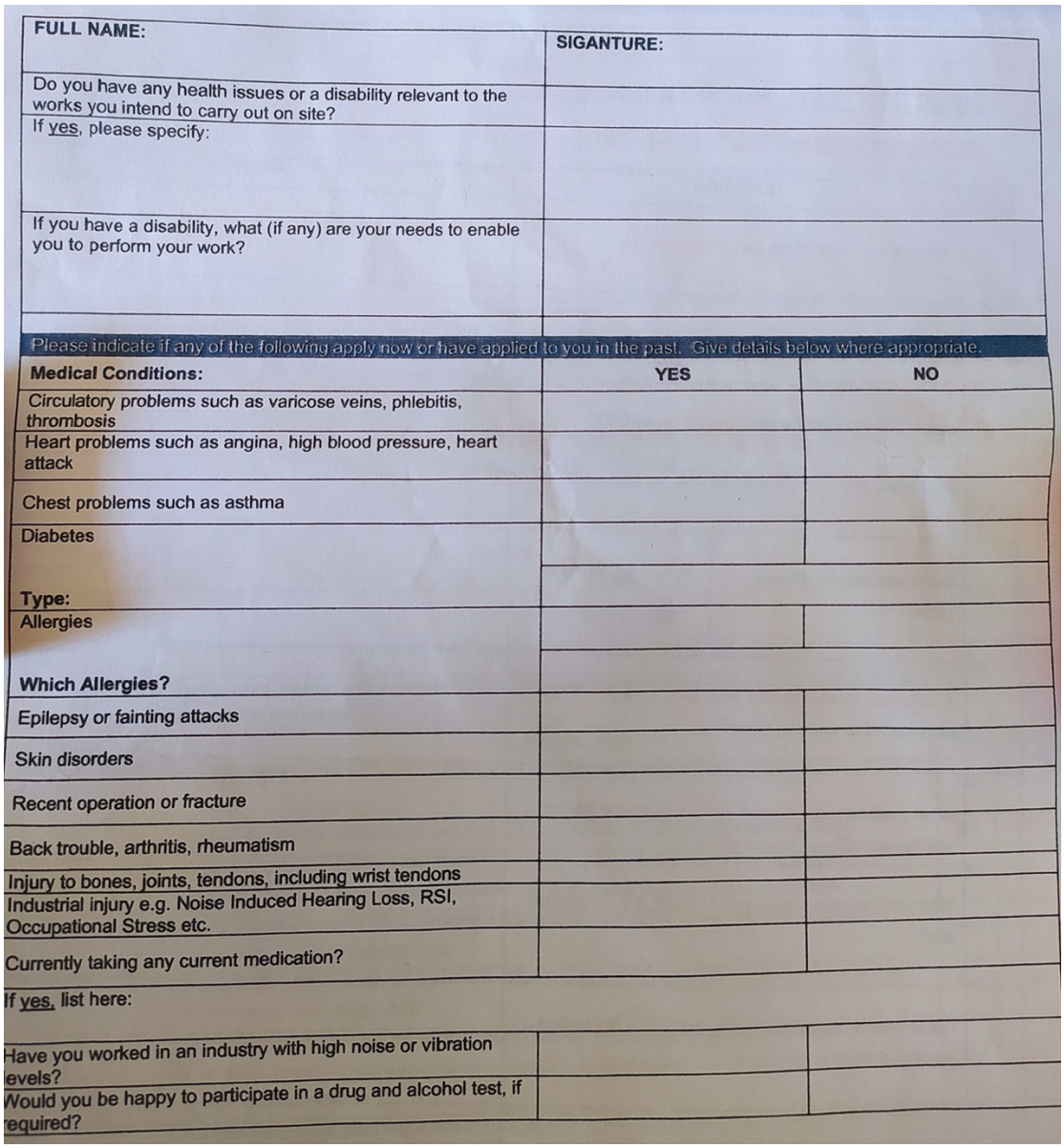
Contractor Declaration:

I can confirm that the operative has been briefed on the latest set of RAMS and they have signed the relevant documents.	Yes	No

RAMS Title	RAMS Number	
Supervisor/Manager Name:	**Signature:**	**Time** / **Date**

Note: Please attach a copy of the signed RAMS sheet to the back of the induction. Workers will not be permitted for induction unless all paperwork is complete.

Image 5: Induction form page 3

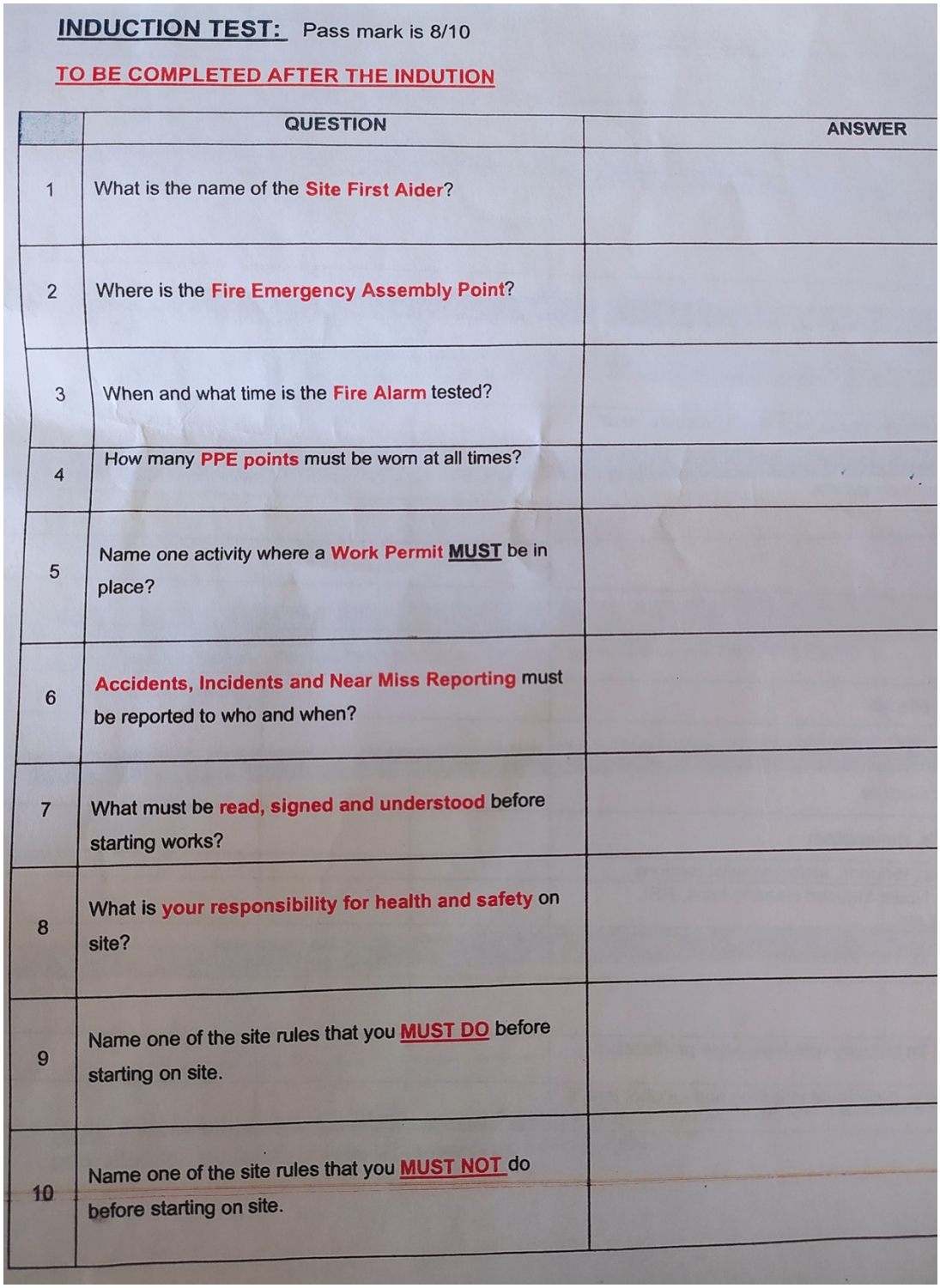


FULL NAME:	SIGANTURE:
Do you have any health issues or a disability relevant to the works you intend to carry out on site?	
If yes, please specify:	
If you have a disability, what (if any) are your needs to enable you to perform your work?	

Please indicate if any of the following apply now or have applied to you in the past. Give details below where appropriate.

Medical Conditions:	YES	NO
Circulatory problems such as varicose veins, phlebitis, thrombosis		
Heart problems such as angina, high blood pressure, heart attack		
Chest problems such as asthma		
Diabetes		
Type:		
Allergies		
Which Allergies?		
Epilepsy or fainting attacks		
Skin disorders		
Recent operation or fracture		
Back trouble, arthritis, rheumatism		
Injury to bones, joints, tendons, including wrist tendons		
Industrial injury e.g. Noise Induced Hearing Loss, RSI, Occupational Stress etc.		
Currently taking any current medication?		
If yes, list here:		
Have you worked in an industry with high noise or vibration levels?		
Would you be happy to participate in a drug and alcohol test, if required?		

Image 6: induction form page 4



INDUCTION TEST: Pass mark is 8/10

TO BE COMPLETED AFTER THE INDUTION

	QUESTION	ANSWER
1	What is the name of the **Site First Aider**?	
2	Where is the **Fire Emergency Assembly Point**?	
3	When and what time is the **Fire Alarm** tested?	
4	How many **PPE points** must be worn at all times?	
5	Name one activity where a **Work Permit MUST** be in place?	
6	**Accidents, Incidents and Near Miss Reporting** must be reported to who and when?	
7	What must be **read, signed and understood** before starting works?	
8	What is **your responsibility for health and safety** on site?	
9	Name one of the site rules that you **MUST DO** before starting on site.	
10	Name one of the site rules that you **MUST NOT** do before starting on site.	

The induction that the above forms relate to was a PowerPoint presentation of about 50 slides with a recorded voiceover. The slides combine visuals and text but have dense amounts of

text. The person who runs the inductions on this site could translate for Romanians if needed but for the Turkish and other language speakers onsite then the subcontractor was responsible for sending someone with them who could translate/interpret. Topics covered in this induction included this and next month's work, coronavirus restrictions, the colour card reporting system, PPE requirements, names of the management team and first aiders, a map of site with fire assembly points highlighted on etc. There was a huge amount of information given which it is unlikely anyone could retain even if they could understand all of it, so someone sitting the induction who does not understand English would perhaps understand a brief overview of the information through visuals and what an informal interpreter managed to and decided to interpret. Furthermore, in image 5 of page three of the medical form there are medical terms such as 'phlebitis' and acronyms such as 'RSI', and it is unlikely that bilingual workers being used to interpret will know this vocabulary.

Through the discussions it became evident that most of the time that communication between different language speakers is being facilitated on construction sites it is not through an interpretation. Andrei gives a description of the communication flow: 'I get the information from the office in English, most of the times, and I just pass it on in Romanian.' Similarly, manager Lei has no contact with the workers at all. Others also seem to have very little. Lei says he only speaks to the supervisor, the supervisor then passes the information on, but in a different time and place, at the end of the day he meets again with the supervisor who passes any issues on from the team. As discussed, this way of working when there are speakers of multiple languages on a project reduces direct communication which is an important factor in interpersonal trust, according to Lau and Rowlinson (2009).

During the site visits there were two occasions when two different informal interpreters facilitated conversations between myself and a worker that did not speak English, giving me a great deal of unexpected insight into how informally interpreted interactions work in reality, and how it feels to rely on this. The migrant worker who did not speak English was visibly uncomfortable and so I kept the interaction brief, meaning that this was not an opportunity to hear their experiences of communication at work. However, it was useful to feel this lack of complete understanding and to interact to some extent with these workers, which though small, is a step that hasn't been achieved in the research to date on this topic. One of these was with a Brazilian worker and as a Portuguese speaker I could understand some but not all of what he said before it was interpreted. The other was with Romanians and I had to rely entirely on what

the informal interpreter relayed and on part of the message that is conveyed through body language. In both cases the two interlocutors engaged in a conversation, rather than one turn at a time being interpreted as professional interpreters do, therefore a lot of content was omitted, and most was paraphrased rather than interpreted. The informal interpreter would then say 'he said…' and summarise. Reliant on the informal interpreter, I was left wondering what else was said and wanting to ask more questions but as it wasn't their job to interpret, I did not feel I could keep asking them.

ASM Stefan's description of how multilingual communication onsite is managed also includes interpretation that is more like a relay of information in a different time and place. It also involves multiple communicative modes and checking: 'so I'm taking the supervisor individually, having a chat with him, making him understand. If needed, I'm taking a pen and a piece of paper and start drawing something … and then I'm making sure that that thing goes to their operatives'

That the more formal communication such as instructions, as opposed to conversations while working, happens in a different time and place seems to be the most common way of the informal interpreters working. Ivan explains that for them this is the easiest way:

> Actually, because we have about forty people here and the easier way to communicate, and for everybody to understand what they want from us, we have two supervisors, so we go to the office, discuss everything with the managers, and go on the scaffold and start talking, explain the guys what they have to do and everything.

Manager David describes the same method of working:

> Me: Ok and then what about the work of the interpreter in the more day-to-day activities?
>
> David: Well, the more day to day activities what we- or what I tend to do is go there, spend an hour with all the foreman, … and I'll say 'this is what I want done for today, how are we getting on with what we did yesterday?' … and then they will go back, and they will explain to those guys what they need to do.

Likewise, Johnathan, when asked about his interpreting, reflects that it was not really interpretation he did, even though he possessed advanced language skills:

> Johnathan: ... it was all very much consecutive. And in some cases, when I think about it now, it terms of consecutive it was more a case of like ‘can you just get him to do that?’... basically, I'd be, you know, left to my own devices to get the job done. So, in some regards it wasn't so much an interpreting job as a -as a –what- I don't know what the word is -a runner or a, you know, sorter-outer.

Further, PM Elena explains that informal interpreters summarise rather than translate, she says that the communications is usually ‘a relay of an order’. It would be impossible to translate the details and nuances when working in this way, and most do not have the intention of interpreting faithfully, as Paul says: ‘no they- they change little bit um some words; they don't translate word by word. (Me: mmhhmmm) They choose the short way.’ Likewise, Fernando is a trained interpreter, but he was not employed in this capacity. He observes that before he was the one doing the language work:

> Fernando: There was umm yes there was a guy that he was- I wouldn't call it interpretation because really there was a lot of summarisation, he wasn't really communicating what the safety manager was trying to- to communicate.

The most comparable interpreting mode to the language work done onsite is consecutive. This is determined by the context. Although more information is coming from management to the supervisors and from the supervisors to the workers than vice versa, there is still interaction both ways in order to ensure understanding, and so this needs to be consecutive, which is the mode best suited to short exchanges. What is more, onsite it would be practically very difficult to set up simultaneous interpretation. Nonetheless, in some situations such as training sessions, when the communication is almost entirely unidirectional, simultaneous interpretation would be the choice in other contexts because it saves a lot of time and the information would be more seamless, yet in construction it is barely used. As Olga explains:

> Olga: Mostly it was consecutive …

> Me: And did you have to also do any written translation or sight translation of documents?
>
> Olga: Not a lot because the thing is that's the …nature of site work. So onsite people prefer to verbally communicate. That's primarily I think the focus of people. … and of course, you have to see the context, in Kazakhstan or in Russia onsite people not have access to a computer, having something printed out of a computer or online reading it somewhere it just would be more difficult, so practicality of it is you have to communicate people to people, directly, verbally, onsite and if you have an interpreter or need an interpreter it just all happens at the same time.

Even in teams where most workers speak enough English for everyday communication, an informal interpreter will have to sight translate documents as many speakers of English as a second language do not have the skills to understand written English. Jen, a safety manager, explains that one reason behind her company's spoken translation initiative was that many of the L1 speakers of other languages can understand English when they listen but not read it. The initiative involves scanning a QR code and listening to information that is available in a few languages, given the positive findings of Lingard et al. (2015) about using QR technology on construction projects so long as the workers have phone access. The participant also noted that this helped L1 speakers with difficulties reading because of dyslexia, for example.

Professional interpreters are trained to sight translate and should read the whole document aloud line by line, translating as they go. However, informal interpreters may summarise what is written or just tell the workers where to sign. This issue is multi-faceted, the reason for not translating fully may be ability but it may be attitude. What is more, sometimes important information might be missed, but in some situations an explanation of the information and what is required in the workers' L1 may be more useful than a direct interpretation, in other words localising the information for workers who may be new to the work procedures.

This finding is important because, as Senior Site Manager Hannah argued, people are more likely to comply with safety rules and follow instructions well if they understand why it should be that way. This argument is pertinent to the work being done by informal

interpreters too. If information is being summarised, and managers do not speak with the workers, a lot of such meaning may be lost. For instance, the core of the message might be passed on but not the supporting information such as the reasons behind it, or the emphasis that the original speaker used. Over time the accumulative loss in meaning will likely have an impact on the motivation, attention to detail, and relations among the workforce.

In the context of a construction site particularly, the process of sight translation can be complex. As explained by Marius, multiple communication methods and languages come into play when conveying information from a written source:

> Me: … and what happens for example when you need to transfer something that's a written document? Do you read it aloud to them, or you write it out for them, or how does it work?
>
> Marius: No, normally the written documents … would be a toolbox talk, (Me: ok) or would be a technical drawing, or a methods statement. … basically, I'm gathering everybody around, I'll say the information in English, then it's going to be translated into Bulgarian or Romanian or whatever other nationalities we've got. … so, if it would be something technical, like a drawing, then obviously I need to explain it in English, translate it in Bulgarian, and show it, visually show it, to the lads…multiple ways of explaining (Me: to make sure) and giving information just to make sure that you sent the right information. Most of the times they still get it wrong but…

Here Marius describes intersemiotic translanguaging, the 'selection and blending of modal resources' (Baynham and Lee, 2019) as necessary to try get a message across. He also describes doing sight translation. Some simple preparation for this task could make a difference to how much of the information they manage to transmit. For example, informal interpreters should be aware of steps to take to carry out a sight translation, which include reading the document first, identifying potential difficulties in vocabulary or areas where re-phrasing would be required, then translating it sentence by sentence aloud, which requires reading one unit of meaning ahead of translating. Also, a short glossary of terms common in the documents that need to be translated could be created.

In conclusion, one of the main language tasks of informal interpreters is to facilitate induction. This can include summarising presentations and helping workers complete forms. Informal interpreters may also be required to pass on information from briefings and toolbox talks and interpret more formal conversations. Some informal interpreters may also do translation work.

9.2 Flexible spoken language use

As described in chapter 5, a construction site can often be conceptualised as a translanguaging space (Wei, 2011), where moments of translation occur. Many participants discuss their use of languages as flexible, switching between the languages and modes that they are able to use to fit the situation. Indeed, some translanguaging occurred within the interviews, for example when Magda was describing the different languages spoken on a project she said ‘francois aussi, you know French’. Plus, Algerian professional interpreter Amal describes ‘doing a lot of things in addition to interpreting’, including reacting naturally and flexibly to interlocutors who used languages interchangeably; she was hired to interpret English<>French, but ‘sometimes people would react in Arabic, very spontaneously’, and she was able to adapt her work to this because she was familiar with the Algerian dialect of Arabic. Such a situation where languages are mixed is typical in a country with more than one official language. However, even in countries with just one official language it is common in construction to use languages very flexibly. Elena comments on the language dynamics on sites in Miami, saying that migrant workers’ English language development is very limited to their trade because they live in ‘a very tight immigrant community’, and that over time Spanish has become dominant ‘no, you’re in Miami, speak Spanish.’ Elena also explains that many American construction managers in Miami learn some Spanish. Therefore, it is likely that they translanguage, that the participants in a conversation use whatever named language they know, interchangeably, to communicate. The formation of linguistic ghettos outside of work combined with the strategy of using an informal interpreter so that teams of non-official language speakers can work together runs the risk of further inhibiting 'integration and second language acquisition', as Dainty et al. (2007) warn. Therefore, the state of language in the community where the project is situated is a contextual factor that affects the amount of interpretation required onsite. Nevertheless, on construction projects with a high turnover of workforce the linguistic makeup is often dynamic. Furthermore, the level of translation/interpretation necessary is variable, not stable. For

example, as Tutt et al. (2012) found with GlazaBuild, a shared repertoire can be established, ‘even when repertoires are not initially shared, over time workers can develop a *shared situated repertoire*’ (Baynham and Lee, 2019 , p.183).

Demitri also describes how operatives use their own language and English interchangeably, particularly with the work specific terms that they learn on the job. Hence translanguaging is a communicative strategy that informal interpreters may use:

> Demitri: you mix your language…even to people who speak the same language as you … you don't know the words in your own language you throw them into -into the conversation, we throw them in English. That happens a lot. That's normal.

Elsewhere, Egyptian architect Amir reports that in Egypt some words in English are assimilated into Arabic. He gives the example of saying 'breaker' even when talking about electric circuits in Arabic, the word 'wire' is also kept in English, and he says that everyone knows this as it 'became one of the Arabic words.' This occurs in many places, and especially with words for new technologies, as interpreter Michail pointed out. Therefore, from the accounts of some participants, it is evident that when working in mixed groups workers often translanguage. Such communication, as Bulgarian Supervisor Ivan describes below, means that the strict type of interpretation one supervisor wanted, or that a professional interpreter might do in other contexts, may not be useful:

> Ivan: It's very funny because even the guys who doesn't speak English at all and doesn't understand nothing, they speaking a very funny language because they using the English word for the screws and all the materials, at the same time talkin’ Bulgarian language (Me: in the middle). And when I came here and went to the building site I said ‘What's wrong with you guys, you're not Bulgarian, probably can't speak English, something in the mix’ ((laughing)).
>
> Me: And maybe they forget the Bulgarian for these specific words cos they use them in English so much?
>
> Ivan: Most of the guys they don't have technical education in Bulgaria. They start to do building job here. So, they don't know the Bulgarian names of the tools and

everything. They don't know because they haven't used it in the past (Me: ah ok). They teach ((learn)) everything here so they have 'impact driver', they have 'hammer drill', of course we have different words for all these tools, but they don't know Bulgarian names for the tools, most of them.

We can see from Ivan's account that the extent to which workers translanguage will be affected by the timing of the workers' migration. Most of the Bulgarian guys he met in the UK were new to the industry, but others may have worked in it in their country and language before. The scenario described by Ivan could be illustrative of Grosjean's (2002) claim that bilinguals are rarely equally fluent in two languages and subsequently 'contrary to common expectations, natural bilinguals rarely make good translators...may lack words to express equivalent meanings' (Antonini et al., 2017 , p.51). It is clear that it is important to try to understand how people actually use language onsite, rather than assuming bounded languages are used and that the interpreter works between them. Professional interpreter Michail's experience shows a potential contrast in the ways of working of a professional interpreter and an informal one, he does not translanguage. He says that when an equivalent term for a piece of equipment does not exist in Russian 'we will just provide the expanded explanation with what the term means, or we agree on on the glossary how we wanna call it'.

9.3 Visual communication

This section discusses the findings about visual communication, the significance of which is summed up by one participant as: ‘a picture is worth a thousand words innit’.

As well as switching between languages and registers, informal interpreters switch between modes of communication to relay the message by whatever means they can. Visual communication is prevalent. For instance, drawings are particularly helpful for informal interpreters, Ivan explains that in more technical jobs drawings can be enough to understand:

Ivan: The building job is easier because it- it's similar all around the world. So, I'm technical. I have a technical high school in Bulgaria, so I just need the drawing.

Me: The drawing?

> Ivan: Drawings. That is all information about my job. (Me: oh ok) Given me by the designer of the building. So, everything is there.

Johnathan also describes how visual communication is commonly used in construction, such as creating meaning using drawings and gesture:

> …the language, if you like, of architectural documents is pretty much international innit, the measurements are the same (Me: mm true) symbols and everything else. So, you basically have to put the thing on the table and point at a bit that you were talking about and then, you know, point to the piece of steel that was the wrong size compared to what it said on the diagram.

As well as the drawings that are ubiquitous in construction with architects' drawings, storyboards, instructions etc., the act of drawing itself is used by supervisors and others to convey information, as described by Aleksander: 'I bring the drawing out and most of it is just like picture with explanations but its- most of it is numbers, so I point them where is our clash, I draw on top of the drawing.' PM Lei also does this, 'if you draw something it will be easier for them to understand…they can draw as well so you both have a correct understanding…' One ASM, Stefan, reports drawing as being a back-up resource, 'if needed I'm taking a pen and a piece of paper and start drawing something'. Professional interpreter Anna explains how drawings were used during explanations one interlocutor gave her, which she then used in her interpretation to the other interlocutors:

> drawings were definitely used ... engineers were trying to come up with a fix for an issue they were having ... an engineer came up to me and he said that they needed- that they had an idea and they needed to explain this errm little scheme they came up with, and I asked him to first explain it to me, so he drew it out on a piece of paper and he explained to me how they saw it would work and then using their drawing I explained what they were going with to umm the foreign specialists.

Drawings are used not only to demonstrate information to someone else but may also be used in the processing of information that an informal interpreter does before passing the information on. Professional interpreters learn note taking to make it possible to retain information, these notes contain symbols as well as or instead of words. Although she was

not trained as an interpreter Magda described taking notes if she has time. Making quick drawings and writing key words. This shows how language interpretation can go beyond strict definitions of language, showing how a translanguaging process can be part of the translation process and contribute to the translation as product (Baynham and Lee, 2019, p.35).

Site Manager Marius also expresses needing to use several communicative methods:

> Me: What ways do you use to manage to get the message across?
>
> Marius: Well verbally, sign language, drawing, (Me: drawing?) drawings and anything that comes to hand. If it's going to be able to read a drawing, I'll just mark on the drawing 'I need you to do this like this', 'I need you to do that like that', so it's anything that works basically.

In her interpretation work Lanfen used visual communication as a back-up method:

> Cos I'm not an engineer background student, and the engineers didn't- they didn't know English, so sometimes if we couldn't find a common word to explain things, just bring a piece of paper and let them draw and they can communicate in that way.

In contrast to several of the other participants, Demitri seems to not use drawing or his phone to translate. This could be because he has more developed language skills than most informal interpreters so does not need to:

> Me: … as well as paraphrasing to get the words from them, (P: yeah) do you also use any other way, like drawings or your phone or anything like that?
>
> Demitri: If the worst comes to the worst and they don't understand the paraphrasing you might do that, I can't remember doing that. You know, paraphrasing is as good as any way of expressing that.

British PM David says that while visual communication is helpful, there can be an overload of visual information leading to it being ignored. Therefore, it is better to speak in person

because when there is a degree of interaction as opposed to just seeing a piece of paper or a noticeboard, people are more likely to grasp the information. Safety manager Jen also expressed this and that her job had become more difficult during Covid19 because of reduced in person communication, 'you can't beat a face to face- or before corona-'. Sean also emphasises that visual is very important but has its limitations: ‘yeah so the inductions will have pictures, so you try to explain as much as you can with the photos. (Me: ok) Or the illustrations that we have. But again, you can only do so much like.’

On sites where translations are done the site becomes a translanguaging space. This is described by informal interpreter Ivan, who says ‘everywhere we can see some explanations written in a few languages. In the toilets, or the canteen, or whatever, everywhere.’ Due to the nature of a construction site and the workforce on it, the translanguaging space is ever evolving. Signs are a very visible element of the translanguaging space. Site Manger Marius explains that signs are usually constituted of visual plus text, which is sometimes translated and sometimes not depending on the management:

> Marius: There are different situations. The main signage into the compounds for example, they're visual plus English text. In the welfare facilities you do have texts- you do have signs in English plus Romanian or Bulgarian or any other language. … On some sites you have them translated, on some sites you don't have them translated. …In the end it's down to the management of that precise project…

Elena says that in the US the signs do not have to include a pictogram, whereas Zane says that in Tanzania the signs are translated. While different practices exist around the world the standardisation of signs within the EU guarantees that migrants within the community will have some familiarity with them. Post-Brexit if the migration flow changes towards having more migrants from outside the EU this might cause more difficulties for communicating information on UK sites.

Innovations Manager Toby mentions visuals as the primary method of conveying information to people who do not understand English. He gives the examples of maps to show muster points and minimising text in PowerPoints.

Posters such as those displayed below can catch attention and display simple messages quickly. These may complement some of the informal interpreters' work, for example in induction they might be referred to and need just a short verbal comment with it. These posters were displayed in the induction room.

Image 8: visual posters displayed in the induction room.

9.4 Gesture

Gesture is used constantly on construction sites to make meaning. As will be demonstrated with examples, gestures can be an effective means of communicating, a useful part of a shared repertoire. However, in more complex communication this is not enough and there is also a lot of room for misunderstanding. For instance, on one jobsite in Brazil Magda had to get involved in the communication of an emergency. She happened to be walking by an office and saw the safety manager looking very pale, the nurse was already with him. The manager who collapsed was Japanese, so would need to use English to communicate at work. The nurse did not speak a word of English. The nurse had been massaging his arm because from his gestures she knew there was a problem with it. In fact, he was having a heart attack. With pain in his chest and numbness in his left arm. They took him to hospital, where he had two stents inserted. Magda explains that in this situation there was not time for translation, that she just told people what to do. Nonetheless that bilingual communication saved his life.

In contrast, a successful example of gesture occurred onsite when we entered the lift and the supervisor gestured to the worker operating the lift, pointing down and making a zero with his thumb and forefinger. The worker did not understand English, and the supervisor only spoke English, but simple messages such as that were no problem.

All the participants that are from construction discuss the multimodal nature of construction sites. For instance, one participant, Demitri, who had acted as an informal interpreter, mentioned gesture as the first method of managing communication:

> Me: I'm looking at how people who speak different languages on construction sites manage to communicate. So, this includes - (P: like this like this) ((Gesturing)) yeah ((both laugh)) yeah. …

He explains the interplay of verbal and physical to ensure the message is conveyed and to overcome any gaps in linguistic knowledge:

> Me: Ok and what type of communication were you needing to translate? It was instructions mainly or?
>
> Demitri: All of it, instruction and in conversation. But instructions, you know, you have to know the terms first before you give instructions, but then you do it like this ((gestures)) and you show them.
>
> Me: Physically...
>
> Demitri: This is what I want, yeah. (Me: ok) I want this so big, so long, so wide, so deep for example ((demonstrating with the space between his hands))

Elena's account of working as a superintendent on multilingual sites in the US also emphasizes the combination of flexible spoken language and gestures, in other words, translanguaging:

> Me: … so as well as somebody acting as an interpreter and using phones (P: yeah) are there any other methods that you can think of that they use to communicate with each other when they're struggling?
>
> Elena: Do you know the thing with construction is that it's so visually obvious sometimes you know, I mean you did a crappy job, everybody can see that ((laughs)) … At some point they meet halfway. The project managers, you know the ones that

> are only English speaking, begrudgingly or not, have to learn some Spanish you know. …To at least be able to communicate some basic stuff. And then again, your trade you learn just enough to say, you know, 'drill' 'dry wall' 'here' 'paint', you know, 'level', and all that kind of stuff. And then, you know, the hand languages and stuff like that.
>
> Me: Yeah. Yeah, like gesturing, get by somehow
>
> Elena: Right right exactly, 'not like this - like this-' ((gesturing)).

João, who worked many times as an informal interpreter, states that when he was not there then the workers had to get by, usually using gesture.

Professional interpreter Sara also describes using the setting to help when she did not know a term, for example by pointing and asking for the name of something. As Sean prompts, the use of gesture onsite is universal, not only between different languages. He gives the examples of signalling to someone from below to clip on, or trying to move around a forklift, as scenarios that are always communicated with body language regardless of the people involved.

A British PM, Jack, described how management also need this non-verbal communication, even though most of the time they avoid speaking to those who do not speak English by going through the supervisor. The first example is in the office, and the second out onsite:

> Jack: Cos some guy will come in and he'll stand there and I'll say ‘what's the matter?’ but he doesn't know what to say, cos his supervisor has sent him for a tin of aerosol grey spray paint …come in and go ((miming spraying)), and I'm like ‘what? What do you want?’ And he goes ((gesturing holding a can and pushing down with his index finger)) and I said ‘ah spray paint?’ ‘yeah’ ((nodding)).
>
> Me: Ok so you use gesture quite a lot to-
>
> Jack: Gesture yeah, that means spray paint or brush, cloth ((using actions to depict each one)), you know what I mean, cos maybe the supervisor didn't have time to go to

> the office, so he sends his man. (Me: ok) But you get there in the end … but I rely on the supervisors to do most of the interpretation.

The PM states that he relies on the supervisors to interpret but in brief interactions with speakers of other languages he is able to use gesture to be understood. He gives an example of successful interaction based on gesture:

> Jack: But I've seen me go into a mast climber and say 'right level 6' yeah, so we'll go to level 6 yeah, 'show me the panels' ((gesturing- fingers for six, points to eye for 'show', and makes a square with his hands for panels)) and they know exactly what I'm talking about cos it's obviously (Me: visual gestures) visual body language.

One site manager, Hannah, also stresses the need to mix methods of communication to ensure that LX speakers of English will understand

> Me: In your experience what makes communication onsite successful? And what doesn't?
>
> Hannah: Everyone learns differently, so being aware of this, and it also depends what it is you are trying to communicate. If it is induction, I believe a mixture of discussion and looking at pictures is useful. Site walks and videos can be helpful too. Ensuring you use the correct tone of voice, being positive, upbeat etc, and you are interested in what you have to say, is important … Ensuring that you come across as approachable is important. Being aware of your use of body language and the words you choose, plus explaining why we need to or have to do something a certain way. If I am trying to communicate something I need or want done onsite I find it best to take the person to the location and use body language as well as good choice of tone and words to explain what I need doing and why. I find communicating with architects and engineers via marked up drawings or photos better than words …Testing someone's understanding by asking questions …

Her answer displays an array of communicative strategies that she believes are best combined to make communication successful. This is in line with the conclusions of Cameron (2011) and Hare (2012). The participant uses visual methods such as photos, drawings and videos,

and highlights using the space in the communication to demonstrate visually in walk-arounds. She is also aware of more subtle aspects that come into play in communication, such as the speaker's tone of voice and attitude. Although they are simple and free strategies, such as asking questions to check understanding or being aware of body language, it is likely that her communication with workers is much more effective than other managers who have not considered how they can be clear. However, if elements of communication such as body language, tone of voice and 'word you choose' are so important, it is also important that these are carried over into the other language, by the interpreter.

As well as gesture, other body language can also be important in interaction, such as facial expression and posture. Participant Lei mentions several times using body language to communicate. When asked for an example, he gets up and enacts it, using his arms to create the space of an exclusion zone and imagined barriers:

> Me: And you mentioned using body language, so can you describe an example when you saw or did this?
>
> Lei: … let's say you have a lifting operation above, if you want to enter there should be an exclusive zone set up … if they don't understand English- you have to explain that if there is a barrier do not try to remove it and take the shortcuts yeah- most of the people they will do if there is not watched, they'll just try to remove the barrier and they'll … it's really dangerous so you have to tell them say 'if this is a barrier do not touch it' yeah, 'stay away'- like this- ((using his arms to draw a barrier in the air and then crossing his arms back and forth and shaking his head)) so they understand.

He continues by suggesting that a problem does not arise from not understanding but from ignoring:

> Lei: … so in most of the cases they will understand because it's not like too complex, it's common sense, most of them they have common sense but the people sometimes they try to ignore it.

Michail illustrates how interpreting onsite is facilitated by the surroundings and translation can be more difficult because of this de-contextualisation:

> It's much easier to interpret onsite because you are within the context already. So, you're on the construction site and you know what the people are discussing so it's much easier to visualize the problem they're discussing (me: right). While during translation you have to do the research, you have to google things, see how this particular detail on the drawing looks like, ... and also from the point of view of terminology, if you don't know for example the particular term but this piece is there you just show them and the engineers would understand, ok we're talking about this beam for example.

This is perhaps one of the reasons why professional translators are hired but interpretation is often more ad hoc.

The prevalence of gestures and other forms of visual communication onsite give weight to the argument of Bagga-Gupta and Messina Dahlberg (2018, p.404) that:

> the separation of oral, written, signed and embodied resources in analysis need to be recognized in terms of an issue related to academic traditions, rather than what humans 'do'. Here the hegemony of both a monolingual bias and an oral language bias, in the educational and language sciences in general, can be understood as contributing to the marginalization of people's deployment of written, signed and embodied resources in face-to-face and virtual settings.

9.5 Technology

Several types of technology are used onsite to help with communication, such as radios, phones and digital displays. Phones are used for translations (Tutt et al., 2013b, Oswald et al., 2019) and pictures. Opinions regarding the use of phones are divided. On the one hand, one participant, Aleksander, professes that 'Google translate is my best friend.' Ivan also uses Google translate. Moreover, Andrei describes a positive experience of using translation technology:

> Andrei: One of them speaks English very well the other one struggles a bit, you always have Google translate.

Me: Ok.

Andrei: Or there's apps that you can speak in English, or any language, and they will reproduce in Chinese and it's very accurate.

Contrarily, one Site Manager, Marius, explains how he does sometimes have to use Google translate but that this is a last resort:

Me: Ok and do you use your phone a lot?

Marius: Google translate in some cases, yeah, we do use Google translate. Only that there is a bit of an issue with Google translate cos it's not the best performing app. Yeah, I mean it kind of changes the sense of the information that you're trying to do. So, me personally I'm only using it in extraordinary cases. I mean, if the person is not going to understand nothing, not a word, and I can't speak with somebody that understands whatsoever English I have to try and send my message somehow, so then I will be using Google translate.

As participants in Oswald's 2019 study found, this free translation technology is not reliable. PM David states that he does not like using phones because 'if you've got an earphone in, you're not concentrating on what you're doing (Me: hhmmm) so we try not to have that cos there's an element of risk in there.' Romanian site manager Paul also says that he never uses his phone to translate.

Phones are also used as the link to the interpreters if there is no one there to interpret. In fact, Andrei says that 'without phones we're dead, or radios.' Phones are also used for pictures in WhatsApp groups. Lei took out his phone during the interview and showed the WhatsApp groups for all of the teams, explaining that he will send a photo of the area and what he wants done and ask for one back to show completed work. Paul also uses pictures on his phone to show details. Such interactions replace a lot of the need for language.

Many participants, including Lei, Daniel, Marius, Paul, Toby and Sean, mentioned that videos are sometimes used on the construction site, particularly in induction. Largely these

are played in English and an informal interpreter summarises the key information in the language needed. Some sites do have videos in more than one language, however, as Sean stressed, showing the video multiple times to cover the different languages spoken is far too time consuming.

> Me: What about umm using videos, do you have videos in the induction?
>
> Sean: Umm we did on the last job, we don't here. But again, on the last job the videos were all in English …We had two videos in induction on the last job, one of them was all in English and the other one had a couple of different languages. But again, when you're doing the induction four people might speak English, five people might speak Romanian, two people might speak Bulgarian … and the video was about twenty minutes long …you'd have to put it 20 20 20 like each …

The most advanced example of practices to deal with communicating video is given by the in-house interpreter of a nuclear engineering project, who subtitled the videos himself.

In the following account of visual communication onsite, the participant, Site Manager Marius, appears defensive in his response, and also displays a defeatist attitude towards the issue of onsite communication:

> Me: … So, do you ever have a situation where you are showing a presentation or a video material as well that you need to translate?
>
> Marius: Normally this is done in the induction, and this is aimed at Health and Safety … it is a very busy environment because of problems, because of deadlines, because of money, because of everything else, so time is a luxury on a construction … So it would be great- yeah cos I presume that's a suggestion not just a question- (Me: shake head) well I mean from my point of view it would be much easier to combine the visual explanation with the audio explanation all in one go cos it makes it easier for someone to understand your message, but the time you need to prepare that, the time you need to gather them around, that means lost efficiency onsite. (Me: yeah) So you can't do that all the time … The rest of it- it normally it comes on the managers… to make it work with the resources and the time available.

> Me: So then when they show this video you would then tell the Romanian guys what has been said?
>
> Marius: What has been said over there, and the Bulgarian interpreter would be saying to the Bulgarian lads what has been said over there. Everybody will try and make sure that the target audience got the message as much as possible

This is yet another example of an interview extract that demonstrates that the issue of communication between speakers of different languages causes concerning stress for those involved, this will negatively impact on their ability to work as a team. As discussed, Safety Manager Jen highlights that although she had some innovative ideas for using augmented reality technology for safety videos that would convey information without much need for language, she works for a small company that does not have the budget for this. This is a barrier to technological solutions that must be considered and is unfortunate in light of the positive findings by Sacks et al. (2013) regarding the effectiveness of AR in construction safety training.

In summary, a variety of technological communication aides are used by/with informal interpreters. These include radios, phones for photos and translation apps, and videos.

9.6 Translation

Another practice used to overcome language obstacles is translating documents. This practice too ranges greatly in formality. Some companies have full time in-house linguists to translate everything, others outsource to language companies for specific texts, others use someone onsite or their contacts to translate documents, and others still barely translate documents at all. For example, Ali and Greg were both employed as in-house linguists in construction companies, and they split their time between translating documents and interpreting. Meanwhile, on a site where Romanians were the majority, the wife of one of the workers translated the methods statements, according to PM Jack. The manager on this site stated that sourcing translations changed the perspective of the client and shows that the managers care. Often the translation of documents is not something that is planned in advance but rather dealt with as the problem arises. For example, Paul describes how a storyboard is ‘like a

Bible in this job', and as the wife of one of the supervisors was an English teacher she translated the storyboard into Romanian, this example demonstrates the resourcefulness of the team, yet also the unplanned nature of developing language initiatives from within the project. After that they started to also get translations for Bulgarian and Polish. On other sites the informal interpreters' work may include doing a written translation, but often a sight translation is done instead. Sometimes the paperwork is already translated, and they do not have to deal with the translation of written documents at all, this is especially the case in Miami, according to Elena, who says that all documentation comes in Spanish. On one large project a manager, Toby, describes having information available in several languages:

> now we're moving to a sort of technology age those signs are becoming digitized, … got a screen and safety messages are relevant to the day and the time that people are working, but then you can also have different languages sort of stream onto those digital boards. So yeah, they interchange between languages as well.

He states that the translation is done by built-in translation software. Technological solutions such as this might not currently be accessible to smaller companies but will likely be widespread soon, it is important that the quality of the machine translation is assessed and also to consider where this type of communication is useful and where it's limits are, where a person would still be needed. In this instance when the manager was asked for a more specific example, about how inductions work, he answered:

> Toby: Um yeah so, the induction we've got at the moment I don't think that's given in multiple languages, but I- I think there's umm there's part of the induction which is done via a video. So, you watch a video on an iPad. (Me: mmhhmm) and I think on that video you can select the language you want to hear it in.

On the one hand this shows the widespread and accessible use of these multilingual videos, but it also shows that the language barriers in induction have not been fully overcome, even on this site with more resources, as there will always be site/time/task specific information that is not included in the standard videos. From the data in this study, it seems likely that the most common solution to dealing with written documents used on construction sites is for an informal interpreter to do a spoken summary in the required language.

Understanding which translation solutions are usually used when helps to define the gap in communication that is filled by an informal interpreter.

On the same site the principal contractor had most of the signs translated into Romanian and Turkish, the signs are made onsite, so the translation is done by a worker. In contrast to these multiple instances of translations, shown below, the public-facing noticeboard (not shown here for anonymity) was only in English.

Image 9 showing a sign displayed onsite in three languages with pictograms that may help other language speakers to understand the instruction.

Image 10 shows a sign in English with a Romanian translated version below. Again, the text is accompanied by image that should be clear to all, this was during the pandemic when similar signage was used throughout the city.

Image 11 shows translated posters in the canteen. Top left is in Turkish, top right in Irish Gaelic, and the bottom poster is in Cockney. This approach is lighthearted, created by the image and the choice of words. According to Ulubeyli et al. (2015, p.467), the use of visual humour can be 'stunning, striking and memorable' and 'has the potential to create a productive learning environment and keep people thinking', likely the intention here.

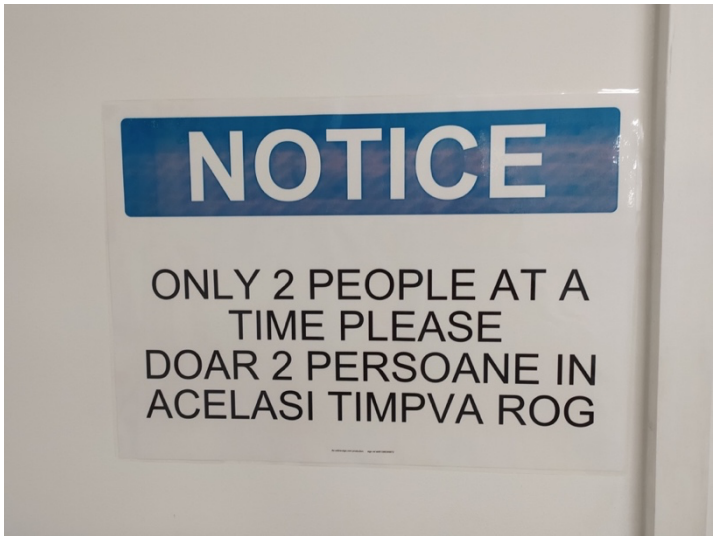


Image 12 is an example of a translated poster, in English and Romanian, that does not have visuals, the message would be difficult to understand with a pictogram.

Image 13 shows a sign in English and Romanian that was displayed at the site entrance. It informs readers that graffiti is a red card offence, a card system like in football is used for clarity.

Image 14 shows a translated sign on a bin telling workers the type of waste that can be disposed of there. The supervisor commented that the worker already knew which rubbish goes there but if it is written and translated then they didn't have an excuse for not complying with the instructions. They suggested that having translations is not only about actually conveying information but about 'covering our backs'.

9.7 Beyond language

Beyond spoken or written language and the other communicative modes discussed so far, the interpreters also use other interpersonal skills in their work facilitating communication. Both interpreters and construction workers emphasize the importance of interpersonal skills for communication. For example, Ali, a professional interpreter, says:

> The job onsite can be challenging sometimes, so you have to have the right mentality … you have to be ready for some challenges so everything depends- is here ((taps head)) so you have to say to yourself that you will be successful, that you will overcome the challenges. Because there might be many things going on around, different construction noises... it's being able to communicate, it's about being polite, it's about being diplomatic, so you'll have to have those skills.

In Ali's opinion, self-confidence, politeness and diplomacy are useful for an interpreter. As discussed in the previous chapter, João particularly emphasizes other communication skills that come into play beyond language. He gives an offsite example of breaking up an argument then says:

> Many situations like this happen in industry also because you're also with more - I don't know, in my case it was many people were not from there, so they were thinking about their family, thinking about their life, problems, their family problems and they're just to take the money. Cos if something happens outside of their comfort zone it's err it's like a trigger they're very - how can I say - they're very picky to make big confusions. It's good to have that skill of communication and the skill of knowing the language, two different things.
>
> Me: So, on the site, it was, in some situations, it was more than just translating, you had to kind of mediate some difficulties and things as well?
>
> João: Lots of times. Lots of times.

Further, several times in the interview he notes that he was the youngest onsite and that giving orders to the older more experienced workers created a difficult dynamic, a difficulty

Amal also faced in her interpreting work. One time they would not follow his instructions to work with him, so he started working alone. By taking that attitude, rather than confronting them, they joined in as a team, followed his instructions, and started teaching him. He describes the need for interpersonal skills as well as language to help foster co-operation. Magda also asserts that her attitude towards others was key for creating effective communication:

> And it was also good to talk to the workers you know... sometimes I'd just take walks and try to meet them, talk to them ... Cos you see all types of behaviour on the project, 'oh I'm project secretary, I'm this, I'm that,' I said no. You know, I'm an artist, I'm here- this is a job it's not a career. (Me: ok) I had to earn. So, I really enjoyed talking to them. (Me: mmhmm that's very cool) I really did. Many many lessons, many many different perspectives.

For Magda working in construction was a means to an end rather than a career, which she believes allowed her to not get involved in the politics of hierarchies and helped to forge open communication channels with workers. Magda considers that by understanding the people she was interpreting for she could facilitate their communication better. She says:

> So, you have also to make sure what you're communicating is something they can understand. In their level of understanding (Me: yeah) I'm not diminishing anything but what I'm saying is communication is the key. (Me: yeah, and it's different for different people who-) It's not about difficult words or about how well you are speaking the language -no. It's communication in translation.

Magda talks about communication in similar ways to João, underlining that communication is more important than language; when she describes helping in the emergency she says ‘why I’m telling you this story? Because it was an emergency and I didn’t have time, there was no translation’. Communication in an emergency is different, and needs different skills, which is why David’s initiative to work on emergency communication is promising.

Similar to the discussion with Magda above about adapting to who you are speaking to, Zane says:

> my fellow countrymen, Tanzanians you know, some of the vocabulary- some of the- the- the specialised language that, you know, is used in construction they may not be familiar with it. And you know some of them are just casual labourers (Me: yep) Or they're not highly educated, so I have to make sure that I- I speak in the simplest way possible for them to understand. And to act accordingly.

For Zane interpersonal skills are the key to successful interpretation: 'the most important thing to me is being patient (Me: mmhhmm.) Being patient with the person that I would be interpreting from and being patient with the person that I would be interpreting to.' For Anna, a professional interpreter, the skill of controlling your emotions is important for onsite interpretation:

> Some of those people may not be experienced with working with an interpreter, so there were instances when errm an engineer would be frustrated with the process, or with the company they were working for, but because errmm I was the first person they would be uhh you know giving all this information to they would kind of reflect that frustration on me. (Me: mm) and I think it's very important to just maintain the maximum levels of err zen ((both laughing)) you know, just not take anything personal (Me: yep) and it -it definitely takes some emotional monitoring.

The degree varies, but almost all of the interpreters agree that their work involves more than transferring the words from one language to another. It is possible that the need for mediation is diminishing over time; one interpreter, Ulla, explains that part of her work involved bridging the different business cultures of the countries involved in the communication, but more and more a global business culture is emerging:

> Ulla: I think the role possibly was then maybe more than now …body language…the communication culture is very different... Interpreters may have a role which goes beyond the language side to the culture…ease them off…role transmitting the message which is culture based.
>
> Me: Yes of course yeh.

Ulla: Body language based you know. … Finnish managers … their observation from the English side was 'they just don't say much do they?' Cos in English communication culture, even today, you can come and interfere, when somebody is speaking, it's ok, it's not impolite, you can show up and join in in negotiations. But in Finnish the culture is another person speaking you let them finish what they're saying. So of course, they don't get the chance to talk a lot, or they don't take that opportunity. …eye contact and so on, I think interpreters possibly have a role in that to ease the atmosphere.

This is just one example with one culture of how communicative situations can be hindered by misunderstandings that run deeper than the language. Likewise, interpreter Olga explains how it is important to get involved, to an extent. Her experience suggests that the perception that interpreting does not or should not involve more than translation means that it is an undervalued profession:

Me: … did you find that your work was mainly purely interpreting, or did it turn into a role that went beyond interpreting?

Olga: … I don't know, I don't think there is such a thing as purely interpreting.

Me: Hmm true yeah.

Olga: … it's such an undervalued job to be honest (Me: sure). That's why I had to change career because in London nobody cares, nobody needs an interpreter right, people speak languages, they somehow get by… as an interpreter you get involved… and um I think it's important, actually, to get involved (Me: yeah). Not involved in terms of- you should be neutral in terms of transferring of meaning, but you should be involved in terms of producing the result I think (Me: mmhhmm). And if that takes actually showing what you understand is correct. For example, on the site sometimes it does happen when you can't explain or something doesn't work and you have to actually show and kind of do it physically, and um you have to do it, you can't stand by and say 'oh sorry I'm an interpreter I cannot do it', you know, it doesn't work like that (me: yeah). And I think people appreciate it more, because at the end of the day my job is successful as an interpreter if the outcome of that meeting, or conversation

> is successful (Me: sure). So, both parties are satisfied and understood what they need to do or what they need to communicate.

She argues that sometimes doing more than interpreting words is within the job remit, although she was hired as an interpreter and a consultant. She also may use her body and objects to aid the interpretation. For Olga, her investment in bilingual skills was worthwhile as she has secured jobs through them and settled in her L2 country, but her interpretation skills were not valued as she expected. She continues:

> Olga: And of course, there is a level, I mean in terms of boundaries my rule was always I would agree in advance kind of what people expect of me …I would say … if this happens what do we do, do I have to show by hand or I don't know is it purely verbal…just so people understand what to expect, but also what I can expect

It is a sign of this interpreter's professionalism that she agrees the boundaries of her responsibility before working (CIOL, 2017). Such discussions themselves can improve understandings and trust. This interpreter is motivated to succeed in her interpreting and has clear aims, which will not be the case if the interpreter is informal because the interpretation is only a part of their workload, and their skills are not recognised or rewarded.

Sara brought up the topic of work boundaries without being prompted, saying that they were a principle that her team always kept. She describes times when one interlocutor would ask her for information about the other such as 'what's the message behind what he's asking me?' and she would tell them that she did not know, that she was just the interpreter. Likewise, Magda is not a professional interpreter, but she has a 'code' of not being involved. She discusses how it is difficult to be 'exempt' when interpreting, but that 'you cannot be the one judging or you know twisting the words or the meaning or whatever. Because you are translating.', as discussed in the literature on professional interpreters (section 4.2), impartiality is important (CIOL, 2017).

Mediation work is present in the narratives of construction workers and professional interpreters, supporting the argument of Wadensjo (1998) that the contrasting models of interpreting are partially an academic construct. For example, Greek informal interpreter and PM Demitri responded:

> Me: And from your experience do you think that this type of interpreting for the colleagues it is mainly that, you are interpreting directly, or it becomes more of a role of co-ordination or mediating between people?
>
> Demitri: … yes you mediate, oh of course.

The professional interpreters largely agree on what interpretation involves, as can be seen in the following four examples. Karl says that he does not do much more than interpreting, but that 'interpreting involves a bit of mediation anyway because of cultural differences, kind of, but that's always the case' Meanwhile, Ahmet is an in-house linguist in a civil engineering company, he explains:

> I always go beyond because interpretation, from my point of view, ultimately entails localisation as well. Which is basically when -let's say someone from the UK comes to Turkey, to give a training about some construction applications ok, if I just translate, just interpret (Me: mmhhmm) it may get lost in translation, so I have to localise some aspects, some words, some terms, and re-explain what has been said, in Turkish. Not just translate it as it is. But re- re-explain, re-define. In essence I become a second tutor in some circumstances…let's say the speaker is giving an example of, a very local example, related to the UK, a practice in the UK, which wouldn't necessarily make sense in Turkey (Me: mm). So, when he gives an example, I have to relate it to Turkey and find a suitable Turkish counterpart example, counterpart scenario. That's what I mean by localisation.

Localisation is a communicative strategy that is more likely to be used by professional interpreters as they are more likely to be bi-cultural and perhaps more aware of the need to localise and able to do it. Bilingual workers who are also bicultural are likely to be those whose identity has changed with the process of language learning and because of having been immersed in another culture. Magda describes working similarly, stating 'a cultural adaptation is the key'.

In Greg's experience too interpreting assignments often entail other work:

this particular role I tried to just limit it to being you know the language support; I was happy with that. But in previous roles the role has grown to be mediator, coordinator, liaison … I've done a lot of those kind of roles, but on this last one I just tried to limit it to languages support because you can be distracted (Me: ok) And you know, before you know it the liaison is 80% of the job and you don't have time to do the translation so...

Me: Mmhmmm and I'm just wondering because of course Japanese and British culture I imagine are really quite different, did you find you ever needed to explain any of those differences or?

Greg: Oh, often yeah. I mean that's what I do now, I have a background, actually, in cultural anthropology and cross-cultural communication, which I studied in Japan, at the university. So I've always been able to put that to really good use, and I mean I've always run training sessions for local staff working with Japanese…Sometimes you have to explain to the local staff taking part in the meetings to look out for sort of body language, non-verbal cues, from the Japanese as to when they're ready to speak, and more often than not I'll actually step in and stop the local side in their stride cos I know the Japanese side are now ready to answer … politely, diplomatically, tactfully of course and say to the UK side guys 'Mr Sayto I think he wants to say something now' then you know I'll revert it.

The level of expertise required for the interpretation and consultation work that Greg describes is of course developed over time and with study. When the interpreter interjected in English to speak as the interpreter rather than interpreting dialogue, he then repeated what he said in Japanese so that all participants in the communication could understand, this is important for maintaining trust. Professional interpreters should have an advanced bi-cultural awareness and know how to handle the situations with discretion.

In contrast to the above examples, professional interpreter Amir says: 'we didn't involve any cultural issue because we were in a site of construction, so it was not- we didn't have this option of like explaining the culture or have to deal with the issue of the culture. It was only the practical side of the language.' As this participant suggests, culture-based interpreter

interventions are more likely to arise in business negotiations than in practical work. Nonetheless, he continues:

> Amir: ... for example if we have a need to understanding between two people, explain why he thought this way and why he had this opinion, so we have to explain sometimes why did he get angry, for example, or why did he laugh, because um ((laughs)) sometimes it's err - did you ask about this, did you mean this?
>
> Me: Yeah, yeah exactly.
>
> Amir: Yeah, we had it for - but it's not a big deal, or we didn't have it often, it's a few times. (Me: mm interesting so because you had -) but yes, we- we may have to explain what's the situation when for example someone is getting angry, what- what are you saying, no he doesn't mean this, he means that that. So, we have to- to just explain the two points of view.

He describes mediating tensions as being part of his work sometimes, because he is the only person who understands all interlocutors.

It is notable that all of these participants have different language combinations, pointing to the universality of the practices. Semi-professional Chinese<> English interpreter Lanfen describes similar experiences onsite; she thinks that one of the interpreter's functions is to co-ordinate because 'culture clashes' and 'different personalities' can hinder the work progress. She continues:

> As the interpreter we are working in between and because we speak the language, and we know what they want and we understand what the other side wants, … the communication is just small part when you work on job site, but most part is to co-ordinate… to make them to co-operate with each other and push the work go forward … we didn't realise that we need to do this part of the job (Me: ok). But once you get into the job site you found, oh if you stick on you as a linguistic, you just translate what one party says to another party, it doesn't- it couldn't work very well, cos most of the time you have to help them to understand. Help them to negotiate each side's

> meaning and help them to work together. So yeah, it is very interesting but at the same time it's very challenging.

She was not trained as an interpreter and did not know all of the cultures involved. However, as the person who understood both languages, she had more insight into the nuances of messages and the interlocutors' personalities.

Amal was interpreting English and French for an American company in Algeria for nine months. She describes multi-tasking, starting with translating specifications. In Amal's experience interpreting in construction, the need to overcome obstacles to understanding and co-operating caused by cultural differences stemmed from reactions towards her, not the other interlocutors:

> I was doing kind of um let's say … a cultural adaptation you know? Like I had- because I know the Algerian mindset. And it happened to me to avoid many misunderstandings; like in other words it goes beyond interpreting. … At the very first time I wasn't really or easily accepted, young- I didn't look like that ((laughs)), much younger, I don't know, like a woman, you know, a young woman, not a man, in an Arab Muslim community, coming from the US. I was branded… they were resisting- they were resisting, many of them, because I was the only female. So, can you imagine, a female in a barrack of military people, trying to help them understand something? And I was the youngest one, among all those people, particularly in the higher Arabs. Ok so how come this young lady coming here to help us understand stuff, we are engineers, we know what to... And they are like laughing. Like 'we don't care, she's a lady, she's - no we don't need her, we don't need you', … over and over and I kept on doing my job. I never stopped. And I kept on being polite, and I kept on- it's not that they did not humiliate me, but I understood them. … people were trying to um- this is again the culture ok, the local culture, people were trying to um to provoke me and to see how I would react. And I have always been reacting very friendly, always smiling, very polite, and period. So, I gained their respect you know. They ended being or feeling sometimes very embarrassed.

The participant produced the above extract naturally, she was not asked about mediation work. Amal's narrative resounds with João's, where they were resilient and used their

interpersonal skills to deal with the prejudices towards them from the interlocutors they were interpreting for. The interpreter might experience a tension because an interlocutor questions their authority; for example, when the interpreter is younger than the interlocutor, or like in Amal's case when people struggle to accept the help of an interpreter who is not a professional in the construction field and is female. João described dealing with racism by keeping calm, not engaging with it and focusing on his work, given that racism has been discussed in previous publications about migrants in the CI (Dunn et al., 2011) then it is probable that other informal interpreters also have to deal with this.

When asked whether he had to mediate differences between Chinese and Tanzanians on the projects professional interpreter Zane answered:

> I do mediate the situation, I do explain some stuff to - especially to my fellow countrymen...When it comes to some other aspects of culture, you know, I usually avoid my best to avoid it to get personal. ... we're supposed to make sure that we respect each other, that we cooperate to get things done. So that's what I say to my people, that ok ‘make sure you do your job the way that you're supposed to do it’... ‘Make sure that you respect any other person because he or she is a human being’ ...

Zane considers cultural mediation as necessary onsite to avoid conflicts, despite not sharing the language or the culture with the Chinese interlocutors.

When considering the scope of an informal interpreter's work, participants mentioned several times that parts of the work were not 'official'. For example, in the above example of Magda procuring girls (p.112), she comments: ‘Yes this is the nitty gritty of stuff right, this is not- this is not even official.' For her, as project secretary, some of the language work was official but aspects such as this were not. Interpreter Fernando describes how he was entrusted to do and manage the interpretation work himself but had to run it by the management when they were official papers. Professional interpreters Ali and Ulla also mention a division between what is official communication and not.

This section has identified personal qualities that interpreters use in their work and shown that many professional and informal interpreters’ work goes beyond the transfer of words and includes mediation. This is something that those using their services should be aware of.

9.8 The work of professional interpreters in construction

Among the professional interpreters there was also a lot of variation concerning the scope of work of an interpreter in the construction field. For example, English professional interpreter Greg's work included translating, subtitling and consulting as well as interpreting, and Amal claims: 'they accepted it that I would not only be their interpreter, but their partner. …an agreement, I was their representative in Algeria, I was more than an interpreter for them.' Similarly, Michail referred to himself as a 'company representative' for a British company building an international trade and business complex in Uzbekistan, which contrasts with the idea of the 'invisible' interpreter. Meanwhile, German professional interpreter Karl would only step out of interpreting when there was an issue with the communication that he needed to clarify. In other contexts, a professional interpreter might strictly only do interpretation, perhaps in line with a code of conduct and the expectations of the person hiring them. However, it seems that the dynamic and informal nature of construction is more conducive to a more flexible interpreter position. This applies to professionals as well as informal interpreters. For example, Anna, a professional interpreter, explains her motivations for going beyond interpreting when onsite:

> I found it to be a lot more helpful instead of trying to errm create an interpretation process as we know it, you know when one party would say something I would lay it over to the other one and we would go back and forth. Instead, I would speak to one of the sides, in terms of what was an idea they wanted to introduce or what was the issue they were experiencing and try to really talk to them about it, ask all the questions, make sure I'm understanding what their message is and then explain the situation to the other party. I found that to be a much more effective way of interpretation... felt important for me to make them feel comfortable with my presence around, to make them feel comfortable to go to me when they need to ask a question, and when they need to let the other party know something.

From her account we can see that professional interpreters in this industry in fact adjust their working practices to the environment and go beyond just interpreting the words and try to get more involved, to understand better and build trust.

Professional interpreter Sara brings up another aspect of interpreting that will be different: 'I translate for him in first person right, just the way he's spoken', which aims to keep the communication between the two interlocutors as natural as possible. This is one way of working that an informal interpreter will not do because it is not natural.

Sara explains that the type of introduction that interpreters would do in other fields was not wanted here, so she would just say her name. A professional interpreter usually introduces him/herself saying their name and function, for example that they will interpret all that is said by both parties, that they will be impartial, and that the information will be kept confidential. Nonetheless, she stuck to the rest of the principles of interpreting, such as impartiality, confidentiality and accuracy. She underlines the importance of treating the interlocutors with respect and having a cultural awareness to be able to facilitate communication across two different cultures.

When comparing professional and informal interpreters it is interesting to note that a couple of the professional interpreters depict a tension between what they are taught and the reality of their work. As highlighted by Ali: ‘being a professional interpreter … learn certain rules while still studying, so you try to act like, as I said, a shadow, you try to wear simple things, try to be modest’.

The professional interpreter usually aims to be inconspicuous to allow the interlocutors to interact as naturally as possible. Ali continues, demonstrating a tension within this:

> sometimes you have to do certain things that you're not supposed to do. So when you get to understand what you're translating you start acting like you're a specialist, you start explaining this… if you as a translator or as an interpreter understand what your supervisor is trying to say or convey then he or she may ask you to step in and explain in other words or be more creative…So as a translator or as an interpreter we have some work ethics that we have to comply with. And at university you are usually taught not to infringe those rules, so you try to act like a shadow, but sometimes you have to take a more active role (Me: yep) depending on what is needed.

Zane also illustrates the need to sometimes go beyond interpreting, in spite of this being outside of the remit of their job: ‘I know for sure that interpreting, you know, you have to say

exactly what the other person said, but then sometimes it's tough (Me: yeah) for the- yeah so you have to add a little bit of an explanation for them to understand.' He later claims that: 'it is my task then to digest that and simplify the message for them to understand'. Zane says that he uses consecutive and simultaneous interpretation modes on construction jobs, in contrast to the informal interpreters:

> Me: Ok so (P: yeah) so when you were onsite what type of material would require a simultaneous interpretation?
>
> Zane: ... giving instructions to workers (Me: ok) so the supervisor or the engineer would be saying ok this and this and this and this. And I have to make sure that I interpret whatever the person says to the local workers. For them to understand and to act accordingly. (Me: ok) And also when it comes to like umm err during a meeting for example.

The ability of professional interpreters to use other interpreting modes, such as simultaneous and sight translation, when necessary, is an important difference. For example, while Ulla, a semi-professional Finnish interpreter usually did consecutive interpreting she sometimes did whispered simultaneous if it was for just one or two other language speakers, or Sara did sight translations onsite. When we consider how this situation would be different with an untrained interpreter it is probable that the information is summarised, and therefore a lot of it lost in translation.

A few of the professional interpreters, including Ahmet, Farah and Ulla, mentioned that although they had experience in related areas such as on civil engineering projects, in training etc. they had not had requests to do interpreting work from construction companies, and did not know colleagues that had either. Nonetheless, they, and many other professional linguists on the network, did do a lot of translation work in the field, showing that it is considered that in those cases they cannot get by with bilingual workers the way they do with spoken communication.

From the examples of professional interpreting in construction, both Ahmet's account and Karl's are like the scenarios O'Byrne (2010) describes, interpretation in a classroom environment with a presentation. Consequently, they are not instances of onsite

communication, the focus of this study, but they are occasions within the industry where this language work is needed. Karl differentiates translation and interpretation more than others, as he works solely as a professional interpreter. Although he does not work in written translation, he explains that on construction training jobs the written material is already translated by another translator before the session, 'but sometimes I kind of have to help cos sometimes the actual translation isn't really that great, so I kind of have to say respectfully 'that should actually be this' so it's easier to understand.' His account shows that the translations were not well done, but we do not know who translated them. In his experience as a professional, for visual materials the presenter explains it and then the explanation is interpreted, rather than the interpreter summarising and therefore choosing what is important:

> Me: Ok and the material that you were interpreting was that all spoken, or did they have videos that they had to show and things as well?
>
> Karl: I mean the guy presenting was speaking … typical PowerPoint. (Me: ok) and there might have been the odd visual materials, certainly yes. But visual is often a problem because it can't really be interpreted. So, then they will play the video and the presenter will kind of explain what was in the video, and then that explanation is interpreted.

Here Greg explains how the interlocutors can facilitate- or impede- a good interpretation:

> Me: Ok. And how did you find the attitude towards you, I mean were they people that were used to working with an interpreter, that allowed you the time to properly interpret and to prepare and everything, or was it difficult?
>
> Greg: … the ones that are experienced tend to know when to stop speaking, they'll give you short chunks of information, and then sort of, you know, know when to hand over to the interpreter. And the ones that don't do that they just keep talking, and talking, and talking. And probably in my experience of working on that construction project, most people were inexperienced, I would say, with dealing with interpreters yeah. They didn't know when to stop ((both laugh)) and apart from that some of the language they use it's - I mean you know it's hard for even native speakers to understand sometimes some of the, you know, the jargon or the- the business speak …

> Me: Yeah, so in terms of the people keeping talking when you needed to break it up into chunks, did you just deal with it moment by moment, or did you try and kind of brief them on how to help you manage it?
>
> Greg: I would always brief them beforehand… I'll ask the client how they want to proceed and if, you know, if possible, I will say to them look please break at every couple of sentences or something, just look at me and then I'll take over …

He suggests that if the people in construction needing interpretation were aware of the process of interpreting, they could facilitate it by speaking in smaller fragments and using simpler language. He would encourage this by briefing beforehand, something that will not happen if there is not officially an interpreter, but that would be simple to facilitate. Ulla also describes a need to educate the clients on how to work well together, by allowing time for the interpretation and providing details about the project in advance so that the interpreter can prepare the terminology. However, Ali suggests that, in his experience, the preparedness of clients to work with interpreters is improving. Ulla also explains that it is much easier to work if the client is prepared to work with an interpreter:

> …I had different experiences, some people were not used to an interpreter, and of course it was a very frustrating experience for all sides. And then of course you meet people who are experienced working with an interpreter…more patient and comfortable…

Anna also finds that often it is necessary to discuss the interpretation process with the client, including explaining that she needs them to pause after every few sentences to interpret. She adds:

> a lot of engineers and technicians and site workers they don't have much experience working with an interpreter (Me: yep), so they don't know a lot of nuances in terms of when to pause or how to structure this process and so on.

Furthermore, all of the professional interpreters concur that they tried to receive materials related to the interpreting assignment beforehand to prepare glossaries with specific terms.

Karl argued that that should be the standard. Ulla explains the importance of preparation for an interpreter:

> As an interpreter you have to actually have a certain working vocabulary and understanding of the subject, otherwise there may be basically more factor for error … I would always prepare … construction industry itself yes has a lot of elements, you know how you have to learn kind of civil construction, like for example concrete, or brick laying, or certain welding works, or certain scaffolding, things like that. But- and that's not too difficult, however when you go to electrical work, instrumentation, control systems etc. that may get more complicated because it's technically more difficult and you have to basically prepare for it more (Me: mmhhmm) I would say. And of course, then there is an operational and management kind of talk which is also- you know it depends, it can be sensitive, it can be something you have to convey culturally let's say, it could be a conflictive situation which you have to navigate a little bit, so certain- having of course certain emotional sensitivity to a subject is also important as an interpreter I would say

Ulla demonstrates how interpreters need to be able to move between different settings in construction specialities as well as between the different languages used by management and workers. She also highlights the challenge of the human element of the profession. Farah also notes that professional interpreters prepare. She was given a booklet in English about the construction H&S test, read it and looked in a dictionary for anything that was new. In contrast, Sara says that they were never given glossaries, she says 'it's the way they think right, you're an interpreter, so you're supposed to know everything. ...it's not the case.' Sara's interpretation work was onsite, whereas in the context Farah worked in, a test centre, the content to be interpreted is standardized and there aren't so many unforeseen circumstances.

Another interesting finding about interpretation on construction projects is that Amal explained to her company that they should be switching interpreter every 30 minutes to avoid fatigue and errors, so they hired another interpreter, which is standard practice in professional business interpreting. She created glossaries that were then sold to the client, an investment, as they would be needed in the future when the equipment was still used but the interpreters had left.

Another way of working is described by Sara, who explained that sometimes local Peruvian workers who wanted to try speaking in English did so but with the interpreter there to help with difficult phrases. This is interesting as it encourages language improvement and communication directly between workers but with an interpreter on hand. Similarly, Magda as a project secretary had a standby interpreting position, as many on the construction site could speak English to some extent so she would just step in where they couldn't understand.

This chapter has discussed a number of aspects of professional interpreters' work. While interpretation skills themselves can only be gained through training and practice, some of the ways of working could be adopted in the CI were the language function formalised. For example, glossaries could be created and shared, interlocutors briefed, and work boundaries agreed.

10 Conclusions

This final chapter will summarise the research and its findings (10.1), discussing the extent to which the research questions have been answered. The implications of these findings for theory (10.2.1) and practice (10.2.2) will then be outlined. Finally, the chapter will conclude with a discussion of the limitations of this research and some recommendations for how these could be addressed in further research (10.3).

10.1 Summary of findings

This thesis has explored the communication work of bilingual migrant workers who facilitate communication between speakers of different languages on construction sites around the world, referred to in this thesis as informal interpreters. The data collected was in the form of interviews with participants from various countries, and observational notes and material data from UK construction sites. This data has been analysed through the lens of an identity and language approach and translanguaging. All of the data has been subject to thematic analysis. A subset of the interview transcripts have also been analysed using narrative inquiry to exhibit and examine the stories of these participants. The findings contribute to answering the two broad questions set out at the beginning of this thesis: (1) who are the informal interpreters and why do they perform this task? And (2) what language work do informal interpreters do and how? Multiple findings about the context in which the language work happens have also been presented.

Before discussing the findings that directly answer the research questions, the descriptive and contextualising findings are presented here. These findings make the current research comprehensible and will also be useful for future related research. They also highlight how wider issues that the CI face and that are addressed in the CM literature are also relevant to the work of the informal interpreter. These issues are trust, collaboration and responsibility.

The international scope of the research made it possible to confirm that the informal interpreter position exists internationally, and that communication is achieved in largely the same ways. First of all, in line with previous research (Dainty et al., 2007, Loosemore and Lee, 2002, Wasilkiewicz et al., 2018) it was found that work teams are often segregated by language. This means that often English (or the official language) is not needed by the

workers on a regular basis. Sometimes segregation might be a deliberate strategy to manage communication, or sometimes it is a coincidence caused by the labour available and informal recruitment meaning that often workers from one country work in one trade. Relatedly, while the focus of this thesis has been on migrant workers, sometimes it is the local language speakers that are unable to understand interactions because the other language becomes the majority one in their team. It is important that management consider who may be linguistically isolated onsite and whether there are strategies in place to alleviate this.

In terms of the work environment, it was found that there is considerable concern about communication. It was also found that struggles with interlingual communication cause frustration, as Loosemore and Lee (2002) and Santoso (2009) report. Furthermore, several participants reported feelings of mistrust and fear that stemmed from language barriers. It is possible that by implementing some of the positive practices, summarised below, these negative feelings about multilingual communication are alleviated and the work environment improves. Further, this research has found that concern about miscommunication onsite is founded; in an example of an accident caused by misinterpretation, and by an interpreter reporting hearing an informal interpreter misinterpret. From discussion about the accident came another novel finding, that such situations can mean that a worker loses their language ability when in shock. It is therefore vital not to rely solely on one bilingual worker for interpretation. If this situation is unavoidable, contractors could enlist telephone interpretation services on a needs basis.

Despite this environment of concern and tension, it was found that most of the participants had an attitude of accepting that these challenges are simply the way things are, which played out for example in a perfunctory attitude to transmitting information in the induction, which was sometimes seen as a tick-box exercise. This supports the findings of Loosemore and Lee (2002) that management of language barriers is reactive, and of Phua et al. (2010) that the problems associated with cultural diversity are ‘accepted as an inevitable part of daily life on sites’ (p.418). Some of the suggestions for practice below should help to increase trust in the interpreter, by checking their language skills and assuring that they consider facilitating communication to be part of their job.

There are a couple of ways in which the communication needs on a project are managed. As found in previous research (Dainty et al., 2007), companies often have a ratio of local

language speakers to those that cannot speak this language. Additionally, while it was found that some companies required workers to speak a certain level of the local language for them to be able to work onsite, as Bust et al. (2008, p.592) report, others did not, they stated that this was unrealistic given the reliance on migrant labour. Consequently, the plan for management of communication needs to take into account whether this minimum language level requirement exists or not and what the speaker ratio is, as when a large proportion of the workers are bilingual there are less communication challenges to be dealt with. Beyond these aspects language difficulties were generally found to be dealt with in an ad hoc way, meaning there is room for improving the management of communication onsite and a need to discuss and recognise the language challenges.

One of the clearest signs that language requirements are not often planned for is that frequently management were unaware of what language speakers they had onsite, as found by Dainty et al. (2007). It is likely they therefore underestimate the difficulty of language work and how much of the bilingual workers' time this language work takes up. As an effect of the mismanagement of communication onsite, it was found that beyond the time needed to translate content, time was lost by work needing to be checked and re-worked more often because the information was not always relayed clearly into the required language, as found by Loosemore and Lee (2002, p.521) and Santoso (2009). This research found that where language learning did occur it was through the individual worker's own initiative, rather than from the company. This is an area for improvement, as learning the common language(s) used onsite should be incentivized, perhaps through classes and financially rewarding language work.

Another contextual finding is that it seems that workers contracted through agencies are likely to have less language skills because workers who speak the local language find it easier to become directly employed (as found by Kraft, 2019 in Norway). Knowing this means that arrangements for communication can be taken into account when hiring for a project, specifically that the bilingual sent with a gang to interpret may be less fluent than other bilinguals already on the project.

When planning for language requirements on a construction project the trade or profession of the workers needs to be taken into consideration. Some trades require less language use

because the information is largely in drawings, and some workers will necessarily already have developed some local language skills to be certified for the job.

Another factor to consider, which arises from this research, is that as it is often the younger workers who have the language skills, maybe because they now learn English in school in their home country and because when they arrive, they are more likely to invest in the skill for their future. Therefore, if languages are related to promotion, it is often going to be younger workers in supervisory positions. This implies that the older and most experienced workers are not in these positions, or their skills are not recognised, possibly compounding the skills crisis. If communication were better managed, with a language worker position independent of the supervisor position, this scenario could be avoided.

This research has briefly reported on how communication management and needs vary between different construction sectors, for example with gas, oil and nuclear projects hiring professional linguists. It was also found that informal interpreting probably still happens on these sites but less frequently and for the more informal communications. Understanding the differences between professional and informal language work makes it possible to consider other potential ways of managing interlingual communication on construction sites, even if they are not professional interpreters that are hired. For instance, the informal interpreters could be briefed beforehand, and glossaries of terms developed. This would likely improve the quality of the interpretations. A finding from the interviews with professional interpreters is that they agree the boundaries of their work and type of interpretation required before the job. This is a practice that can be learnt from as it would clarify the process for all parties and avoid possible misunderstandings, as it was found that different interlocutors had different expectations of informal interpreters. Several interpreter participants highlighted that their job is easier if the client is prepared for how best to work with an interpreter. Another aspect of the way of working of professional interpreters that could be learnt from is receiving information and materials about the job beforehand, if the interpretation work onsite were formalised then toolbox talks, induction presentations etc. could be shared with the bilingual worker beforehand, allowing them to prepare it, likely permitting a more complete interpretation of the contents.

As well as interpretation and translation a variety of other communication strategies that are used have been reported on. One method found for communicating with speakers of other

languages was to create subtitles for videos. While this is time-consuming and requires an investment, if it is a video that is to be used repeatedly it is worth considering, as the viewers will understand much more of the information than they could from either just visuals or summarisation from an informal interpreter. Informal interpreters also use other communicative strategies such as gestures (Tutt et al., 2012), drawing (Wasilkiewicz et al., 2016) and using phones for translation apps (Oswald et al., 2019) and sending photos in WhatsApp groups to pass messages on. Some of the other findings are unique project initiatives which are examples of best practice for dealing with communication difficulties onsite, these are covered in 10.2.2.

Regarding the work environment and team that an informal interpreter is helping, many migrant workers do acquire some knowledge of the local language, however, if they are at the stage that they understand the language but cannot produce it then management/supervisors might not take these skills into account. Yet for many workers they need to be able to understand the language, to receive instructions etc., but only need to produce it occasionally. If this capacity were checked as part of the induction process, with a few oral questions, language needs could be better planned for. This is related to the finding that often migrant workers feign understanding because of the stigma attached to not speaking the local language, causing difficulties for supervisors, safety managers etc. The issue of stigma is also something that can be improved through some of the initiatives discussed in the implications for practice section (10.2.2).

By interviewing people who have different personal profiles, locations, languages, and experience on different types of projects, it has been possible to learn who the informal interpreters are on the projects discussed and to draw some wider conclusions about factors that contribute to someone taking on the language work. Some of these factors are contextual or operational. For example, it was found that the linguistic make-up of the team affects how many informal interpreters are needed and to do what language work. If the group of people working together do not share a language, then sub informal interpreters will need to facilitate communication during work, whereas if all the team speak one language but this is different to the local language then only one interpreter will be needed, and this is often the supervisor, as found by Phua et al. (2010) and Wasilkiewicz et al. (2016). However, a novel finding is that many other people can also be ‘sub’ interpreters. People working as ASMs, contracts managers, office assistants, architects, labourers, PMs and project secretaries all

discussed sometimes communicating a message across languages themselves, some of them interpreting for other people or some of them by using their LX in the workplace or using non-verbal methods to communicate with someone they did not share a language with. These findings make it easier to plan ahead for linguistic needs.

In terms of interpretation and translation per se it was found that informal interpreters occasionally consecutively interpret or do written translations. In terms of written translation, it was found that some companies have full time in-house linguists to translate everything, others outsource to language companies for specific texts, others use someone onsite or their contacts to translate documents, and others still barely translate documents at all. This is the first time that a broader industry view of how written translation is dealt with has been achieved. Informal interpreters also give oral summaries of written documents, similar to the practice of sight translation but less accurate and complete. Planning and having documents translated in advance means all information will be translated, which is not likely to happen on the spot. Moreover, a database of translated documents could be referred back to in future and in the long run this effort pay off.

What is more, it was found that English sometimes has to be used as a lingua franca between informal interpreters, e.g., between a Bulgarian and a Romanian. To best understand these multilingual and multimodal practices the construction site has been described as a translanguaging space, drawing on the work of Wei (2011). As well as opening up the conceptualisation of communication itself, this theory helps to balance the focus of this thesis. While the work of informal interpreters' is incredibly important, firstly it is not clearly a position taken on by one person as it may be done by other sub interpreters too, and secondly it is important not to portray the migrant workers interpreted for as incapable of communicating themselves at all. While they might not have developed skills in the local language, they still communicate with each other, sometimes across languages, by translanguaging, using what linguistic resources they can.

The linguistic focus has drawn out a number of small findings that together show the work the informal interpreters do and how this can be better enabled. For instance, common elements of language that were difficult for informal interpreters to handle are accents, language variants, homographs, and acronyms. Raising awareness of these would facilitate the informal interpreters' work. For instance, interlocutors could consciously speak more

slowly and clearly, avoiding acronyms and very regional terms. Construction specific bilingual glossaries could be created and shared. Interlocutors should also bear in mind the negative impact of noise on the process of interpretation and choose an appropriate location when possible. The use of English as a lingua franca has been explored with participants, to conclude that this is often used to facilitate communication between workers who do not share another common language, but that this can cause difficulties for informal interpreters who may have to relay unclear messages.

In terms of who takes on the informal interpreter position and why, it was found that this may happen because this bilingual worker is best known by the manager (onsite conversation) or because they are the most willing (previous literature and Hannah), not necessarily because they have the most advanced linguistic skills. Sometimes the language skills of the worker may be found by chance (e.g., João and Fernando). However, when contracting workers from agencies the agency is often asked to send a bilingual worker with the team. In the scenario of having an English supervisor then they would have to make sure that the gang of workers from the labour agency come with someone able to translate. This scenario might add another layer to communication, and subsequently more chance for lost information. For instance, if the PM passes information to the supervisor, who only speaks English, instead of the information being transferred into the other language at this point, it is then passed on again to the member of the group who is able to interpret it to the rest. In such a situation it is easy to see why having the supervisor as interpreter is a more straightforward working method.

Meanwhile, many of the factors that contribute to someone becoming an informal interpreter are down to that individual. From the perspective of a migrant worker, language skills are sometimes a condition for them to be able to improve their opportunities and working conditions. Bilingual workers may take the initiative when they see that people cannot understand and interpret, and they then become the go-to person when an interpretation/translation is required, as in the cases of João and Fernando.

Of course, the linguistic repertoire of the individual determines whether they have knowledge of the languages required at that time. Who interprets should be considered carefully and the worker should be supported and incentivized to do the language work as well as possible. Another consideration highlighted by this research is that a bi/multilingual person is more likely to be able to learn, and come to facilitate, a language if it comes from the same

language family as the language(s) they already know. This knowledge may be useful if a company were to look to hire and train informal interpreters.

Beyond the named languages of the bilingual worker their interpersonal skills may also be important and may be used to mediate tensions and create good working relationships. While it had been reported from previous research that the language work sometimes goes beyond interpretation/translation and may include language classes and helping with 'questions and problems which migrant workers encounter with documents in their on-and-off site lives.'(Tutt et al., 2011 , p.18), the mediation aspect has not been explored in prior research. This has the potential to affect relations between workers and perhaps the safety culture and productivity in the workplace. Therefore, formalising and maximising the potential of these workers should be considered, and this aspect of the work taken into account when choosing who is an appropriate interpreter.

Analysing participants' narratives through an identity and language lens has brought out personal complexities related to the individual and their work and migration trajectory that would be lost without this perspective, but which cumulatively reveal important trends. On an individual level the performance of the work depends on whether the individual invests in the informal interpreter position with the hope of career progression and integration in the local community, or whether this is just an additional task, and their construction role is salient. Several participants expressed pride in helping by doing the language work and acquiring this skill allowed them to see opportunities, both for work as well as personal relationships and migration, that were previously unavailable to them. The informal interpretation experience may, for some people, lead to a 'trans'formation of their identity.

As well as being promoted within the industry there appears to be a trend of bilingual workers moving on to other areas of work. In some cases, this occurred because of migrants actively pursuing opportunities, with their investment in learning and using multiple languages as a key part in this. This trend provides further justification for formalising the work of informal interpreters and creating a recognised position, as Tutt et al. (2011) call for. Tutt et al. also found that on the rare occasions when an agency migrant worker became a permanent employee it was because of having taken on language work. If this work was validated, they would be more likely to stay in the CI and more likely to improve the language skills. Although informal interpreters who identified strongly with their bilingual

identity and were interested in the language work were the minority in this study, with most not giving it importance and informal interpreters in other research begrudging this expectation (Oswald et al., 2015), it is a significant finding with potential to improve the situation.

Related to the worker's investment, or not, in their bilingual skills is the way the language work is performed. A new contribution to the literature made by this study concerns the different ways the language work is performed. The scope of their position ranges from summarised interpretation when asked, to including translation, mediation and language teaching. Some of those informal interpreters who performed a greater range of language tasks, because their bilingual identity was important to them, emphasized how they needed to use interpersonal skills in this work, including being polite and diplomatic, empathetic, patient and being able to control their emotions. Another ability some participants noted using is being able to adapt to who they are speaking to, in other words, a message can be interpreted in a number of ways and to choose the best way means taking into account the interlocutors and their idiolects. Rarely this might also need to involve a cultural adaptation of the message. Raising awareness of these differences would help workers and management to deal with communication, and with further research the ideal function could be determined.

In conclusion, this research has significantly advanced our understanding of the language work being done on multilingual construction sites. Firstly, numerous findings increase our understanding of communication on linguistically diverse sites by indicating factors that affect what language work is done. Another important finding is that some workers leave the industry after having upskilled through languages. Furthermore, it has been possible to provide a clearer description of the language work by conceiving of it as moments of interpretation in a translanguaging space and showing how some form of mediation usually occurs. Finally, it was shown how the performance of language work varies greatly and that what language work is done and how partly depends on the worker's investment in this. Moreover, as a result of these findings, it is argued that the informal interpreter function should be formalised to compensate their skills and responsibility, to encourage investment in languages, and to help retain language skills in the industry. What is more, establishing a scope for the language work and the reasonable expectations for it would benefit all implicated parties.

10.2 Implications for theory and practice

10.2.1 Implications for theory

This research is significant because of its contribution to the literature on communication with migrant construction workers, as this is an area that is under-researched, but which will continue to present challenges in an increasingly globalised world. The use of the translanguaging lens has clarified the reality of onsite language practices, which have been poorly understood thus far. The concepts 'translanguaging moment' and 'translanguaging space' have been particularly illuminating. Building on the work of Baynham and Lee (2019) this research also contributes to the discussion regarding the relationship between translation and translanguaging.

Moreover, this thesis is also a contribution to the academic literature on informal interpretation; it adds an industry example to this literature, which has largely focused on schools and hospitals (Antonini et al., 2017, Baraldi and Gavioli, 2016, Cline, 2019a). Using this theoretical framework to help understand the connection between informal interpretation/ language brokering in diverse contexts and the individual's changing identity has particular promise. The informal interpretation work and the informal interpreters have been examined using a theoretical framework built using the concepts 'investment' and 'imagined communities' from the field of SLA, concepts which have not been widely used to study bilingual workers and their language practices, but which have been proven to have the potential to create new insights with this application. As well as allowing a better understanding of these migrant workers, this framework has given justification to the suggestions for practice, which are detailed below. Many of the findings about bilingual migrant workers may well be relevant to other areas where informal interpreters are used such as in travel and tourism, prisons, factories, etc. and could be used as a basis for further research in these contexts.

The thesis also makes a contribution to the construction management literature, as the informal interpreter has been discussed in relation to widely discussed issues that the industry face, including: H&S, vulnerability, responsibility, teamwork, trust, co-operation and productivity.

10.2.2 Implications for practice

Given the ethnographic, detailed and relatively small scale, nature of this research, it is necessary to note that recommendations for informing practice can be made, but as Pink et al. (2010, p.657) state 'so long as they can be appropriated in ways that reflect the nuances of the contexts in which they are subsequently applied.' Therefore, prescriptive suggestions are largely avoided. Nevertheless, numerous relevant insights and areas of promising practice are emphasized instead.

Some useful findings that could be used to improve practice are initiatives. The strategies reported include a phrase exchange, use of augmented reality e.g., scan a poster to go to a website and see a video, using QR codes to access spoken translations of posters, using high vis vests with 'translator' on, using picture flashcards, and creating different language subtitles in inductions. Implementing several such initiatives in conjunction would improve communication on multilingual projects.

Regarding the recommendation of formalising the language work, Tutt et al. (2011) state that this should be done to recognise the valuable linguistic skills of the workers. Some supervisors stated that they were able to sign off induction, a legal requirement, thanks to the help of informal interpreters, a clear sign that these skills are currently being utilised without fair compensation for the responsibility and skills involved. On top of this, formalizing the work would also help to retain these skills within the industry, as several of the participants moved on to other areas of bilingual work. Furthermore, if the position were formalised it would be possible to establish a scope of work and reasonable expectations of what the work involves. This step may also encourage workers to invest in their language learning and in the position. Rather than doing the minimum required, they may interpret more regularly and foster cohesion more widely. A basic tenet of identity theory is that if an identity is recognized in a social context, then the salience of that identity becomes stronger (Hogg et al., 1995), another reason why more informal interpreters might invest in their bilingual skills if the work were recognised. Other advantages to formalising the work of informal interpreters include setting boundaries, meaning that bilingual workers can be more confident in their task and not asked to interpret in situations in which they are not comfortable, as happened to Magda, and stop workers from feeling that their skills, and investment, are being

taken advantage of, as professed by Fernando. While it might be useful that the language work is not performed in a uniform way and adapts to project needs, if expectations were clarified with the individual it would lead to increased trust and management would know what information is passed on.

The conclusions of some studies of language students abroad may be worth considering in this context. It is argued that factors beyond the individual's intentions and attributes affect the success of their language learning. Bui (2018, p.345) argues that if students 'perceive that learning the target language will be useful for their social needs, they perceive its native speakers positively and strive to emulate them'. So, it is possible that if the language capabilities of migrant workers were recognised it could lead to them improving their language skills and to improved relations between different nationalities. Further, in Bui's study of Thai students in China, he claims that 'if the members of host communities treat Thai students as legitimate learners and users, and value their knowledge and experience, Thai students' motivation to learn the target language may be strengthened' (p.365). Therefore, the impetus should be on management and the other interlocutors to work on demonstrating valuing language skills and fomenting them, not only on the bilingual workers themselves. Similarly, Aveni (2005) found that, when speaking an L2 that they are in the process of acquiring, speakers often find that they are not able to present an imagine of themselves to others as well as in their L1and therefore 'often reject or reduce their interactions in the second language in order to protect an ideal self-image' (p.2). Aveni et al. (2005) frame speaking in another language as an activity that involves personal risk, which causes speakers to make decisions about why they will speak in that language, determining whether the benefits outweigh the costs. Consequently, for workers, the value of speaking their L2 needs to outweigh the cost, again supporting the argument that the informal interpreter work should be valued for it to be most effective.

Overall, it has been found that management have little understanding of what language their workers speak, it is highly likely therefore that they do not know who may be linguistically isolated and whether strategies are in place to deal with this. It is likely that if management were more aware of the language work being done on site and more involved then this language work could be done more effectively. In general, it is clear that a better understanding and awareness of the linguistic difficulties faced daily onsite is required and that such comprehension and preparation would ease daily communication for all onsite. For

instance, with the findings from this research, it can be considered who is the best person to do the language work. Particularly, it has been demonstrated that it is unsafe to rely on one person to interpret and shown how 'sub' interpreters can be available or phones used to contact back-up interpreters. Alternative ways of dealing with written translation have been discussed, which has the potential to streamline efforts. Beyond the communication itself, it has also been shown how having someone who is dedicated to communication and prepared for the task can save time by avoiding the need for re-work or for double-checking, given that all will have the assurance that they are understood and are understanding. Furthermore, having someone dedicated to this would make it possible to build up a bank of translated materials and glossaries and implement other relevant initiatives. Moreover, having a position dedicated to language work would allow for the decision of who is supervisor to be based on their construction experience, thereby making the most of the skills available in the workforce.

On a smaller scale, conversations had during data collection have also had their own implications. For example, multiple participants in supervisory or management positions reflected that the language work is something that they hadn't really stopped to consider before, and that they were now thinking of some interventions and support. Such as making the bilingual workers identifiable with 'interpreter' hi-vis vests or by learning/teaching some basic phrases. Moreover, some of the participants who did language work professed that the interview was an enjoyable experience for them, arguably it allowed them the space to reflect on what is often invisible language work, perhaps giving them a sense of validation of their skills. Finally, it is likely that the theoretical framework and the findings it has led to can be fruitfully applied in other contexts. As an illustration, many industries rely on informal interpreters, and in her research on NGOs Wine Tesseur explored how multilingual workers perceive their role and the agency they have. She found that between bi/multilingual NGO workers there are some who volunteer to translate and there are some who find it a burden (Tesseur, 2021).

10.3 Limitations and recommendations for further research

The research was deliberately limited to an investigation of interlingual communication and the work of informal interpreters within this on construction sites, but there is plenty of scope

to research other areas in the industry where informal interpretation and translation work occurs, such as in site offices and during tendering.

The chosen methodology also created limitations because of the sample size, although there were forty interview participants, they are not easily comparable, meaning that generalisations cannot be made. Nevertheless, the literature review combined with interviews and observations lends validity to the findings. Although some findings obtained from only a few participants are not generalizable they do provide rich insights into the lives of these language workers, and thereby allow inferences to be made to transfer understanding to similar settings (O'Reilly, 2012, p.225).

Furthermore, whilst advancing greatly what we know about language work on construction sites, this understanding is limited importantly by not having recorded interaction data to analyse and because as a researcher I did not share the languages of the migrant workers on sites that I visited. For instance, the experiences of English speakers have been documented, those interpreting, and supervisors/managers interpreted for, but it has not been possible to understand the experiences of workers relying on this interpretation. This study, in common with most of those in the research area, is Anglo-centric, the language combinations studied always include English, which will affect the perspective of the research.

There are also limitations that stem from the context of the research, such as those created by access difficulties and the pandemic, discussed in the methodology chapter. Within the UK it is possible that the effect of Brexit meant that participants were more engaged with the topic of migration than would be the case in other years. Furthermore, the intention was to carry out a linguistic ethnography, entailing much more time onsite and recorded linguistic interaction. Recording video would allow for a more in-depth analysis of multilingual and multimodal communication. As Heath and Hindmarsh argue, 'it is not possible to recover the details of talk through field observation alone, and if it is relevant to consider how people orient bodily, point to objects, grasp artefacts, and in other ways articulate an action…it is unlikely that one could grasp little more than passing sense of what happened' (Atkinson et al., 2002, p.102). However, now that the nature of the language practices onsite is clearer, it seems that even if a researcher were to get the access to shadow an informal interpreter working with a language they have in their repertoire, the type of studies that are common in interpreting studies where the interaction is linguistically analysed would not in fact, add

significantly to our understanding. This is because the language work onsite is much messier than this, with information being passed on in another time and place and perhaps in another mode. Nonetheless, a more focused case study of, for example, an informal interpreter's day at work, would be valuable. Perhaps a day-in-the-life video, where the participant wears a go-pro for a day (Pink et al., 2015, p.33). Such a study would make it possible to see how much time is spent on language work, helping to better understand relations and to follow the communication, helping understand whether this activity is peripheral to their job as a worker or whether interpreting is a significant activity in terms of time.

The aforementioned limitation of not accessing the perspective of migrant workers who are interpreted for is important for a couple of reasons. Firstly, they may have different opinions about what information they need interpreted, potentially work information that the other interlocutors simply haven't considered, perhaps extending beyond communication that is obviously considered as information, such as instruction, to including norms or attitudes in the workplace, for example. It is also possible that researchers and/or management downplay the importance of workers' other ways of knowing that do not rely on an informal interpreter. Possible examples of ways of knowing, beyond having information translated, could be using the internet to search for instructions in their own language, or forums of other migrant workers where discussions about employment routes take place. Secondly, there may be sensitive issues about the relation between migration, language and vulnerability that have not been examined in this research and where informal interpreters' work may be incredibly important for the wellbeing of these migrant workers.

A limitation worth bearing in mind when considering the whole of this thesis is that the construction projects researched were medium/large projects in London, therefore it is inevitable that there are some differences to ways of working on smaller projects or in other regional sites and that some of the recommendations are not practical on small projects in different geographical locations.

It is important that research continues to be carried out about communication with migrant workers in the CI to continue to develop understandings of the complex linguistic practices and sociological phenomena implicated. Nevertheless, we now better understand who informal interpreters are and why and how they do the language work, this makes informed management and H&S interventions that aim to improve the communication possible. Such

interventions have the potential to have a positive impact on the employment trajectory of these bilingual workers as well as on communication onsite, which has been shown to be closely related to relations, safety and productivity.

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11 Appendices

11.1 Interview participant biographies

Interviews were carried out on three of the four sites visited. These are referred to as projects 1, 2 and 3, so that it is possible to identify participants that were from the same project. One interview has not been included because it was not relevant. All of the projects where interviews were carried out were located in London, project 1 was the construction of five luxury apartment blocks, project two was a re-cladding of a residential block, and project three was a large hotel and residential development. The participants listed here that were not on these projects were recruited through online networks, one for construction professionals and one for language professionals. Participants who carried out language work have been classified as trained or untrained professional interpreters or as trained informal or untrained informal interpreters.

Ahmet

Ahmet, from the language network, is a Turkish translator and interpreter. He works with Turkish and English and runs a translation company that works with many different languages. In Turkey he was a certified translator and now here in the UK he is a member of the Chartered Institute of Linguists. Before this career as a linguist, he worked as a Contracts Manager and often had to interpret informally onsite. He notes that this work was not in the job definition and that 'having a good level of English does not necessarily make you a translator, that's another skill set', one that he developed translating materials for his father. Ahmet explains that in countries where the official language is not English informal interpretation and translation happens frequently because English is the global language of contracts, so they must have someone able to translate in the business. The focus in this thesis is onsite communication, where this happens with informal interpreters. However, it has been shown that language work can be a significant part of the workload of professionals at other levels in the CI, such as for contract managers and PMs. Ahmet explains how language played a part in him climbing the career ladder to Contracts Manager. The opportunity to informally interpret and translate is leveraged by the worker:

> Me: ... did those experiences play a part in your motivation to now move into languages?

P: Hugely yes.

Me: Ahh ok.

P: … in addition to confidence, that gave me the new skills for that sector, and we can expand that. Because the company I was working with constructed energy plants, so I got to know a lot about the energy sector as well (Me: mmhhmm). Thermal energy, atomic energy, etc. So that truly did inspire and, let's say, leverage, my translating abilities.

Aleksander

Aleksander, from project 1, is a Bulgarian Contracts Manager and untrained informal interpreter. At the time of interview his team were working on cladding, on project 1 in London. He discusses using an informal interpreter to be able to communicate with the other teams. This communication needed to happen in English as there were Bulgarians, Romanians, Ukrainians, and Latvians working on the project.

Ali

Ali, from the language network, is a trained professional interpreter. He studied linguistics and translation studies at university. After graduating he worked in the oil and gas industry in Kazakhstan, both translating and interpreting onsite using Kazakh, Russian and English. The onsite interpreting involved accompanying someone for short periods.

Amal

Amal, from the language network, is a trained professional interpreter from Algeria, she speaks Arabic, French, and English. She is an interpreter and translator and studied linguistics. She owns her own language business. Her experience interpreting in construction was mostly on one long computer assisted construction project, by a company from the US with the Algerian government as the client. Her involvement started with interpreting phone calls and translating emails, then involved site visits and negotiation meetings, and finally nine months onsite in Algeria.

Amir

Amir, from the language network, has Arabic as his first language and he also speaks English and French. He worked as an architect for 23 years. For the first two and a half years he was doing his military service. He worked on the construction of a military airport in Egypt, along with an American company. During his time working there as an architect he was also an untrained informal interpreter and translator. He notes how it would be impossible for the team to get by without himself and other bilingual workers because Arabic and English are so different. He later changed career path and studied a PhD in theology and sometimes interprets lectures from English to Arabic.

Andrei.

Andrei, from project 1, is from Romania and has been living in the UK for five years. On project 1 in London, he was a site supervisor, and all his team were Romanian, he did language work as an untrained informal interpreter. Andrei says that with Chinese management who do not speak enough English he uses translation apps to translate Chinese to English, and then he translates that message into Romanian for his team. He strongly links language skills and good employment opportunities.

Anna

Anna, from the language network, is a trained professional Russian interpreter who lives in Canada. She has a master's in linguistics, translation, and interpretation. She works with Russian, English and French. She mainly translates and does conference interpreting but did two assignments in the CI. The project we discussed was a polypropylene plant in Russia, where the management, site workers and some engineers were Russian but there were also French, German, Austrian and Italian engineers.

Constantin

Constantin, from project 3, is a Romanian construction engineer working in London. He came to the UK 5 years ago and previously worked in the US. His current team are Romanian, Polish, and Lithuanian. He sometimes does language work and is described here as an untrained informal interpreter.

Daniel

Daniel, from project 1, is a Romanian Site Supervisor working in London, he is classified in the data as an untrained informal interpreter. Daniel was supervising a team of dry-liners and joiners. He used an English-speaking foreman to communicate with his team. Most of the team were Romanians but there were also some Bulgarians and 'Africans'. He no longer tries to communicate with workers without the interpreter foreman present and believes that people should not be allowed onsite if they do not speak English.

David

David, from the construction network, is an English PM who started working in the CI at the age of 16. He has thirty-four years of experience and has worked as a labourer, carpenter, foreman, site manager, and is now PM. He explains that over the last twenty years he has been working in Central London and has seen a huge increase in the number of workers of other nationalities, which has made his job harder. The informal environment of a coffee shop and recruitment of the participant through a channel where the participant demonstrated concern about the research topic and pride in their work facilitated a frank and detailed discussion.

He told me about his initiatives to improve communication onsite between different nationalities, and the tragic accident that motivates his efforts. The accident occurred four years prior to the interview. He had given an explanation to his foreman. However, the foreman did not understand correctly and so the information did not reach the workers. Consequently, the worker entered an area he should not have, fell four metres, breaking his back and fracturing his skull. The participant describes how difficult it is to speak to someone that is panicking, especially because in shock people revert to their mother tongue. Consequently, they had no common language to use to assess pain or to communicate about movement and the ambulance. Following the accident, it took time for the participant to come to terms with it, but last year onsite he could see the same situation developing and had an idea to alleviate it. The initiative aims to get workers to understand the basics and emergency phrases in each other's languages. The initiative stands out because it recognises the utility of British workers learning from others, not only expecting the migrants to learn English. The participant stresses that not only is this vital in case of an emergency but that it improves the day-to-day working relationships. For just thirty minutes to an hour every other day the workers sit together and share their languages. They start with ten phrases or words in

English, which the Bulgarians will translate into Bulgarian, the Romanians into Romanian etc. on cards, and then they will teach each other. The next week they will review these terms and add more. The participant emphasized that they included some jokes and fun to encourage people to engage. The manager said that while it is a slow process it did seem to be working, creating a good work culture onsite with people interacting who did not use to.

Demitri

Demitri, from the language network, worked as a PM in construction in Cyprus, informally interpreting Greek/English. He is an untrained informal interpreter as he has no training but is more skilled in this than other informal interpreters because he is Greek but went to an English school and has lived here for sixty-two years. He also has an interest in languages hence being on the network, contributing to a more developed bilingualism.

Elena

Elena, from the language network, is from Spain. She speaks Spanish, Catalan, and English to L1 proficiency, and did language work as an untrained informal interpreter. She worked in Miami, US, as a manager in her family's construction business, where she used her languages skills constantly. She interpreted onsite as well as translating documents. Since the collapse of the business in the 2008 financial crash she works as a language teacher. She says that the American PMs were the only English-only monolinguals in her construction experience, and she did not know any labourers that were from the USA. Some of the managers began to learn Spanish, as they were the minority. However, many general contractors coming in from other states couldn't communicate at all. As well as Spanish speaking migrant workers there were Creole speakers, who usually learnt Spanish so that they could communicate with their co-workers. She could communicate basic things in French with the Creole speakers. However, she said that it was rare that she had to do that because the Creole speakers, from Haiti, made more of an effort to learn English than the Hispanic workers, 'because nobody speaks Creole'. Referring to the workers from Latin America she describes: 'it becomes a very, you know, micro kind of world also where they don't become bilingual because, or not fluently, because you never leave the construction site'. In Elena's experience as a PM in Miami the owner of the subcontracted company is usually bilingual and informally interprets when necessary. As there are not so many languages spoken onsite, interpretation is needed less than in the UK. However, she notes that on projects further north than Miami she would

go to interpret because it was necessary to communicate in English with the people from there.

Farah

Farah, from the language network, is a trained professional interpreter and has experience in many areas of bilingual work using Arabic and English. First in North Africa and then in the UK in a black and minority ethnic organisation. These jobs involved informally interpreting and she decided to get certified in legal interpreting. She has since interpreted for the Home Office and worked as a transcultural mental health worker. She also completed a PhD in mental health interpreting. In the field of construction, she has translated contracts and interpreted for a company that provides H&S training and testing for construction companies.

Fernando

Fernando, from the language network, is a Mexican interpreter. During the construction experience he describes he was a trained informal interpreter. He has never had a formal education in English but taught himself, he then worked in public health in the US for many years and wrote a curriculum to train interpreters to interpret for terminally ill patients. Then he opened an interpreting company himself and became a certified medical interpreter. Meanwhile, he entered construction as a labourer whilst setting up his company and then got promoted to office assistant because of his language skills. He did trainings in Spanish and English and interpreted safety briefings, did administration work and hiring orientations. He explains that language is important onsite because of safety, productivity, and costs from repeating work. The foremen were all bilingual in his experience. He worked with this company during several different projects but stopped working with them to focus on his business.

Greg

Greg, from the language network, is a highly experienced British language and culture trained professional working with Japanese and English. He describes that he taught himself Japanese using an audio-lingual method for years, taking some classes and then moving to Japan for university. Living in Japan allowed him to develop a bi-cultural competence. He has used these skills in translation and interpretation jobs, as well as consulting for businesses working with the Japanese. Despite having no formal training in interpreting he has worked with prestigious global businesses and his work relevant to the CI was on a vast highly

specialised project. Greg was employed as a full-time in-house translator/interpreter for a nuclear power plant project. The project was suspended and so this account is based on the initial phase and what was planned for the execution of the project and speculated to happen. The project was expected to have 10,000 workers onsite at one time, clearly a large proportion of which would have come from other countries. He was hired as a Japanese <> English interpreter, but there were people from many nationalities already working on the project. Therefore, in this early phase there were many people using English for whom it was not their L1. His skills were largely needed in the office at this initial stage, but he explains that he expected to be onsite a lot more as the project progressed to accompany the Japanese engineers who would be directing the local workers. The company was planning for the necessity of further language help when there were more workers and more language combinations on the project.

Hannah

Hannah, from the construction network, is an English Senior Site Manager in a tier 1 contractor. She stresses that it is 'the responsibility of the subcontractor's supervisor to ensure their operative is able to understand induction and if not to arrange a suitable interpreter.' The interpreters wear a vest labelling them as 'interpreters' although this is not formally part of their job. She has a developed opinion on how best to communicate with workers who speak other languages.

Ivan

Ivan is a Bulgarian supervisor on project 2 who also does language work as an untrained informal interpreter. He arrived in the UK 9 years ago and did not speak any English. He put himself through an evening English school. Until this project he had always worked with Bulgarians, he explains that this is why he speaks 'broken English' and understands '60-80%'. Now he also works with Romanians and uses one of them as an interpreter. As the work is technical, he can communicate a lot through drawings. He began working as a fixer, then as a ganger and now as supervisor of a team of cladders.

Jack

Jack is an English PM of a company with four subcontractors on project 2. The other supervisors and managers are Bulgarian, Romanian, and Polish. He describes struggling to communicate directly with operatives and that this had resulted in some safety incidents. He

says he's worked with Romanians for 7 years and only learnt how to say good morning but that the Romanians pick up a bit of English quickly 'cos it's a necessity for them.'

Jake

Jake is an English Works Supervisor on project 3. On his previous job he was a trainee contracts manager. He has been working on creating visuals to communicate with operatives who cannot understand English. The company has an induction entirely in Romanian and the English one that is informally interpreted for Polish and Turkish workers. Most of the signs onsite are translated, and informal interpreters wear an identifying vest.

Jen

Jen, from the construction network, is an English Safety Manager who works in deconstruction. She has worked extensively on technological solutions to language barriers onsite, and also usually uses the supervisors to interpret.

João

João, from the language network, was a Portuguese graphic designer who moved abroad because of the earning potential in construction. He is an untrained informal interpreter. First, he moved to Italy and worked as a labourer. He taught himself Italian and became supervisor because of his communication skills. The same thing happened in Holland. He then looked for other bilingual work and has worked in several countries in call centres, casinos, and as a tour guide.

Johnathan

Johnathan, from the language network, is a British languages graduate, as part of his degree he spent time living in Germany. As soon as he finished university in the UK he went back to Germany and was looking for work. He was approached by a construction firm that were doing a hospital renovation in the town he was living in. As it was a British firm all the plans and paperwork were in English, but they were using German subcontractors. Johnathan was hired to work with the English Site Manager who couldn't speak German so needed help sourcing materials, liaising with subcontractors etc. He is classified here as an untrained professional interpreter, at the time of the relevant construction experience. He was recruited through informal networks. He describes this informal interpreting experience as a 'baptism by fire' as he did not have any interpretation qualifications and just tried to 'bluff' his way

through it. For him this job was just a ‘means to an end’ to finance himself when he first arrived. Nonetheless, he says that it was enjoyable, working with people and overcoming new challenges every day. However, after that job ended, he ‘tried to get myself a job but it never came off.’ Due to the informal nature of recruitment and approach to dealing with multilingual projects he never worked in construction again. He returned to the UK, working in a bilingual call centre, then as a teacher, and eventually he returned to translation and interpretation. Reflecting on his informal interpreting experience he said, ‘I think it stood me in good stead because I’ve ended up you know going back to that’ and ‘it did remain in my mind this is something I could look up in the future maybe.’

Karl

Karl, from the language network, is a trained professional freelance interpreter who usually does conference and business work. He is German and works with English and French. He has a master in interpreting and translating, and before working as an interpreter he worked as a teacher. The interpretation jobs he has done in the CI were in training sessions.

Lanfen

Lanfen, from the language network, is an English teaching graduate from China. A state company in China needed interpreters for a chemical plant project and employed these graduates to do it, therefore she is classified as an untrained professional interpreter. Lanfen was fluent in both languages before the job but had to learn to interpret and learn the specific vocabulary on the job. After this initial experience she continued in the field by working as a translator, specialising in architecture once she immigrated to Australia. Whilst they were employed as linguists for the project, they were not, at this time, professional interpreters.

Lei

Lei, from project 1, is a Chinese PM. On Project 1 in London, he was working with the façade contractor. He explains that most of the workers are from Eastern Europe, and he usually only talks to the supervisor, in English.

Magda

Magda, from the language network, is a Brazilian artist and untrained professional interpreter. She worked in construction to support herself, and has worked in the industry in Brazil, the US, and Angola as a project secretary. She is bilingual because she went to a

British school in Brazil. Her language skills were a requirement for the positions in construction companies. She also worked interpreting for an immigration lawyer and has translated construction manuals.

Marius

Marius, from project 2, is a Romanian Site Manager who also does language work as an untrained informal interpreter. On project 2 in London the operatives he was working with were Bulgarians, Moldovans, and Romanians. With the Romanians and the Moldovans, he speaks in Romanian. Moldovan is similar to Romanian, and he has picked up some of the Moldovan words. With the Bulgarians he uses gestures, drawings and google translate. Sometimes he uses one of them as an interpreter. He thinks that workers should know the language of the country they migrate to.

Matei

Matei, from project 1, is a Romanian supervisor and untrained informal interpreter. On project 1 in London, he was supervising a team of Romanian carpenters. When necessary, he acts as informal interpreter between his team and management.

Michail

Michail, from the language network, is a trained professional interpreter from Uzbekistan. He is an L1 Russian speaker and works with English, which he studied at university with a specialisation in translation. He has worked as a linguist in the CI in Uzbekistan, Turkey, and the US. In Uzbekistan the project required him to facilitate communication between engineers in London and the client in Uzbekistan. He then moved to the US where he worked on an oil project for nine years with a Russian client. He now works as a freelancer, interpreting in the medical field, because the reduced price of oil and worsening political relations with Russia meant that there were no more such projects.

Olga

Olga, from the language network, is a Kazakhstani professional trained interpreter, translator, and safety culture consultant. She mostly did this work in Russia and Kazakhstan. She began by teaching English, but then started to work in the oil industry translating and interpreting in Kazakhstan. After moving to the UK, she worked as a translator and interpreter on a Kazakhstani oil project, but then moved into consulting. The consulting was in the UK,

Russia, and Kazakhstan, and involved supporting the management on construction projects to improve the site culture. She now works as a market reporter for petrochemical markets, where she is also using her Russian language skills. Olga reflects that she did not have knowledge of construction before doing these jobs but that she was called because she already had lots of interpreting experience and could prepare the construction terminology.

Paul

Paul is a Romanian Site Manager on project 2 who also does language work as an untrained informal interpreter. He uses the supervisors to interpret for their teams that speak Polish, Romanian, Bulgarian and Lithuanian. He learnt English before coming to the UK 6 years ago but then couldn't understand people because of the varied accents.

Sara

Sara, from the language network, is a trained professional interpreter from Peru, where she studied translation and interpretation. She now lives in the USA. She was hired for her language skills on a mining project, and an oil project.

Sean

Sean is an Irish ASM on project 2. He explains that he did his university dissertation on communication onsite but that 'now I realise the problem is people don't even understand English.' He describes using an informal interpreter but does not trust that they interpret his message and finds communication on the job very frustrating.

Sofia

Sofia, from the language network, is a university professor who worked in the languages department of a civil engineering university in Romania. The university offers a translation and interpreting degree and masters in English, French, German, Romanian, Japanese, and Spanish. She says it is traditional in Romania to start a new language at university level. She added topics on public service interpreting because she noted that engineering projects might have overlaps with town councils, and legal and medical language. The department started as foreign language teaching within technical courses such as engineering or agricultural. During communist times the staff were forced to work with some of the departments doing translations and revisions of engineers' journal articles free of charge, which is how they got into translation and interpretation.

Stefan

Stefan is a Romanian ASM on project 2, in London. He does language work as an untrained informal interpreter. On that project there were Romanians, Bulgarians and Chinese people working onsite. Stefan has been in the UK for 8 years. He started working through agencies as a labourer, then as a storeman in logistics, then as a ganger, before being hired directly as an ASM. He knew basic English when he arrived but made efforts to find British people to practice with.

Toby

Toby, from a personal contact, is an English Innovations Manager. He describes various ways that communication with migrant workers is managed on his current project. Firstly, people have to pass an English competency test before going onsite. In the induction iPads are available with videos that you can choose the language on. Onsite there are digital boards with safety messages displayed in multiple languages, that are translated by translation software.

Ulla

Ulla, from the language network, is Finnish, she currently lives in the UK and has previously lived in Sweden, Denmark, Kuwait, Saudi Arabia and Iran. During the relevant construction experience she was an untrained professional interpreter. Before working as an interpreter and a translator she did radio broadcasting for the BBC World service and radio Finland. She shows that one factor which changes how languages on construction sites are dealt with internationally is the strength of the TUs, stressing that in Scandinavian countries workers' rights are taken more into consideration.

Zane

Zane, from the language network, is a Tanzanian linguist. He works with Swahili and English as a translator, interpreter, editor, and writer. For the purposes of this research, Zane is classified as an untrained professional interpreter, because he is employed for this purpose but is not trained in interpretation specifically. He did a languages undergraduate degree and a master's in political science and African studies. His interpreting experience includes in healthcare and legal settings, and in construction. He explains that the need for interpretation in construction in his country is often because of Chinese companies working there. It is these

Chinese companies that hire him. Consequently, the engineers and executives are Chinese speaking, and the workers speak Swahili. It is therefore necessary to use English as a lingua franca. Usually, the Chinese participants would speak in English, and he would interpret this into Swahili for the supervisors, who then pass the information on to the workers. Zane is usually hired for a few hours for a crucial activity; he does not accompany the construction professionals throughout. In Zane's experience the workers are all locals, and so there are not language barriers between them. What is more, he is hired only on bigger projects because they are international, whereas on smaller projects interpretation is not necessary.

11.2 Sample interview guides

11.2.1 For interpreters:

- Introductory ice-breaker questions about the participants themselves such as where they are from, how long they have been onsite, how they learnt English etc.
- Who do you usually interpret for?
- What type of information do you usually interpret?
- What do you like or not about doing the language work?
- What do you do when you can't find a word for something or don't understand something?
- Do you only interpret conversations or also presentations, videos etc.?
- Do you ever translate written documents too?
- Do you find that your work as an interpreter involves more than translating what is said, such as supervising, mediating tensions, or explaining cultural differences?
- Do you ever use different methods to help communication, such as your phone or drawings?
- Is there anything I haven't asked about, but you think is important to the work you do?

11.2.2 For managers/supervisors:

- Can you tell me a bit about your experiences communicating with workers who don't speak English?
- Do you identify languages and needs from the beginning of a project or as they arise?
- How is the person who interprets chosen?
- Is it part of their job formally?
- What happens when that person isn't there?
- Are outside interpreters bought in at any point?
- More or less what percentage of your workforce are non-native speakers?
- In your opinion what are the implications of hiring workers who speak other languages for the management of a team?
- In your experience what makes communication on site successful? And what doesn't?
- In what sorts of situations do they help you by interpreting?
- What do you do when the information you need to pass on is written?

11.3 Information sheet

School of the Built Environment,
University of Reading,
Whiteknights,
Reading,
RG6 6AW

Informal interpreters in the construction industry
Information Sheet

My name is Morwenna Fellows and I am a PhD student in Construction Management, from the School of the Built Environment at the University of Reading. I am carrying out research on communication on construction sites. Specifically, on the role of the informal interpreter.

If you are willing to be interviewed you will be asked to participate in an interview of about 20 minutes, at a time and place of your choice. During the interview I will ask you questions on your experiences with communication in the construction industry. With your permission, I would like to tape the interview and transcribe sections later. Copies of the transcript will be available on request and any changes which you ask for will be made. During my visit to the site I will also take notes to contextualise the interviews and may take photos.

You can choose not to answer any questions. You are free to withdraw from the study at any time. At every stage, your identity will remain confidential. Your name and all identifying information will be removed from the written transcript. My supervisor and I will be the only people who will have access to this data. The data will be kept securely and destroyed when the study has ended, which will be a maximum of three years from the completion of the research. The data will be used for academic purposes only. Copies of any outputs, such as articles or presentation slides, will be available on request.

If you have any questions or concerns, please contact me at morwenna.fellows@pgr.reading.ac.uk, or my supervisor at d.e.tutt@reading.ac.uk. This project has been subject to ethical review, according to the procedures specified by the University Research Ethics Committee and has been given a favourable ethical opinion for conduct.

Print name:

Signed:

Date:

11.4 Consent form

School of the Built Environment,
University of Reading,
Whiteknights,
Reading,
RG6 6AW

Informal interpreters in the construction industry
Participant Consent Form

1. I have read and had explained to me by Morwenna Fellows the Information Sheet relating to this project and any questions have been answered to my satisfaction.
2. I understand that my participation is entirely voluntary and that I have the right to withdraw from the project any time, and that this will be without detriment.
3. I understand that my personal information will remain confidential to the researcher and her supervisor at the University of Reading, unless my explicit consent is given.
4. I understand that my organisation will not be identified either directly or indirectly without my consent.
5. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation.

Print name:

Signed:

Date:

12 Abbreviations

APCI - Association of Police and Court Interpreters

CCS - Considerate Constructors Scheme

CI – Construction Industry

CIOB – Chartered Institute of Building

CIOL – Chartered Institute of Linguistics

CIS – Construction Industry Scheme

CITB – Construction Industry Training Board

CLB – Child Language Broker

CSCS – Construction Skills Certification Scheme

DPSI – Diploma in Public Service Interpreting

EC – European Community

EEC – European Economic Community

ESOL – English for Speakers of Other Languages

EU – European Union

H&S – Health and Safety

HSE – Health and Safety Executive

ILO – International Labour Organisation

ITI – Institute of Translation and Interpreting

NESB – Non-English-Speaking Background

NGO – Non-Governmental Organisation

NHS – National Health Service

NPIT – Non-professional Interpreting and Translation

NRPSI – National Register of Public Service Interpreters

OHS – Occupational Health and Safety

PPE – Personal Protective Equipment

PSI – Public Service Interpreting

SLA – Second Language Acquisition

SSL – Spanish as a Second Language

TICHA – Toolbox Integration Course for Hispanic workers and American supervisors

TPR – Total Physical Response

TU – Trade Union

UN – United Nations

UNHCR – United Nations High Commissioner for Refugees

VR – Virtual Reality

13 Transcription key

Transcription notation	Meaning
[xxx?]	Used for words that it was difficult to decipher
…	Used for omitted speech
Underlining	Underlining is used for particular stress/emphasis
-	A dash is used when a word is cut off, for instance because of self-interruption
((xxx))	Double brackets are used for transcriber's comments, not transcriptions

(Silverman, 1997, p.254)