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ABSTRACT

The construction industry (CI) employs significant numbers of migrant workers, making construction sites multilingual spaces. Workers who do not share a common language work alongside each other, posing issues for safety, integration and productivity. Methods used to overcome these language barriers include the use of bilingual workers as informal interpreters. The prevalence and importance of informal interpreters is recognized in the literature. However, their language work is not well understood, and hence, the research question addressed is: what language work do the informal interpreters do and how? This study uses the theoretical lens of translanguaging to conceptualize communication onsite between speakers of different named languages, emphasizing the flexible and multimodal nature of language in use. An ethnographic approach is adopted, comprising 40 international informal interviews, and observational field notes and material data from the UK. The language work of the informal interpreters is explored through this data and theoretical lens; their language tasks and the nature of their language work is identified, including the use of visuals, gesture, and technology. Far from being straightforward and predictable, the findings show that the scope of their language work varies considerably. In this informal language work, the boundaries between languages and of what constitutes interpretation are blurred. A novel aspect of language work emerges from the data, showing that this often includes mediation. This study clarifies understandings of communication and informal interpretation on multilingual construction sites and these findings could contribute to future best practice on the use of bilingual workers as informal interpreters.

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Introduction

It is common for speakers of different languages to work together on construction sites around the world. In London, for example, migrant workers comprise up to 54% of the onsite workforce (CITB 2019). The difficulty of communicating across languages is managed in various ways; widespread measures explored in the literature include safety training in multiple languages (Jaselskis *et al*. 2008) using written translations (Tutt *et al*. 2011), and pictographic signs (Roelofs *et al*. 2011, Hare *et al*. 2013), and encouraging workers to learn English (Fitzgerald 2006, Tutt *et al*. 2011, Wasilkiewicz *et al*. 2016, Oswald *et al*. 2019). However, day-to-day spoken communication onsite remains a significant difficulty. To cope with this, bilingual workers facilitate communication for other members of the project who cannot understand each other. These bilingual workers who carry out informal language work are referred to here as informal interpreters because they are hired for another position, such as a labourer or supervisor, they are not usually trained for or paid for the language work, and the language work is largely oral communication. This informal language work is significant because the multilingual make-up of the workforce may impact the relations, effectiveness, and safety of a site. For instance, non-English speaking 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, Oswald *et al*. 2015, Sherratt 2016). That the informal interpreter is implicated in these issues is recognized in the construction management literature, yet, while it documents the existence of their language work (including Loosemore and Lee 2002, Fitzgerald 2006, Dainty *et al*. 2007, Phua *et al*. 2010, Tutt *et al*. 2013b, Lyu *et al*. 2018, Oswald *et al*. 2019),

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not much is known about what their work entails or how they facilitate communication.

The key relevant research papers and their findings related to informal interpreters are reviewed briefly here. Dainty *et al*. investigated the health, safety and welfare of migrant workers in the South East of England (Dainty *et al*. 2007). They found that each gang had a designated English speaker because migrants from particular countries tended to work together. 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 trained translators or employed as such, or even whether the language work was in fact translation. 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 who were usually the supervisors of subcontracted workers, as was found by Wasilkiewicz *et al*. (2016) with Polish workers in Norway. These studies provided an initial understanding of the work of informal interpreters in the construction industry (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.

Tutt *et al*. (2011) present the story of Lukasz, a worker who was receiving extra pay for language work which included translation, interpretation, running language classes, and Polish safety training. Tutt *et al*. call for these language practices to be recognized 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. Further, 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).

More recently, in their 2019 paper, Oswald *et al*. examine the challenges and strategies surrounding communication on a multinational construction project in the UK. They found that some workers were reluctant to interpret if pay was linked to productivity, 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, especially as over time they received more training than other colleagues because they would then explain the contents of the training in the other language, consequently they could influence how tasks were carried out (Oswald *et al*. 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 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. Similar 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.

So, it has been established that the work that informal interpreters do can vary greatly and this is not a formalized position, but informal interpreters and their language work are still little understood. Therefore, this study aims to explore the informal language work of bilingual migrant workers more thoroughly. Specifically, this paper addresses the question: what language work do the informal interpreters do and how?

The theoretical framework applied to the data to explain the language practices of these bilingual workers is explained below.

Theoretical framework

In this paper, interlingual communication is conceptualized according to the translanguaging perspective.

The term interlingual is employed here, instead of multilingual, because it emphasizes the going between languages and their connection rather than separation of named languages. Translanguaging views language as fluid and unique to the individual (Hua *et al*. 2017). Specifically, researchers working with translanguaging think of people as possessing an idiolect (Wei 2018), rather than knowing distinct 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 also includes linguistic features specific to distinct socially and politically defined languages. Translanguaging is similar to code-switching and code-mixing because a plurilingual person often uses more than one language in an interaction. However, the translanguaging concept differs from traditional understandings of language because it rejects the structural understanding of language and separation into named language codes. Rather, translanguaging emphasizes the speaker and the flexibility of language in use (Lewis, 2012 in Creese *et al*. 2016). From the translanguaging perspective, language encompasses multiple senses and signs as well as multiple languages, and the individual uses their entire communicative repertoire to create sense and meaning. As will be seen in the data, diverse mediums are used to communicate. In Creese's words, "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). Effectively, 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).

This conceptualization is illuminating in the context of interpreting on construction sites, which is marked by its diversity of language speakers and activities, creating a need to organically devise means of communicating that go beyond more rigid and simple conceptualizations of communication and specifically of interpreting, in line with the move away from the conduit model in interpreting studies. Another motivation for employing this theoretical lens is that attempts to improve communication onsite that build upon existing practices are likely more successful than approaches that seek to create radical change and impose demarcated languages. Not least due to the fact that upholding impositions for the workforce to "only speak English" or drawing funding for the use of expensive external interpreters are both extremely rare onsite in practice (Tutt *et al*. 2011, pp. 14–15).

Using the translanguaging lens to study the language practices of an interpreter may at first appear contradictory, as interpretation is the transfer of meaning from one distinct named language to another. However, as will be examined in the data, the language work onsite is rarely an interpretation. This will be seen as an oversimplification from previous literature. Further, the practices of translation/interpretation and translanguaging can occur in parallel, especially in instances of informal interpretation, where the means are different but the common goal of both activities is the same. Indeed, while Baynham and Lee (2019) maintain that there is a fundamental difference between the two practices, they also demonstrate that translanguaging was a useful concept for understanding a community interpreting event, stating "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). These distinctions are further blurred in the context of a bilingual worker informally interpreting on a construction site, where the practice is not usually regulated. Although translanguaging likely happens regularly onsite, there are translating and interpreting episodes within this when there is a stronger consciousness of the borders of the languages involved. Baynham and Lee (2019) conceptualization of the translation process is also applicable to interpretation, namely in the sense 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 conceptualization is especially relevant to informal interpreting. For, while translation and interpreting are often hidden cognitive processes, in informal interpreting it might be spoken aloud or made visible, and perhaps practiced as a collaborative effort involving various human and non-human actors. Nevertheless, it is important to highlight that Baynham and Lee contend that translation moments correspond to translanguaging moments but are not reduced to them, as they argue translation works across borders, keeping languages apart, while translanguaging brings them together, dissolving these borders (p. 183).

The concept of a "translanguaging space" came out of the discussion on translanguaging. Baynham and Lee (2019) explain that:

> [A] translanguaging space emerges from different kinds of mediating procedures, including translation, transliteration, code-switching/mixing, … Translation can therefore 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)

Construction sites where multiple languages are used can become translanguaging spaces. For instance, in induction rooms multiple languages can be seen and heard and the people in the space use these languages flexibly.

Hence, translation/interpretation and translanguaging are different forms of dynamic language practices but can co-exist. 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, as documented by Tutt *et al*. (2012) with "Glazabuild" and Kraft (2019) with "Svorsk". Consequently, the translanguaging lens makes the informal interpreters' communication practices that build bridges between the speakers of different languages onsite visible, showing how they facilitate work and reduce isolation.

The rationale for using an ethnographic approach is discussed below and the data collection and analysis process is described.

An ethnographic approach

Rationale

Ethnography is increasingly recognized as an approach that can bring valuable insights to construction research (Pink *et al*. 2012), and the exploratory nature of the research question makes ethnographic methods appropriate because of the ability to explore everyday social experiences and how reality is produced through interaction (O'Reilly 2008). Nonetheless, the specificities of the environment also cause challenges for data collection (Oswald and Dainty 2020), which were compounded by researching in a pandemic. Nevertheless, "ethnography is a methodology that develops in practice" (Tutt *et al*. 2013a). Indeed, the methodology adapted to overcome obstacles such as the pandemic and negotiating access. The methodology also developed to pursue opportunities as they arose, such as being interpreted for, and the investigation of online forums leading to unexpected participants and a more international study. While true that ethnographic research is subjective (Pink *et al*. 2012) and the researcher is inseparable from the research, 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". Using the concept of translanguaging in this research makes it possible to move beyond prevalent and constrictive definitions of interpreting and of bilingualism to understand linguistic practices on site. Furthermore, subjectivity can be a strength of the research approach, as researcher reflexivity can allow insights that could not be gained through another method. For example, my role on site was limited because I am a female British researcher with no skills in construction. Yet my background helped in other ways; because I was a "stranger", participants explained things they would not do otherwise (O'Reilly 2008).

Data collection

Data was collected using an ethnographic approach. Fieldwork was carried out on three construction sites in London where observational field notes, photographs and documents were collected, and 14 informal interviews were carried out. Access for two of the sites was negotiated through a colleague at the university who also worked as a project manager (PM), access for the final site was negotiated through contact with a supervisor who had published on an online public forum about good practice when working with multilingual teams. The observational field notes collected when visiting the three construction sites in London helped to contextualize the language work and comprehend relations between speakers of different languages. I used my phone to take the photos and take quick notes during the site visits and then recorded an audio with observations and reflections as soon as I left the site. The photos and induction documents collected during site visits are not analyzed but contribute to a composite understanding of the context, and function as aide memoirs. Participants in the onsite interviews included H&S and PMs, supervisors, and workers, who were selected because they had experience working on multilingual constructions sites and would provide a variety of perspectives because of their different positions at work and language repertoires.

Another 26 interviews were conducted online with construction workers and professional interpreters with international experience. The onset of the pandemic was what led to this data collection method as it was no longer possible to travel or visit construction sites. These participants were recruited online, some through a website for construction professionals and some through a website for language professionals. The website for construction professionals contains resources and examples to encourage good practice, and the website for linguists includes a job board, professional development resources and community discussion forums. The selection criterion was having experience of multilingual communication on construction sites. These participants were located in different countries at the time of interview and all had worked in the CI in different countries. They were invited by email to participate in the research because their public profile listed that they had experience working on multilingual construction sites. The languages used by participants were English, Romanian, Bulgarian, Chinese, Portuguese, Spanish, French, Arabic, Catalan, Japanese, German, Russian, Kazak, Finnish, Greek, Italian, Turkish and Swahili. The interviews were audio recorded. The sample size of the interview participants was determined by having reached saturation but the collection of observation data was limited by time. The reason for the interviews being informal is so that the interviewee takes the lead (Copland *et al*. 2015) and I learn from each participants' own perspective (O'Reilly 2008). To achieve this, a list of general topic questions was created before the interview as a guide, but in the interview the interviewer followed the lead of the participant and used follow-up questions where relevant and attempted to ask open questions to invite participants to share their experiences and opinions.

Further details about the interview participants are provided in the table below. To better understand the data, those participants who carried out language work have been loosely categorized 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 individuals and companies that participated in this research have been anonymized (Table 1).

Data analysis

The transcription is verbatim in so far as all words are transcribed with some additional punctuation used to aid 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. In this way the data shows the participants' accounts in their own voice 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 … " 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). Further, 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 linguistic issues in the research and how "meaning is made through more than language" (Krzywoszynska 2015, p. 312).

The analysis of the data was an on-going iterative process with many stages. I firstly transcribed the

Table 1. Below shows the pseudonym given to the interview 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.

Interview 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	Laborer > 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	Laborer > 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

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 *et al*. 2015). The transcription was naturalistic, and I then checked them against the recording for accuracy, 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.

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 organize 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.

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 *et al*. 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.

Below, the data is presented and discussed, using the theory of translanguaging, to answer the question posed at the outset of this article: what language work do the informal interpreters do and how?

Findings and discussion

In this article the main language tasks of informal interpreters are identified, generating new knowledge for the construction management research field. Their flexible use of languages onsite is explained, based on the translanguaging lens, and different scopes of the language work are explored. In this paper L1 is used to refer to a person's first language and LX to additional languages in their repertoire. The following discussion encompasses various language tasks that informal interpreters do, including facilitating oral communication in inductions, toolbox talks, and daily communications and written translations. The flexible multilingual and multimodal nature of these interactions is then detailed. The focus on these aspects is a result of the data analysis which highlighted these parts of the language function as being principal.

London, Thursday 10th September 2020, project 3

After chatting in the site office, Jake and I started on our "commentated walk" (Raulet-Croset and Borzeix, 2014) around site – 1st stop the kitchen. He introduces me to the H&S manager, Juliana, who is microwaving her lunch. She is the only female I've seen. 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 site, at this point 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 signaled 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. 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, which they only do if they want to stay and establish a career here in the UK.

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, realizing 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 summarizing. 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.

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.

What language work do the informal interpreters do?

It has been found that informal interpreters facilitate formal and informal oral communication, make comprehensible the contents of written texts and that their language work is not restricted to transfer of words but may extend to include cultural mediation.

Induction

One of the main tasks of the informal interpreter is in the induction and this was always highlighted by management and the informal interpreters themselves as an important and regular activity that required interpretation. Induction is usually given in the local language, with an informal interpreter on hand to help. However, if there are many workers who speak another language then the induction might be given directly in that language. The site induction is a legal requirement and key moment for highlighting risks on a project (HSE 2020). One supervisor onsite described using interpreters "to cover our back", he explained that they were able to sign through the induction thanks to the presence of the informal interpreter. Here the reliance on these bilingual workers is evident which raises the important question of where responsibility for the transmission of such vital information lies. Furthermore, the induction presentations might be dense, with over 50 PowerPoint slides covering upcoming work, coronavirus restrictions, the colour card reporting system, PPE requirements, first aiders and management, a site map etc. Furthermore, in the medical form collected from this site induction there are medical terms such as "phlebitis" and acronyms such as "RSI" that it is unlikely bilingual workers being used to interpret will know.

In conclusion, one of the main language tasks of the informal interpreters is to facilitate induction. This can include summarizing presentations of site specific and H&S information and helping workers complete employment and medical forms.

Daily task communication

Beyond the induction, informal interpreters may also be required to pass on information from briefings and toolbox talks and interpret conversations. Interpretation might be needed constantly throughout the workday or only at key interactional moments, depending on the linguistic make-up of the project. The core part of the informal interpreter's work usually involves receiving information from management and passing this on to the team. Therefore, it is not really an interpretation as the transfer occurs in a different time and place, and the information will be altered, usually summarized. Site Supervisor, 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." and supervisor Ivan explains that this is the easiest way:

> 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.

Likewise, Johnathan, an informal interpreter hired specifically for his language ability, reflects on how it was not really "interpretation" that he did:

> In some cases, when I think about it now, in 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.

It would be impossible to transfer the details and nuances when working in this way, and most do not have the intention of interpreting faithfully as is expected of a trained interpreter, as Site Manager Paul says: "no they – they change little bit um some words; they don't translate word by word. They choose the short way." Likewise, Fernando observes that when he was a labourer and someone else was doing the language work, there was a lot of miscommunication:

> There was umm yes – there was a guy that he was – I wouldn't call it interpretation because really there was a lot of summarization. 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. This proved valuable insight for our dataset, as he is bilingual and was witnessing the informal interpretation

from the perspective of someone able to fully understand all parties in the communication. This enabled us to document a rare case, where a qualified language worker was able to attribute and pinpoint the lost communication to poor interpretation. Often such a claim might be speculation amongst a range of potential breakdowns in communication, such as the message being transmitted unclearly by the first interlocutor, or the receiver misunderstanding, forgetting, or choosing to ignore information that was well explained by the interlocutor and interpreted accurately.

This finding about summarization being the norm for interpretation onsite is important. As Senior Site Manager Hannah argued, people are more likely to comply with safety rules and follow instructions well if they understand the reason behind them. Concerningly, a lot of such meaning may be lost when speech is summarized. For instance, the core of the message might be transmitted but not the supporting information such as the reasons behind it, or the emphasis that the original speaker used. Clearly communication with speakers of other languages is more complex even when the communication is transmitted and a transaction is not required. Over time the accumulative loss in meaning will likely have an impact on the motivation, attention to detail, and relations among the workforce.

Sight translation

A language task that is very important on a live project, but less frequent, is sight translation. Sight translation involves reading a text silently in the source language and simultaneously speaking it aloud in the target language. Even in teams where most workers speak enough of the local language for everyday communication, an informal interpreter will have to sight translate documents. As Jen, a safety manager, explained, one reason behind her company's spoken translation initiative was that many of the L2 speakers of English can understand when they listen but cannot read it. 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 summarize what is written or just tell the workers where to sign. This practice of summarizing is a multi-faceted issue as, for example, the reason for not translating fully may be ability but it may be attitude. What is more, sometimes important information might be missed. However, in some situations an explanation of the information and what is required in the workers' L1 may be more useful than a direct interpretation, that is, localizing the information for workers who may be new to the work procedures.

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

> Marius: Normally the written documents … would be a toolbox talk, 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 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, that is the "selection and blending of modal resources" (Baynham and Lee 2019), as necessary to try to get a message across, in difference to a professional interpreter's approach to this task.

Translation

Another practice used to overcome language obstacles is written translation of documents. Although most of the language work that the informal interpreters do involves facilitating spoken interactions, written translation is also required on construction sites. This practice too ranges greatly in formality. Some companies have full time in-house linguists to translate everything. For example, Ali was employed as an in-house linguist in an oil and gas company in Kazakhstan, and Greg likewise on a nuclear project in the UK, and they split their time between translating documents and interpreting. Some companies outsource to language companies for specific texts, while others use someone onsite or their contacts to translate documents. For instance, on a UK construction 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. 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. However, most companies barely translate documents at all. Often the translation of documents is not something that is planned for, but rather dealt with as the problem arises. The work of the informal interpreter 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 PM Elena, who says that all documentation comes in Spanish. Similarly, on one large UK 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.

He states that the translation is done by built-in translation software, this is another form of translation that may alter the scope of the informal interpreter's work. On another 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.

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 the informal interpreter to do a spoken summary in the required language, an activity close to a sight translation. Understanding which translation solutions are usually used then helps to define the gap in communication that is filled by an informal interpreter and the different scopes of an informal interpreters' work.

Beyond language – mediation

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 professional interpreters and construction workers emphasize the importance of interpersonal skills for communication. The language work can sometimes extend beyond transfer of information to cultural mediation. The term "mediator", used in interpreting studies literature, refers to a person who tries to end a disagreement by helping the two sides to talk and agree on a solution. Although many interpreting settings do not necessarily involve dispute resolution, 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 linguistically as well as often operating in-between workers and management. Interpreters have agency and do not simply act as conduits for the words spoken, rather, they often perform coordination and cultural mediation functions (Martin and Abril 2002, Baraldi and Gavioli 2016).

Several informal interpreters described adapting their interpretation to accommodate the recipient and most of the professional interpreters interviewed shared the sentiment that "there is no such thing as purely interpreting" (Olga) and reported giving cultural explanations or adapting the message. Furthermore, in professional interpreter Ali's opinion, self-confidence, politeness and diplomacy are useful for an interpreter.

Some informal interpreters mediate, which they believe has a positive impact on site relations, João explains: "it's communication … So, it's not about the language, to speak the language, but to be able to communicate. … Communication is empathy, is important in any company, it makes you not be also tired of this psychological stress". João emphasizes other communication skills that come into play beyond language. He gives an 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.

For Project Secretary 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. I'm not diminishing anything but what I'm saying is communication is the

> key. (Interviewer: 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.

Like the discussion with Magda above about adapting to who you are speaking to, untrained professional interpreter Zane says:

> my fellow countrymen, Tanzanians you know, some of the vocabulary some of the – the – the specialized 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. 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 Anna, a professional interpreter, the skill of controlling your emotions is also 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. 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 and it – it definitely takes some emotional monitoring.

The degree varies, but almost all the interpreters agree that their work involves more than transferring the words from one language to another. 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 … 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.
>
> Interviewer: 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 and how interpreters can mediate to make the interaction successful. 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:

> Olga: … I don't think there is such a thing as purely interpreting … you should be neutral in terms of transferring of meaning, but you should be involved in terms of producing the result I think … at the end of the day my job is successful as an interpreter if the outcome of that meeting or conversation is successful. 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. 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 … 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. 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 recognized or rewarded. Likewise, professional interpreter 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."

Other ways the work extends beyond interpreting in the accounts include teaching and explaining phrases to workers and communicating with external

parties such as the police and the mayor. On the other hand, many of the informal interpreters interviewed try to cover the essential transfer of information only, as these people focus on their construction work, do not have developed language skills, or do not want to spend time on language work. There are also factors beyond the individual that affect the extent of their language work, including the expectations of those they interpret for, the languages spoken on the project, ratios of different language speakers, and whether written translation is done by the informal interpreter or 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.

How do they carry out this language work?

Communication on a construction site is highly diverse, constituted of multiple languages, images, gesture and technological aides. The data relating to these aspects of communication and how they are employed by informal interpreters to facilitate communication between speakers of different languages are discussed below.

Flexible spoken language use

A multilingual construction site can be conceptualized as a translanguaging space, where moments of translation occur (Baynham and Lee 2019), that is, an interactionally created space for multilingual and multimodal communication that highlights the complexity and interconnectivity of the resources deployed in interaction (Hua *et al*. 2017). As seen, many participants discuss their use of languages as flexible, switching between the languages and modes available to them to fit the situation. For instance, PM Demitri describes how operatives use their own language and English interchangeably, particularly with the work specific terms that they learn on the job:

> 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.

How the informal interpreter learnt the language is important for understanding how they practice the language work. The informal interpreters in construction are not usually lifelong bilinguals. Instead, they have often learnt their LX(s) as adults and naturally through contact with the language in the country they migrate to work in, rather than through formal study. Indeed, because of this many of this study's participants' English is contextually shaped, as Bulgarian Supervisor Ivan explained: "my technical English is much better than my normal." Such communication, as 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. 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)).
>
> Interviewer: 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. 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 may 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 construction in their country and language before. The scenario described above by Ivan could be illustrative of Grosjean's (1985) 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). Professional interpreter Michail's experience

shows a potential contrast in the ways of working of a professional interpreter and an informal one, and he explains that 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 the glossary how we wanna call it".

Furthermore, the level of translation/interpretation necessary is variable, not stable. For example, as Tutt *et al*. (2012) found on a UK construction site, 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) (Italics in original). Like Bulgarian Site Supervisor Ivan described previously. Meanwhile, in conversation onsite several of the British managers and supervisors mentioned that they had learnt some basic informal vocabulary in Bulgarian or Romanian that they used at work.

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, the informal interpreters switch between modes of communication to relay the message by whatever means they can, and visual communication is prevalent. For instance, drawings are particularly helpful for informal interpreters. Supervisor Ivan explains that in more technical jobs, it is possible to communicate work information through drawings: "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." Informal interpreter Johnathan also describes how visual communication is commonly used in construction, creating meaning using drawings and gesture:

> … the language, if you like, of architectural documents is pretty much international innit, the measurements are the same 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, in the form of architects' drawings, storyboards, instructions etc., the act of drawing itself is used to convey information, as described by Contracts Manager Aleksander: "I bring the drawing out and most of it is just like picture with explanations but it's – 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 … "

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

> Interviewer: … as well as paraphrasing to get the words from them, 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.

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 this information on. Professional interpreters learn notetaking 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, informal interpreter and Project Secretary 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/interpretation process and contribute to the translation as product (Baynham and Lee 2019, p. 35).

On sites where written translations are done, these visuals constitute part of the 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 Manager Marius explains that signs are usually constituted of visual plus text, which is sometimes translated and sometimes not depending on the management.

Nevertheless, British PM David advises that while visual communication is helpful, there can be an overload of visual information leading to it being ignored. Therefore, he argues that 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.

Non-verbal communication

Gesture is used constantly on construction sites to make meaning, as found in previous studies (Including Kraft 2019, Loosemore and Muslmani 1999, Tutt *et al*. 2013b). As will be demonstrated with examples, gestures can be an effective means of communicating, a potentially useful part of a shared repertoire. However, in more complex communication this is not enough and there is high potential for misunderstanding. For instance, on one jobsite in Brazil, Project Secretary 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 because he did not speak Portuguese. The nurse did not speak any English. The nurse had been massaging his arm because, from his gestures, she knew there was a problem with it. In fact, Magda discerned that he was having a heart attack, with pain in his chest and numbness in his left arm. They took him to hospital. 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.

As Assistant Site Manager Sean prompts, the use of gesture onsite is universal, not only between different languages. He gives the examples of signaling 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. Consequently, these existing practices can be built upon. Indeed, one participant, Demitri, a PM who had acted as an informal interpreter, mentioned gesture as the first method of managing communication:

> Interviewer: I'm looking at how people who speak different languages on construction sites manage to communicate. So this includes – (Demitri: 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:

> Interviewer: 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.
>
> Interviewer: Physically …
>
> Demitri: This is what I want, yeah. I want this so big, so long, so wide, so deep for example ((demonstrating with the space between his hands))

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:

> 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)).

As well as gesture, other body language can also be important in interaction. PM Lei mentions 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:

> 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.

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

> Interviewer: 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. She 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 because of these.

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.

Technology

Several types of technology are also used onsite to help with communication, such as radios, phones and digital displays. Phones are used for translations and pictures, but opinions regarding the use of phones are divided. On the one hand, one participant, Contracts Manager Aleksander, professes that "Google translate is my best friend." Moreover, Site Supervisor 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.
>
> Interviewer: 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.

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

> Interviewer: 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.

Likewise, 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, so we try not to have that cos there's an element of risk in there."

Phones are also used as the link to the interpreters if there is no one there to interpret. In fact, Site Supervisor Andrei says that "without phones we're dead, or radios." Phones are also used for pictures in WhatsApp groups, PM Lei took out his phone during the interview and showed the WhatsApp groups for each 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. Site Manager 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 the informal interpreter summarizes the key information in the language needed. Some sites do have videos in more than one language, however, as Assistant Site Manager Sean stressed, showing the video multiple times to cover the different languages spoken is far too time consuming:

> Interviewer: 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 …

Regarding this issue with the use of videos, 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.

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.

The conclusions drawn from this research are now outlined, the limitations of it discussed and directions for future research suggested.

Conclusions

In conclusion, the language work that informal interpreters do includes facilitating communication in key moments such as inductions as well as in daily tasks. The combination of using a translanguaging lens and the perspective of the researcher, who is an interpreter, made it possible to develop a better understanding of the work that informal interpreters do. By conceptualizing construction sites with migrant workers as translanguaging spaces it has been possible to see that these interpreting and translating episodes form only part of the language work. The language work can consist of sight translations, written translation (Building on the findings of Bust *et al*. 2008, Tutt *et al*. 2011) and mediation, not only interpretation (Phua *et al*. 2010, Wasilkiewicz *et al*. 2016, Kraft 2019). As well as switching between their named languages, informal interpreters use drawings, translated or visual signs, gesture and translation technology (Building on the research by Tutt *et al*. 2012, Oswald *et al*. 2019). Additionally, new examples of innovative solutions to language barriers have been detailed.

This perspective has also highlighted how the position of informal interpreter is often not clearly delineated, other people may act as sub interpreters at times and other migrant workers also translanguage and many of them are receptive bilinguals, so they can understand the information transmitted but may not be able to participate in a communication transaction.

Furthermore, it is likely that the broader findings concerning how bilingual workers communicate in a workplace, in which some parties do not share a common language, are transferrable to other industries. Specifically, the theoretical approach employed in this paper, using the concept of translanguaging, has the potential to be fruitful in research on non-professional interpreting in other contexts.

In summary, this research contributes to the literature on communication with migrant workers in construction which is an under-researched area that will continue to present challenges internationally. The novel contribution lies in having demonstrated the different ways that language work on construction sites is performed and the variable scope of the informal interpreter's work.

Recommendations 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. With these findings about the different ways informal interpreters currently facilitate communication on construction sites, those who work with informal interpreters can make more informed choices about their communication at work.

Some useful findings that could be used to improve practice are initiatives involving technology. The strategies reported include 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, and using translation technology. Implementing several such initiatives in conjunction would improve communication on multilingual projects. However, as seen in the data, promising technological aides to communication may be restricted by budget. Further, it is important that the quality of machine translations are assessed and to consider where this type of communication is useful and where it's limits are.

Regarding the recommendation of formalizing the language work, Tutt *et al*. (2011) state that this should be done to recognize the valuable linguistic skills of the workers. Indeed, 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 utilized without fair compensation for the responsibility and skills involved. Furthermore, if the position were formalized it would be possible to establish a scope of work and reasonable expectations of what the work involves. Other advantages to formalizing the work of informal

interpreters include setting boundaries, meaning that bilingual workers can be more confident in their task and stop workers from feeling that their skills, and investment, are being taken advantage of, as professed by participant Fernando and found by Oswald *et al*. (2019). 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. What is within the remit of the job should be clarified, such as whether written translation is their responsibility and whether they also run language learning sessions. It could also be determined whether the language worker is only responsible for translating and interpreting at key formal moments, like the induction and toolbox talks, or whether they are to be available to facilitate communication throughout the workday and act as a focal point for developing communication initiatives. What is more, were the position formalized then the language worker could develop bilingual glossaries to work with and have access to relevant documents and presentations in advance to be able to prepare and facilitate the communication to the best of their ability. Some preparation for this task could make a difference to how much of the information the informal interpreters manage to transmit. 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.

Particularly, it has been demonstrated that it is unsafe to rely on one person to interpret, as suggested by Oswald *et al*. (2019), and shown how "sub" interpreters can be available or phones used to contact back-up interpreters.

Limitations and recommendations for future research

This study has researched informal interpreters on construction sites specifically, however there is scope to research language work that occurs throughout the CI, such as in the tendering process and in site offices.

Furthermore, a study that manages to collect interactional data and in languages that the researcher(s) can work with would be hugely beneficial for further understanding communication practices on multilingual construction sites. Particularly, it has not been possible to understand the experiences of workers relying on these informal interpreters. These workers may have different opinions about what information they need interpreted, potentially work information that the other interlocutors simply have not 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 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. Further, 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.

A further limitation is 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).

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