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Initial person reference in Providence Island Sign Language

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When referring to non-present entities, speakers and signers can select from a range of different strategies to create expressions that range from extremely concise to highly elaborate. This design of referring expressions is based partly on the availability of contextual information that can aid addressee understanding. In the small signing community of Providence Island, signers' heavy reliance on extra-linguistic information has led to their language being labelled as context-dependent (Washabaugh, de Santis & Woodward 1978). This study investigates the semiotic strategies that deaf signers in Providence Island use for referring, and examines how signers optimise specificity and minimise ambiguity by drawing on shared context. We examined first introductions to non-present people in spontaneous dyadic conversations between deaf signers and analysed the semiotic strategies used. We found that signers built referring expressions using the same strategies found in other sign languages, yet designed expressions that made use of contextual knowledge shared through community membership, such as geography, local spoken languages and traits of fellow islanders. Our signers also used strategies described as unusual or unattested in other sign languages, such as unframed constructed action sequences and stand-alone mouthings. This study deepens our understanding of context dependence by providing examples of how context is drawn upon by communities with high degrees of shared knowledge. Our results call into question the classification of sign languages as context-dependent and highlights the differences in data collection across communities and the resulting limitations of cross-linguistic comparisons.

1 Introduction

Discussing things that are not present in space or time, also known as *displaced reference* (Hockett 1960), is central to everyday communication, and to do it signers and speakers draw on all communicative tools in their arsenal. In addition to signs and words, they use their bodies for other communicative strategies, for example using their hands to represent or trace an object, using their body to embody a referent, or using their hands to point to a nearby object or space to invoke a meaning related to the target. Both in speech and in sign, people weave together complex multimodal utterances that capitalise on the tools for meaning making or *semiotic repertoire* available to them in their communicative setting (Enfield 2009; Kendon 2014; Kusters et al. 2017).

The semiotic repertoire available in each communicative setting is different, and this informs communication practices. One important factor is that different pairs of speakers or signers may share different levels of context as a result of their individual backgrounds. Members of culturally bound communities, for example, share knowledge about local histories; for instance, when two Trinbagonians talk among themselves, one may say "the coup" and both know it refers to the failed attempt to overthrow the government of Trinidad and Tobago in 1990 (Millette 1991). Geographically bound communities share knowledge about distribution of places across spatial layouts; this may result in neighbours pointing in the direction of the nearest supermarket when they discuss where they went grocery shopping. This kind of knowledge provides a shortcut, allowing signers and speakers to be less explicit or specific in communication, and instead rely on the shared context between them and their interlocutor.

With respect to displaced reference, shared context is particularly important, because referring expressions are formulated with the addressee in mind. For example, a speaker referring to their sibling may have to choose between different expressions such as *my brother*, *Javed*, or *the tall boy with glasses*. The selection of any one of these depends on what the addressee knows about the referent. In this process of selection, there are two important principles at play, (i) create an expression that has the most chance of success with the addressee and (ii) be as brief as possible (Sacks & Schegloff 2007; Enfield 2012). The use of contextual information is important in this selection process because the addressee requires certain information to resolve each expression; the knowledge that the referent is related to the speaker, the knowledge of the referent's name, and the knowledge of the referent's appearance. The more information shared between speaker and addressee, the easier it is to create concise and informative referring expressions.

In small communities, shared knowledge appears to play an important role in referring. Sign languages used in small-scale communities, most often in geographically remote rural areas, have been noted to use a high degree of context-dependent strategies (de Vos & Pfau 2015). Most research on this phenomenon has focused on the use of one specific semiotic strategy: pointing. This work has investigated how these signers point to real-world locations to index

referents associated with those locations, and in doing so incorporate shared spatial context to communicate (e.g., de Vos 2012; Bauer 2014). While pointing and spatial knowledge are important domains where shared knowledge can influence reference, there are likely many more domains of context that can feed into formulating referring expressions in small communities.

In this paper, we investigate how signers deploy various semiotic resources when establishing reference, and examine how referring expressions incorporate contextual knowledge. To do so, we examine how signers of Providence Island Sign Language (PISL) perform displaced reference to non-present people in conversation. PISL is particularly well suited to this study; the language is used on a small Caribbean island, among a signing community that shares a high degree of both cultural and geographical context. We examine first introduction, perhaps the most challenging form of reference, and we focus on the practice of person reference, a domain that is richly attested in everyday conversation. Our findings shed light on the vast array of strategies that PISL signers use when introducing characters, and in doing so they contribute to our wider understanding of how context can shape communicative practices in the domain of reference.

This paper is structured as follows. Section 2 introduces the topic of displaced reference, followed by an overview of how it is performed in sign languages. We then introduce PISL, and the socio-cultural context in which it is used. Section 3 outlines the present study, with an overview of research questions, data collection and coding. In section 4 we present the findings and in section 5 we discuss them. Section 6 concludes.

2 Background

2.1 Displaced reference

Displaced reference, or the ability to talk about something removed from the here and now, is a core feature of human communication (Hockett 1960). While it is pervasive and widespread in communication, displaced reference is demanding to perform. To identify a referent meaningfully, the speaker or signer must consider the perspective of their addressee, leverage the information they share, and provide additional information as necessary (Grice 1975; Clark & Bangerter 2004). Thus, the act of displaced reference is guided by situational factors, such as the identity of the interlocutor, which serve to influence the choice of referring strategy (Schegloff 1972; Enfield 2012).

Displaced reference presents a special challenge when a new referent is introduced for the first time. Introductions are an important task, as they serve to *anchor* or lay the foundation for the referent as the discourse unfolds, creating a mental file to which all subsequent information about a referent can be added (Heim 1988; Steinbach & Onea 2016; Clark 2021). Unlike referring back to something or someone, introductions require the insertion of sufficient information to identify a referent that is, by virtue of being new to the discourse, less cognitively accessible than referents that are already under discussion (Ariel 2001). While first mentions are typically

considered the least accessible, it is generally agreed upon that some instances of initial reference can be more accessible due to extralinguistic factors such as world knowledge or physical context (Vogels, Krahmer & Maes 2019).

'Newness' is a vital consideration when deciding how to refer to non-present entities. One major domain of research on reference has focused on how a referent's newness affects the choice of expression used to mark it. To explore this, studies have compared first mentions/introductions of referents to maintained reference or reintroduction, mainly using narrative data. This work has demonstrated that introductions are longer than subsequent references, in speech (e.g., Chafe 1976; Givón 1983), in sign (e.g., Hodge, Ferrara & Anible 2019), and in gesture (e.g., Hoetjes et al. 2015; Namboodiripad et al. 2016). In fact, it is not just quantity of marking, but also the quality of referring expressions that differs. Some spoken languages tend to use indefinite articles for new referents and reserve definite ones for repeated reference, for example the English distinction between *a girl* and *the girl* (Heim 1982; Kamp & Reyle 1993). Furthermore, multimodal studies show that referent newness affects the type of information conveyed by speech-accompanying gestures. Debreslioska et al. (2013) found that in German, introductions were more often accompanied by gestures that give entity information such as size or shape, rather than embodied gestures (or *character viewpoint* gestures) that give information about actions, which are favoured in subsequent reference. Similarly, in examining Auslan, the primary signed language of the Australian Deaf community, Hodge et al. (2019) found signers tend to use more lexical strategies in introduction but favour embodied strategies for subsequent reference.

Another line of research has further examined the semantic content of expressions used in first reference from a typological perspective, finding cross-cutting similarities across languages in how speakers introduce new people to the discourse. Looking across spoken interactions from diverse language communities, Stivers et al. (2007) find that speakers choose from four major categories when introducing a new referent; (i) names (e.g. *Zara*), a conventionalised link between word and specific individual; (ii) relational descriptions (e.g. *my cousin*) which use relational words like kinship terms to triangulate reference; (iii) non-relational descriptions (e.g. *the man who lives on the hill*) which provide descriptive information about the referent; and (iv) zero marking (e.g. cross referencing on the verb) in which the referent is marked by contextual information. Studies that draw on video corpora of spoken languages have revealed additional ways of introducing a new referent, highlighting that this activity is performed multimodally. Strategies such as pointing to referent's homes or habitual locations (Brown 2007; Levinson 2007; Sidnell 2007; Brück 2016) and using ad-hoc gestures that give descriptive content about the referent (Sidnell 2005) have been documented as common strategies for referent introductions, especially in small-scale language communities. While this line of research has taken a broad typological scope and even included multimodal perspectives, the focus has nevertheless been on spoken languages.

2.2 Displaced reference in sign languages

Signers have a rich set of strategies at their disposal for making reference to new people, things and events. Some of these strategies are highly context independent: they can be understood through a relatively stable link between form and meaning and do not require a great deal of supporting information from the discourse and communicative context. Examples include the use of single lexical signs, lexical noun phrases or *mouthings*, (the often silent articulations of spoken words, e.g., Crasborn et al. 2008). These context independent strategies are commonly recruited in first reference (e.g. Hodge et al. 2019).

Other strategies create meaning dependent on the context of communication, often drawing attention to items and spaces in the interaction setting. Pointing is one such strategy, as it manages attention in the physical space surrounding the signer, and can be used to refer to items that can be found or imagined within that space. To manage attention, pointing combines a conventional handshape with a context-dependent direction. Pointing is a common strategy for introducing new referents in sign language discourse (Barberà & Zwets 2013), while points back to locations already associated with particular referents are frequently used for discourse linking and anaphoric reference (Sandler & Lillo-Martin 2006; Steinbach & Onea 2016).

In addition to these overt strategies, signers can also use strategies in which a referent is not explicitly introduced, but instead implied through contextual interpretation. An example of this is *constructed action* (CA), a strategy in which signers recruit manual and non-manual articulators to embody the thoughts, feelings and/or actions of a referent (Lillo-Martin 2012; Cormier, Smith & Sevcikova-Sehyr 2015; Steinbach 2020). When CA is used in referent introduction, various visual cues such as eye gaze, bodily movement, and signing speed can implicitly cue the interlocutor that a new referent is being represented. This richly improvised embodied strategy derives meaning not from conventional knowledge, but from contextualisation of the sequence as representing a particular referent. Indeed, while CA has been found often in first reference, it is commonly accompanied by other more overt and context independent elements (Cormier, Smith & Zwets 2013).

While there is a growing body of work on reference in sign languages, research to date has focused almost exclusively on referring in languages used by large deaf communities in urban settings, often called *macro-community sign languages* (Schembri et al. 2018), or *deaf community sign languages* (Meir et al. 2010). As a consequence, we know surprisingly little about how reference is performed in the many other settings in which sign languages are used worldwide. Many small-scale or *micro-community sign languages* (Schembri et al. 2018), have been documented in rural, labour-intensive and geographically remote communities: a subset often referred to as *rural sign languages* (de Vos & Pfau 2015). Some research findings suggest that these languages exhibit typological differences with respect to reference when compared to sign languages used by urban deaf communities (de Vos & Pfau 2015). Indeed, authors have suggested that strategies

6

for referring in these communities may be more context-dependent, since community members have a high degree of shared knowledge, and may rely on relatively fewer shared linguistic conventions (cf. Sandler 2012).

This suggestion is supported by research that compares the use of pointing for reference in macro- and micro-community sign languages. A common strategy used in many macro-community sign languages is to 'assign' a referent to an arbitrarily-selected location in the space in front of the signer by first naming or describing the referent, then pointing to the selected location (e.g., Friedman 1975; Collins-Ahlgren 1990; Engberg-Pedersen 1993). In doing so, a link is formed between the referent and an empty space in the communication setting. This allows the signer to then refer anaphorically to the same referent throughout the discourse, using points towards the referent's assigned space (Cormier, Schembri & Woll 2013; Perniss & Özyürek 2015; Steinbach & Onea 2016; Wienholz et al. 2018). Notably, the assignment of absent referents to arbitrarily-selected spaces has not been attested in many micro-community settings. Instead, these signers show a preference for pointing to real-world objects or locations that can be associated with the referent using information shared between the signer and the addressee. This strategy, which we refer to as *metonymic pointing,* has been documented in diverse micro-community sign languages to both establish reference (e.g., Washabaugh et al. 1978; Padden et al. 2010; Schuit 2014) and to anaphorically refer back to an established referent (Bauer 2014; de Vos 2012; 2014). Because members of the language community share a baseline understanding of geographical distribution of community members, they rely on this contextual knowledge to streamline referencing.

Aside from a shared understanding of their surroundings, it is likely that other domains of shared knowledge among micro-community signers also factor into referring. Given their small community size, much more may be in the common ground, such as kinship relationships among referents or current events within the community involving specific referents. Indeed, Meir et al. (2010: 3) suggest that this common ground allows micro-community signers to be "less verbally explicit than people who do not have much in common". This may result in signers producing referring expressions that may be confusing for outsiders to the community. For example, Sandler et al. (2011: 2027) describe their difficulty in interpreting a story retold by a signer of Al-Sayyid Bedouin Sign Language, pointing out it appears to "rely heavily on shared knowledge for interpretation".

To recap, reference in sign language is a task that relies on both context independent and context-dependent devices. We have a growing understanding of how signers refer in well studied sign languages, based on results from experimental work and some corpus studies. We have reason to believe that referring strategies may differ between macro- and micro-community sign languages. Much of the typological work on signed referring in this domain has centred on the use of pointing for displaced reference, and about the shared geographic and social information that supports this kind of referring. We still know little about the role that other sources of shared knowledge play in the referring choices of signers in small, close-knit communities.

2.3 Research language and setting

Providence Island Sign Language (PISL) is used in the island of Providence (Spanish: *Providencia*), located off the Caribbean coast of Nicaragua. Despite being part of Colombia, the island is linguistically, culturally and ethnically distinct from the mainland. Providence has a history of deafness and signing stretching back at least 120 years (Washabaugh et al. 1978). Within this time, PISL emerged without outside influence due to sustained genetic deafness among the island's geographically isolated and highly interrelated population. Today, Providence is home to 13 deaf people, with ages ranging from below 10 to above 80, out of a total population of roughly 4,500 (DANE 2018).

The backgrounds of these deaf people are highly diverse, however they all are born to hearing parents and live with hearing family members. While in the past, deaf siblings were very common, today most individuals are the only deaf person in their family. The one exception to this is an extended family with two adult deaf sisters and their deaf uncle. For most other deaf people, contact with other deaf islanders is not part of daily life and they communicate mostly with their own individual networks of hearing family and friends. These social structures have led to a great deal of linguistic variation. In the lexical domain for example, even signs for commonly used concepts such as *dead* and *money* differ across deaf signers' networks. A few deaf islanders have also spent time living on the neighbouring island of San Andres, or more recently mainland Latin America, and have adapted their previous signing experience to facilitate communication with their fellow islanders. Some of these individuals bring knowledge of national sign languages, while others primarily have experience with non-institutionalized signing in home settings (i.e., homesign). However, the large degree of lexical variation and heterogeneity of backgrounds do not appear to present major obstacles to communication among deaf signers, instead their communication is fluent and mutually intelligible.

Previous research has highlighted some interesting typological features of PISL. First, PISL has been reported to have relatively small sets of signs in key semantic domains. In a crosslinguistic study of sign languages, Woodward (1978) found that PISL had the smallest set of kinship terms, with signs for *mother*, *father*, *offspring* and *relative*. Accompanying this is a high degree of polysemy; for example the sign MAMA[1] can be used flexibly to mean both *mother* and *woman* (Cortés Bello & Tovar 2019). PISL is also claimed to make use of a relatively high degree of non-manual elements in sign formation. Washabaugh et al. estimate that between 25–35 % of signs in PISL contain movements of the face and or body, compared to a mere 1.9% of signs in American Sign Language (Washabaugh et al. 1978; Washabaugh 1986). These non-manuals include mouthing of spoken words, a phenomenon stemming from contact with the local spoken languages (Crasborn et al. 2008), in this case Spanish, English and Islander Creole English (Bartens 2013; García León & García León 2019).

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[1] Following convention in the field, we use English glosses in small caps to represent signs.

In all these domains, instead of relying on linguistic conventions, PISL signers seem to use contextually motivated strategies to achieve referential specificity. For example, despite the relatively small set of colour signs, PISL signers can communicate a range of colours by pointing to an object in their immediate environment that matches the desired specific colour. Pointing is used not just for the visible surroundings, but also the broader island geography. PISL has very few place names, and signers instead point in the direction of a specific locations in order to identify that location (Washabaugh et al. 1978). PISL signers also capitalise on multilingual resources in communication by incorporating elements of the surrounding spoken languages into their signing; indeed, some concepts are exclusively expressed solely through mouthings of spoken words (Washabaugh et al. 1978).

The domain of person reference in PISL blends both convention and context. In Providence, *name signs* or signs attributed to individuals, are sometimes used to refer to specific people. These signs are used non-vocatively and often based on salient features of the referent's appearance or behaviour (Washabaugh 1980; 1986: 69). However, much more common than single name signs are flexible multi-sign expressions that recombine salient identifying features of a referent. Washabaugh (1986) deemed naming expressions in PISL to be ambiguous given their lack of uniqueness and specificity, given the fact that multiple referents could go by the same sign name/expression and multiple names/expressions could fit the same individual. For example, in a study of referring expressions, the same man was found to be referred to variably as (i) GOLD-TOOTH + BARBER, (ii) BARBER + BUSH-POLICEMAN and (iii) GOLD-TOOTH + BUSH-POLICEMAN (Washabaugh 1986: 71). Despite Washabaugh's perceived ambiguity, the naming expressions produced by signers seem readily understood, suggesting that signers capitalise on their shared community knowledge to formulate referring expressions, in this instance referents' multiple professions.

Washabaugh's early observations on person reference in PISL are based on limited empirical data, collected through an elicitation task. There is in fact little documentation of how PISL naming and referring practices function in spontaneous signing among islanders, nor of how signers incorporate other context-dependent strategies into person reference.

2.4 Interim summary

In summary, displaced reference is ubiquitous in communication yet requires some degree of sophistication in its formulation. First mentions in particular require sufficient and specific information, as they introduce characters that are new to the discourse and less accessible to the interlocutor. Speakers and signers rely on complex semiotics, drawing on conventional means like lexical words and signs, as well as more improvised and/or contextually grounded means like pointing and embodied depiction. In micro-community settings, sign language users tend to lean heavily on shared context when referring, yet our understanding of this phenomenon

centres around use of space and pointing. It is likely that a host of other factors contribute to the shared context between signers, including cultural, kinship, community knowledge.

3 The present study

This study addresses how signers of PISL, a micro-community sign language with users who have a high degree of shared social and geographic context, perform displaced reference to people. Providence Island presents the optimal conditions for a study of this kind: the island community is small and densely interconnected, and social integration is key to community membership and participation. As a result, most people in Providence spend their time talking about other people in Providence. This presents a natural setting where recognitional reference, references where the interlocutor can identify the specific person as a referent (Sacks & Schegloff 2007), is the norm. This is similar to many other small spoken language communities in which person reference has been studied (e.g., Levinson 2007; Sidnell 2007). PISL signers have also been shown to incorporate diverse, contextually motivated semiotics into their signing, that draw both on contextual and conventional knowledge, such as pointing to nearby objects for colours, mouthing words from spoken Spanish or Creole and embodying a referent to show their actions.

To investigate how these factors fit together, we asked the following research questions: (i) what semiotic strategies do signers use to introduce new characters to the discourse, and (ii) how do signers combine different types of referring strategies? In asking this, we aim to investigate not only the resources used by signers, but also the types of context signers invoke when referring.

3.1 Data collection

Data for this study was collected during a three-month field trip to Providence in early 2019, by the fieldwork team, comprising (i) the first author, hearing researcher and (ii) Ian Dhanoolal (ID), a deaf researcher with previous fieldwork experience in the community. Data was collected as part of a language documentation project, and signed consent was obtained from all deaf participants (Omardeen 2019). Consent was obtained in briefing sessions in which ID used PISL to explain to signers in the objectives of the research project, how data would be used and how privacy would be managed. Recordings were made using two Canon Legria cameras, at 25 frames per second. Sound was recorded using the camera-internal microphone. Recordings were made in Canon's .MTS format, later converted to .MP4 using the software Handbrake (*Handbrake [Computer software]* 2019).

The dataset used in this study is a sample comprising 1hr 27 minutes of spontaneous dyadic conversations, from 6 deaf PISL signers. Deaf PISL signers were recruited and paired up based on their availability and familiarity with each other (e.g., neighbours, relatives). Recording sessions were held at participants' homes and workplaces. Before recording, ID invited participants to

talk about whatever they wanted, suggesting topics such as childhood memories or life stories. The researchers set up a camera to face each participant and sat nearby but out of sight, leaving the participants to converse without supervision. In some instances when conversations died down or didn't get started easily, ID stimulated the conversation by introducing topics. When participants were finished talking, they got the attention of the researchers and signalled that the session was over. We sampled 5 different sessions, with clips of between 17–26 minutes from each session. A summary of the data can be found in **Table 1**, and **Figure 1** shows the signer pairings of each session as well as where each signer lives on the island. Full length video recordings for each session are available via the Endangered Languages Archive at http://hdl.handle.net/2196/00-0000-0000-0013-2411-8, and clips of the individual examples mentioned in this paper are available via the Open Science Framework at https://doi.org/10.17605/OSF.IO/ZGUQ6.

3.2 Transcription and annotation

The data were transcribed and annotated the using the video annotation software, ELAN (*ELAN [Computer software]* 2020). The team first examined each recording and identified all instances of initial reference to people. Coders took into account all communicative behaviour that served to introduce a new referent. This included explicit introductions that gave information about the referent as well as more implicit introductions that highlighted the actions of the referent. Given the study's focus on displaced reference, coders considered only third person reference, excluding reference to both participants in the exchange and people visible during recording. The only exception was when present parties were used to triangulate reference, e.g., *your cousin*. These cases were included, since the addressee, *you*, was not the target of the referring expression.

Determining where initial person reference ended was not straightforward, especially given the interactional nature of the data. Referents were often introduced more than one strategy, and strategies could be met with backchanneling from the addressee. As the focus of this study was the RE itself, we defined the boundaries of the referring expression by relying on the organisation

Session	Duration	Signer I	Signer II	Location
AB-LP	00:20:00	AB	LP	Southwest Bay
BT-LP	00:23:01	BT	LP	Rocky Point
CN-FB	00:23:13	CN	FB	Freshwater Bay
CN-LP	00:26:29	CN	LP	Rocky Point
FB-JH	00:17:30	JH	FB	Freshwater Bay

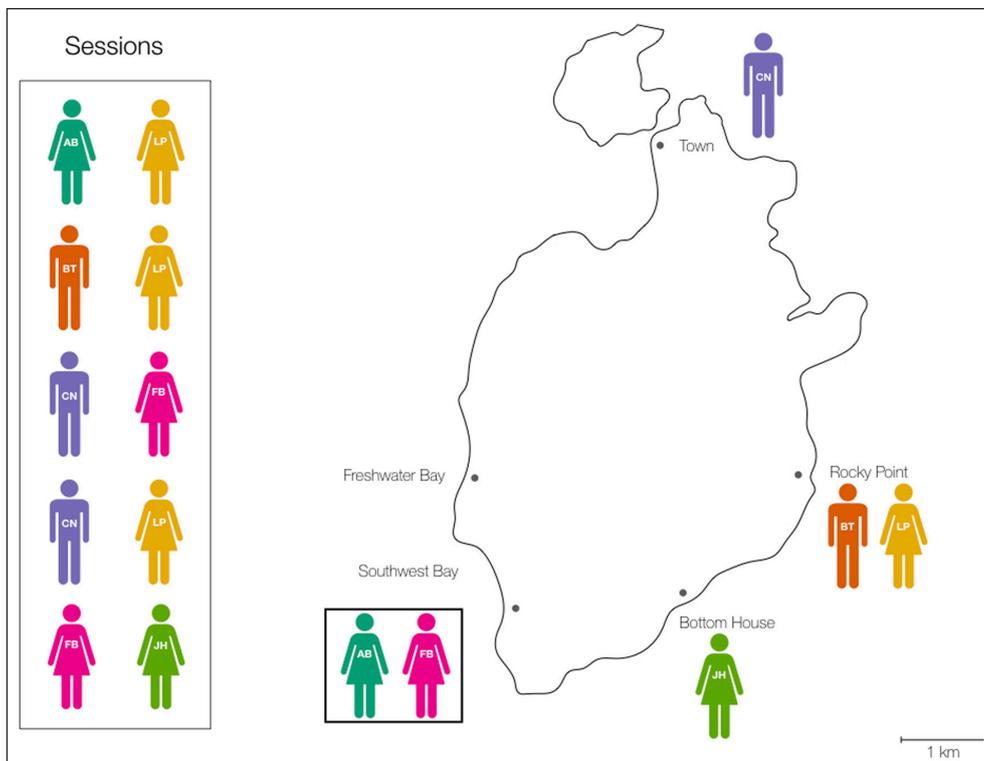**Table 1:** Information on recording sessions.

Figure 1: Distribution of signers across recording sessions (left) and across the island (right).

of turns in the conversation. The RE was thus defined as the expression(s) used within a signer's turn-at-talk (Sacks, Schegloff & Jefferson 1974) where they either explicitly signaled or implied reference to a new person.

As discussed by Washabaugh, resolving person reference is difficult for outsiders to the community, and without extra-linguistic information, "(u)tterances are usually confusing unless interpreters have independent knowledge of the actions being described" (Washabaugh 1986: 36). Given the fieldwork team's experience of several months in the field, coders were familiar with much of the extra-linguistic information needed to resolve reference, such as the island's geography, signers' social circles and the current events surrounding the time of recording. Despite this, coders still faced instances where they were unsure or unable to identify referring expressions. Furthermore, specific signers were more difficult to understand than others, in part because coders spent relatively less time with them during the fieldtrip.

For data coding, all steps were performed independently by two groups: (i) the first author and (ii) a coding team comprising fieldworker ID alongside a hearing, signing research assistant. Coding proceeded in several rounds. First, instances of reference were coded independently by both coding groups. Each went through the recordings and identified first mentions of non-present people. The two coding groups then compared their work and all tokens of first reference were

discussed. Those that were identified independently by both groups were included in the sample. Those that were identified by only one coding group were discussed among the coders. This discussion resulted in either agreement in which case the instance was included, disagreement in which case the instance was excluded, or mutual agreement to leave the case out of the sample due to lack of clarity. This process yielded 106 referring expressions (REs) for further analysis.

Once REs were identified, the data were enriched with rough translations of the utterance containing the referent, and the surrounding utterances, made by the first author based on coding discussions. In this stage, utterances were excluded if the first author could not provide a satisfactory translation. This left a dataset of 92 REs. The first author then coded the semiotic strategies used in each RE, employing coding categories adapted from Hodge et al. (2019).[2] The categories used for this coding are summarised in **Table 2**, along with the conventions used to represent them in the glossed examples that follow in the paper.

Category	Explanation	Glossing Conventions
Conventional sign(s)	Single or multiple conventional signs strung together in referring. Includes name signs.	Signs glossed in small caps, e.g., RELATIVE. Name signs glossed as NS. Unconfirmed name signs glossed as NS^{unknown}.
Mouthing	Silent articulations of identifiable spoken words, either accompanying manual signs or standing alone.	Words written in quotation marks e.g., "mama". Unconfirmed spoken names were represented as "name ^{unknown}".
Pointing	Manual or non-manual pointing behaviour.	Points glossed as IX. Self-points glossed as IX-1, points to interlocutor glossed as IX-2. Non manual points glossed as IX-NM.
Embodiment	Mapping the referent onto the signer's body, including token depictions and constructed action.	Glossed as a description of depiction in small caps with component words connected via hyphens, e.g., WALK-WITH-CANE. Constructed action glossed with CA followed by a description, e.g., CA: stares menacingly.
No explicit reference	No explicit reference, information about new referent encoded in predicate.	

Table 2: Coding scheme.

[2] While we recognise that eye gaze is important to reference (Garcia & Sallandre 2020), we excluded as a criteria for categorisation because we were unable to reliably distinguish which of its multiple possible functions (e.g. pointing, embodiment) it was performing.

Conventional signs were defined as signs that were consistently used to evoke a specific meaning. Given that PISL has a relatively understudied lexicon and initial work on a lexical database is still underway, we used specific criteria to guide classification of conventional signs. For a sign to be considered conventional, the first author looked across annotations to see if either (i) the same sign was used by the same signer multiple times, or (ii) the same sign was used by multiple signers. A sign could also be considered conventional if it was recognisable across the fieldwork team (first author, ID) as having a specific meaning. For example, the sign RELATIVE was considered a conventional sign because it was used across several signers in the sample and multiple times by the same signer. Name signs were classed as conventional based on the same criteria. Name signs for referents we did not know were marked as unknown. The category of conventional signs included single signs, e.g., RELATIVE as well as strings of signs, e.g., RELATIVE + FAT.

Mouthing was defined as the articulation of (identifiable) spoken words from the surrounding spoken languages. We included mouthings that combined with manual signs, as well as those that appeared without a manual component. Mouthings we observed were either full or partial articulations of semantically associated words in Spanish and Creole.[3] This category also included mouthings of spoken names. Spoken names for referents we did not know were marked as unknown.

Pointing was defined as the extension of finger(s) or other body parts to manage attention towards delimited spaces. This category included pointing formed with various handshapes, as well as pointing using non-manual body parts such as the lips or chin. Points were glossed as 'index' or IX in the data, with numbers affixed to indicate points to self, IX-1, or the interlocutor, IX-2.

Embodiment was defined as any strategy in which the signer mapped the referent onto their own body in a non-conventionalised way. This included token depictions in which single conventional signs were used in non-conventional ways, as well as longer sequences of constructed action. In both cases, embodiment was identified through the increase in number and intensity of visible articulators used by the signer (Cormier et al. 2015; Ferrara & Halvorsen 2017).

No explicit reference was defined as any instance in which a new character was introduced to the dialogue without explicit introduction of the referent. This category included subject omission in which verbal predicates were not preceded by explicit subject expression.

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[3] Given the high degree of lexical overlap between Islander Creole and Standard English (Bartens 2013), it is difficult to designate mouthings as stemming from one or the other. We assume Creole for the purposes of this paper, since Creole is dominant in day-to-day life, and Standard English is limited to religious settings (García León & García León 2019), that all non-Spanish mouthings stem from Creole not Standard English. We represent Creole mouthings with English orthography, and provide English translations for Spanish mouthings.

4 Results

In examining the results, it is important to note that despite sampling 6 different signers in 5 different conversations, each individual conversation and signer contributed different numbers of referring expressions (REs) to the overall dataset. Given the diversity of conversation topics, there were differences in number of first references produced per session. Also, due to individual differences in personality and conversation style among signers, some individuals dominated conversation and produced many REs, others were less talkative and produced few. Finally, some signers were simply much harder to understand than others, resulting in more of their potential REs being omitted. **Figure 2** gives an overview of the REs comprising the dataset, and discussed in the results. In the section to follow, we will examine a representative set of strategies used across most of the signers we sampled, and discuss key elements that characterise first reference in PISL.

We examined how signers used five semiotic strategies for referring: conventional signs, mouthing, pointing, embodiment, and no explicit reference. The distribution of these strategies across REs, organized by signer, is presented in **Table 3**. A first glance at the table reveals that
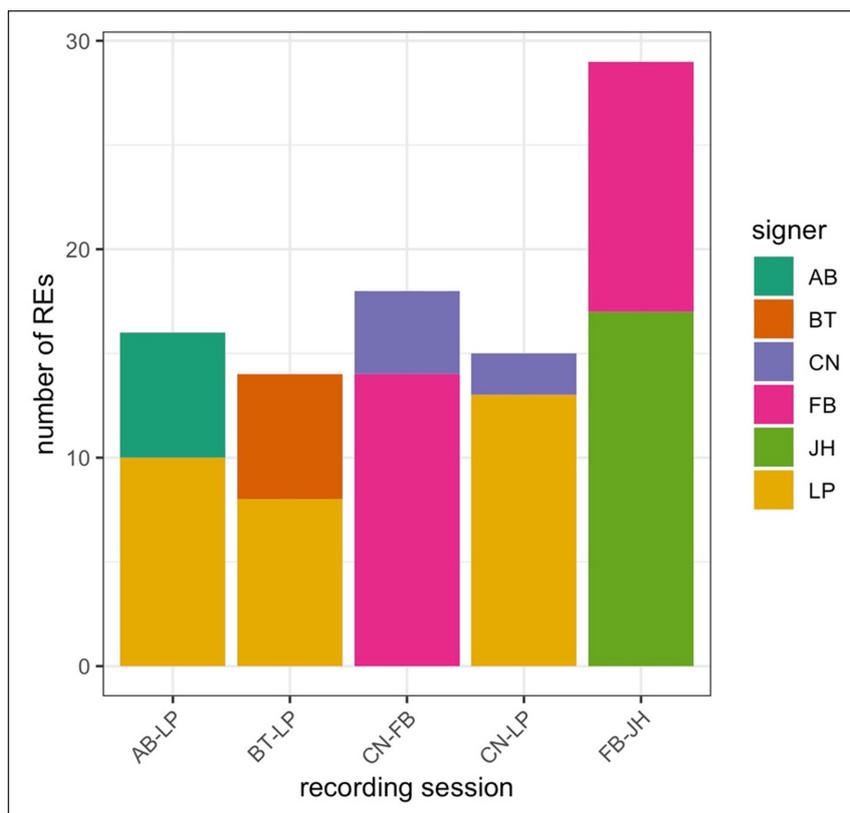

Figure 2: Number of REs per signer by recording session.

Strategy	Number (%) of REs	AB	BT	CN	FB	JH	LP
Conventional sign	73 (79%)	x	x	x	x	x	x
Mouthing	26 (28%)	x	x	x	x	x	x
Pointing	46 (50%)	x	x	x	x	x	x
Embodiment	12 (13%)	x			x	x	x
No explicit reference	2 (2%)					x	x

Table 3: Prevalence of referring strategies and use among individual signers.

the most commonly used strategy was conventional signs, used in around 79% of all REs and across all signers. Points were also highly common, used by all signers and in roughly half of all REs. Less frequent yet also used across all signers were mouthings, which occurred in 28% of REs. Embodiment was relatively low frequency, and used by four of the six signers across 13% of REs. Finally, in 2% of REs, produced by two of the six signers, there were no explicit markers at all and signers relied on implying a new referent.

In the following subsections, we describe in detail how each of these categories were deployed by signers. We discuss examples selected for their representativeness of each category.

4.1 Conventional signs

The use of conventional signs was overwhelmingly common in the dataset, occurring in around 79% (n = 73) of all REs. Conventional signs also were frequently accompanied by other strategies, particularly pointing and mouthing. While conventional signs were also often strung together with other conventional signs to form phrases, around 23% of all REs were single conventional signs. These included name signs and lexical labels such as DOCTOR.

4.1.1 Name signs

One subset of conventional signs that was frequently observed was name signs. Like in other sign languages, name signs appear to have descriptive origins but those origins may be obscure or unavailable to the interlocutor. Most name signs recognised by the coders referred to signers' close family members or other deaf people on the island. Coders could confirm sign names used by all but two signers; these were the signers with whom the fieldwork team spent the least amount of time, and as a result were less familiar with their name sign repertoire.

An example of a name sign can be found in **Figure 3**, where a signer is talking about her husband being treated in hospital. In the example, she describes her relative phoning with the

gloss: NS   CA: pull out paper and write
translation: **Name** pulled out paper and wrote

Figure 3: Name sign.

hospital and writing down when her husband will be released. She uses the sign glossed NS to introduce the referent, her relative, followed by a sequence of constructed action in which her relative takes out a notepad and writes down information.

Notably, having a name sign did not ensure that a person would always be referred to by that name sign. For example, when referring to her sister, one signer used a name sign with one interlocutor but a description with another interlocutor. While both interlocutors were familiar with the referent, the signer chose to use her name with only one of them. This choice may signal that the signer believed the referent's name sign to be unknown to one of her interlocutors, but known to the other. Indeed, a person may be known to many on the island, while their name sign may be known only within certain of their social circles. In fact, we found evidence of signers encountering difficulty when producing name signs that were not known to their interlocutor, despite the referent being a mutual acquaintance of both parties to the conversation.

4.1.2 Descriptions

Aside from naming referents, conventional signs also often provided purely descriptive information to identify the new referent. Description length varied from a single sign to several signs strung together. Short descriptions identified a new referent with a single conventional sign. For example, in **Figure 4**, the signer retells a story of getting lost in the neighbouring island of San Andres and asking a police officer on the street for directions. To introduce the policeman, presumably a stranger to herself and her interlocutor, she uses the single conventional sign OFFICER.

Longer strings of descriptions were often combined with other strategies to pinpoint specific, recognisable referents. They combined with pointing to localise the referent's home or habitual location in the island's geography, or linked the new referent back to someone previously mentioned in the discourse. Conventional signs (including name signs) could also be used in

Figure 4: Single sign description.

possessive constructions in which new referents were triangulated through previously mentioned referents. These were often combined with additional descriptions of the new referent.

4.1.3 Relational terms

Signers frequently used a small set of conventional signs to relate referents, specifically the signs MAMA, PAPA, RELATIVE, FAMILY, OFFSPRING, LOVER and FRIEND. When these signs were used in a relational sense, they very frequently preceded by a point to the signer, the interlocutor, or another party to whom the referent was related. For polysemous signs such as MAMA, which may mean both *mother* and *woman*, pointing was a very useful strategy to disambiguate the meaning of the sign, particularly because both meanings were often accompanied by the mouthing "mama". Signing MAMA alone could mean simply any woman, whereas to convey the meaning mother, a signer would precede the sign by a point-to-self, such as in the construction *my mother*, IX-1 + MAMA.

Aside from pointing, signers used other means to relate new referents back to those previously mentioned in the discourse. For example, signers often repeated the name or description of the aforementioned referent, then followed it with a relational term, as seen in **Figure 5**. Here, the signer is retelling a childhood story in which she trespasses on a man's property and the man's wife comes to scare her away. Earlier in the story she introduces the man using the sign NS^unknown. She then describes how the man's wife appeared to chase them away, introducing the wife with a combination of description and relational strategies. The signer begins with MAMA + OLD (*old woman*). This construction, makes it clear she means MAMA in the sense of *woman*, there is no preceding point to indicate it is someone's *mother*. However, this is quite a general description that could refer to any old woman in the community. She then relates the referent back to the aforementioned man, by signing his name sign (NS^unknown) then the relational term LOVER, followed by MAMA + OLD. This allows us to narrow down the referent from any old woman to the specific old woman who was married to the referent NS^unknown.

Signers tended to combine signs with broad meanings, such as FRIEND, RELATIVE and FAMILY, with additional strategies such as descriptions or points, to counteract the referential ambiguity of these signs. This resulted in a typical strategy of using a very general term combined with a more specific description to narrow down the search space. An example of this can be found below in **Figure 6**. The signer, who sells crab meat for a living, mentions the addressee's cousin
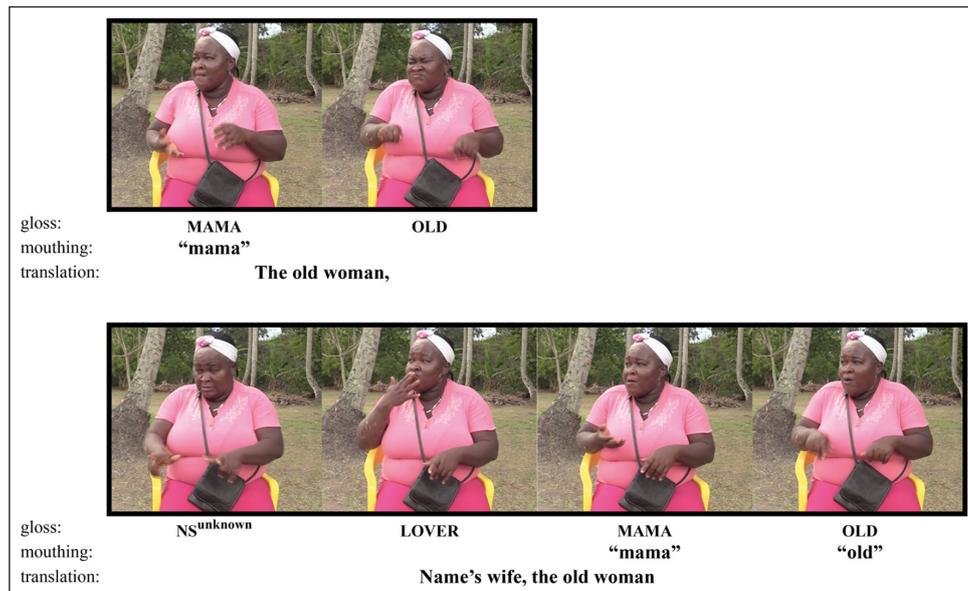

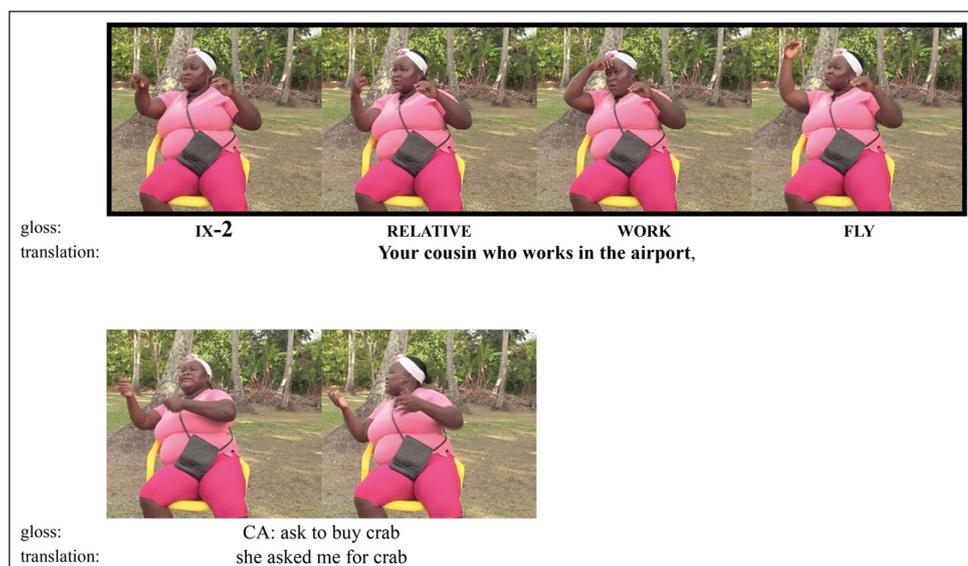**Figure 5:** Relational description using name.

Figure 6: Relational strategy.

is one of her clients. To refer to the addressee's cousin, she points to the addressee (IX-2) and uses the generic kinship RELATIVE, then continues with WORK + AIRPORT. The signer starts with a very common construction, IX-2 + RELATIVE (*your relative*) to set up the reference in relation to the addressee. However, this is a very broad term that can be used to describe various relationships ranging from niece to brother to cousin. The referential ambiguity of such a term poses a challenge by offering too many referents to choose from. To resolve this ambiguity, she follows up with WORK + AIRPORT. This narrows the field down to just one cousin, the one who works at the airport.

4.2 Mouthings

Another strategy we observed was the mouthing of spoken words. These mouthings were used in 28% (n = 26) of all REs. They occurred with or without manual signs and seemed to operate in a variety of ways when co-occurring with manual elements.

4.2.1 Mouthing with manual signs

Some conventional sign forms were always accompanied by mouthings. For example, one signer always produced the sign DEAD accompanied by the mouthing "dead". This was the case for some polysemous signs, regardless of the meaning that the sign conveyed across contexts. For example, several signers used the mouthing "mama" to accompany the sign MAMA, regardless of whether it was used to mean *mother* or *woman*. However, these sign-mouthing pairings were not uniform across all signers. For example, while most signers mouthed "mama" to accompany MAMA, not all signers did so, and while one signer always mouthed "dead" with DEAD, other signers never accompanied that sign with mouthing.

We also found mouthings of spoken names, however this was subject to cross-signer variation in terms of both frequency of use and how these strategies combined. For example, only one signer combined these mouthed names with manual signs, while others instead commonly used mouthed names in isolation. The same single signer also produced mouthings at a much higher frequency than the others, and produced most of the mouthed names in the sample.

4.2.2 Mouthing without manual signs

Several signers used mouthings as stand-alone referring expressions, without a manual component. These instances included mostly mouthed names, as well as one mouthed kinship term "abuela" (English: *grandmother*). An example of a stand-alone mouthed name can be found in **Figure 7** in which the signer describes being on a trip to neighbouring San Andres with a companion. In the example, her companion calls a third friend and invites them to fly across to join them, which the friend does. To introduce the new referent, the signer silently mouths the person's name without any manual sign. As was commonly seen with other examples, there is a break in

gloss:	CALL		COME	FLY
mouthing:		"**name**unknown"	"come"	
translation:		(Person) called **name** and told them to come, so they flew over		

Figure 7: Mouthed name.

the manual signing stream when the mouthing is produced. Given that mouthing takes on the full communicative load of referring, the hands drop to the signer's lap – most likely to draw attention to the mouth – then signing is resumed after the reference is made.

4.3 Pointing

We found no cases of non-manual pointing in the dataset, even though lip pointing in particular has been observed both in past research (Washabaugh 1986: 35) and by the first author during fieldwork.[4] By contrast, manual points were used frequently by all signers, and accompanied nearly half of all REs in the sample (n = 46). Points either targeted real-world locations that could be associated with an absent referent (metonymic pointing) or targeted a participant in the conversation (direct pointing). Points were always used in combination with other strategies, co-occurring with conventionalised signs, mouthings and embodiment.

Many points in the dataset served to add spatial information to an RE in order to help identify a particular referent. Others formed part of possessive constructions, in which the referent of the point was interpreted as the possessor. In line with observations by Woodward (1979), we found that these pointing functions were not distinguished through formal features such as handshape. Instead, handshape patterned most closely with the type and location of target. Most points to real-world places were produced with an extended index finger. However, when pointing behind their backs, some signers produced points using a fist with an extended thumb. Points to self were produced with either an extended index finger or an open hand with all fingers extended, and points to the interlocutor were also mostly produced with an extended index finger.

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[4] Lip pointing is common to both Colombian and Caribbean culture (Saitz & Cervenka 1972: 33; Washabaugh 1980: 35; Ortega-Santos 2016), and is observed for use with nearby referents. This may explain the lack of lip pointing in our study, as we excluded REs that target visible referents.

4.3.1 Pointing to associated locations

Given that the island's geography is shared knowledge among residents, points are commonly used in lieu of place names to indicate the various villages (Washabaugh et al. 1978), with signers even pointing in the direction of San Andres when referring to the neighbouring island. When referring to people, signers in our sample capitalised on this schematised spatial knowledge by pointing to places where a referent lived or worked to specify who they were talking about.

For example, in **Figure 8**, the signer asks his interlocutor if they know about a person who recently died in a neighbouring village. He signs DEAD, followed by a point (IX) to the village where the man lived. In this case, the signer uses an extremely brief description, the sign DEAD. Despite being a single sign, DEAD is highly informative in the context of local practices. Deaths on the island are common knowledge and well publicised; when someone dies, a car drives around with a loudspeaker announcing who died, and the time and place of the funeral. Nevertheless, signing DEAD alone may not be sufficient to identify which dead person is being referred to. Consequently, the signer elaborates the reference with a point (IX) in the direction of the village in which the dead man lived.

4.3.2 Pointing for possession

Points were articulated alongside conventionalised relational terms to indicate possession. In these possessive constructions, points always preceded the conventional sign. The referent of the point was interpretable as the possessor, as seen in **Figure 9**, where IX-2 + RELATIVE is signed to mean
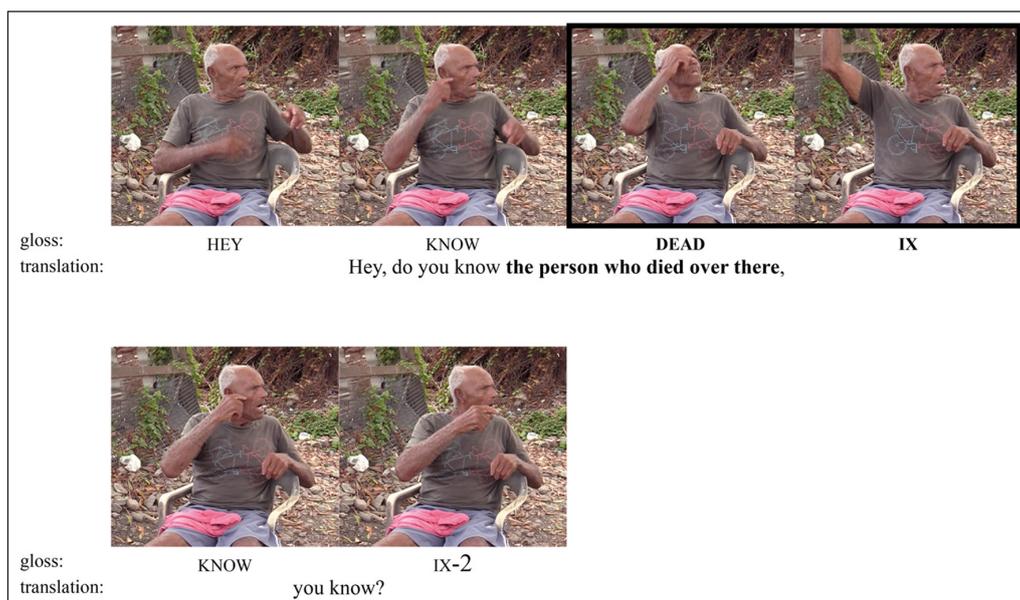

| gloss: | HEY | KNOW | DEAD | IX |
| translation: | | Hey, do you know **the person who died over there**, | | |

| gloss: | KNOW | IX-2 |
| translation: | | you know? | |

Figure 8: Pointing to localise.

gloss:	IX	FRIEND	MOTO	GO-AROUND
translation:		**Her friend** drives her around on a motorcycle.		

Figure 9: Relational description using point.

your relative. These possessive points could target not only the conversational participants (signer and addressee) but also locations associated with absent referents. For example, in **Figure 9**, the participants are discussing how to get around San Andres. The interlocutor asks if the signer's cousin knows how to navigate public transportation in San Andres. In doing so, he uses both the cousin's name sign, and a point in the direction of where she lives. The signer responds that her cousin's friend drives her around, signing IX + FRIEND to refer to the friend. Because her cousin is already the topic of discussion, the signer is able to build efficiently on the recently established link between her cousin and a real-world location by pointing to her cousin's home rather than repeating her cousin's name sign. This point serves a possessive function within the relational expression, contextualising the sign FRIEND by specifying exactly whose friend is being discussed.

4.4 Embodiment

Several signers employed strategies of embodiment to introduce new referents the discourse, mapping features of the referent on to their own bodies. Embodiment served two main functions, either to depict the thoughts, feeling and/or actions of a referent using constructed action or to depict characteristic features of a referent using recognitional depiction.

4.4.1 Recognitional depiction

In 4% of REs (n = 4), signers mapped the referent's body onto their own in order to depict a salient physical feature or a habitual action of the referent. These non-conventional, embodied strategies were always combined with points, and appeared to target referents known to the interlocutor, or recognitional referents.

An example is presented in **Figure 10**, where the signer describes a new referent seeing an event take place between two people. To establish the referent, the signer embodies the person, showing their manner of walking with a cane (WALK-WITH-CANE), then points in the direction of the referent's house (IX). The signer uses her whole body, not just her hands, to convey the walking style of the referent in question. This recognitional depiction appears to be different

from constructed action in which a signer depicts thoughts, feelings and/or actions of a referent (Cormier et al. 2015). While the signer does convey the referent's action, it is a habitual action and primarily important for referent recognition.

Recognitional depictions could also highlight physical features as well as habits. To do so, signers took a conventional sign and exaggerated its articulation to emphasize some characteristic feature of a referent. In the example below in **Figure 11**, the signer uses signing BALD, usually articulated by the quick motion of a cupped hand across the crown of the head. However, she exaggerates the manual and non-manual features of the sign by stretching the length of the movement, squinting her eyes and baring her teeth. This is clearly not a typical articulation of a
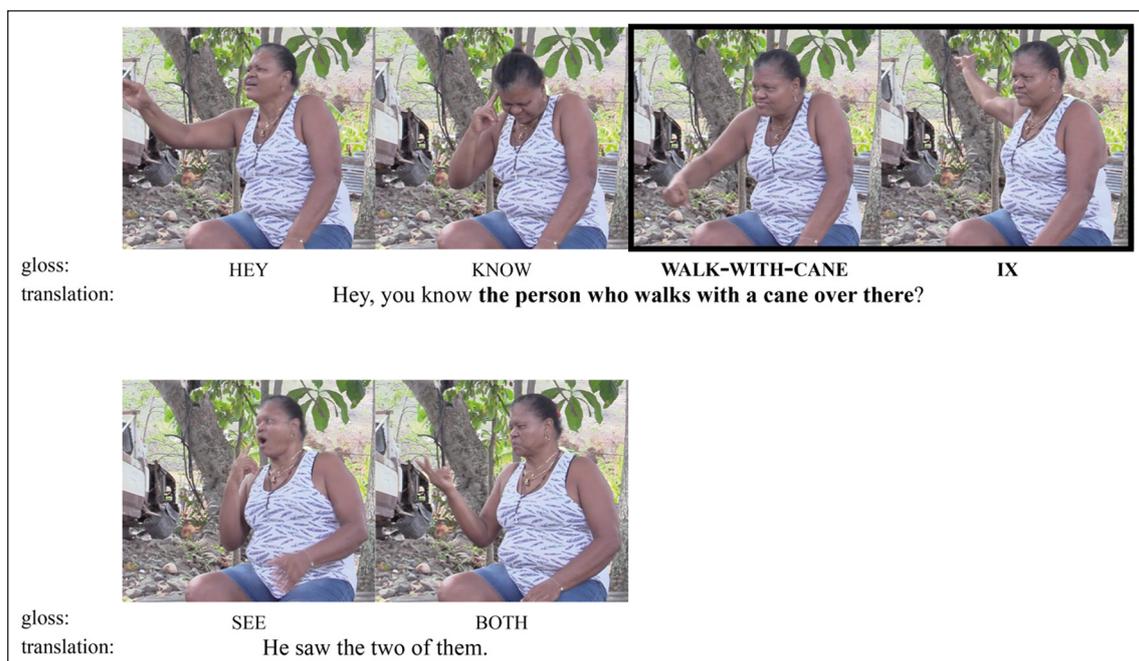

gloss:	HEY	KNOW	WALK-WITH-CANE	IX
translation:		Hey, you know **the person who walks with a cane over there**?		

gloss:	SEE	BOTH
translation:		He saw the two of them.

Figure 10: Depicting characteristics with hands and body.

gloss:	IX	BALD	IX
translation:		**Over there, the bald man over there.**	

Figure 11: Depictive use of conventional sign.

conventional sign. Instead the signer highlights the depictive properties of the sign to refer to a specific bald person, the one who lives in the direction of the point.

This kind of embodiment did not need to involve the hands at all. For example, a signer may refer to someone with buckteeth by simply imitating their appearance, biting their lower lip and drawing back their upper lip so their upper teeth are prominent. These depictions of referents' features or habitual actions may eventually crystallise into name signs, even the purely non-manual ones. In fact, during fieldwork the first author noted a name sign of one hearing signer that is simply several blinks, a depiction of an idiosyncratic habit of that person. What seems most central to these strategies is that the signer zeroes in on a very salient feature of the referent that is widely known and recognized (see Washabaugh 1986: 72).

4.4.2 Constructed action

Another technique of embodiment used by signers in first reference was unframed constructed action, which was used in around 9% (n = 8) of REs. This occurred when signers did not explicitly introduce a new referent, but instead entered straight into a constructed action sequence, in which they embodied the new referent. Take for example, the sequence in **Figure 12**, where the signer describes an incident in the neighbouring island of San Andres where she was attacked by a stranger while going to the shop. Despite never explicitly introducing the attacker, the signer
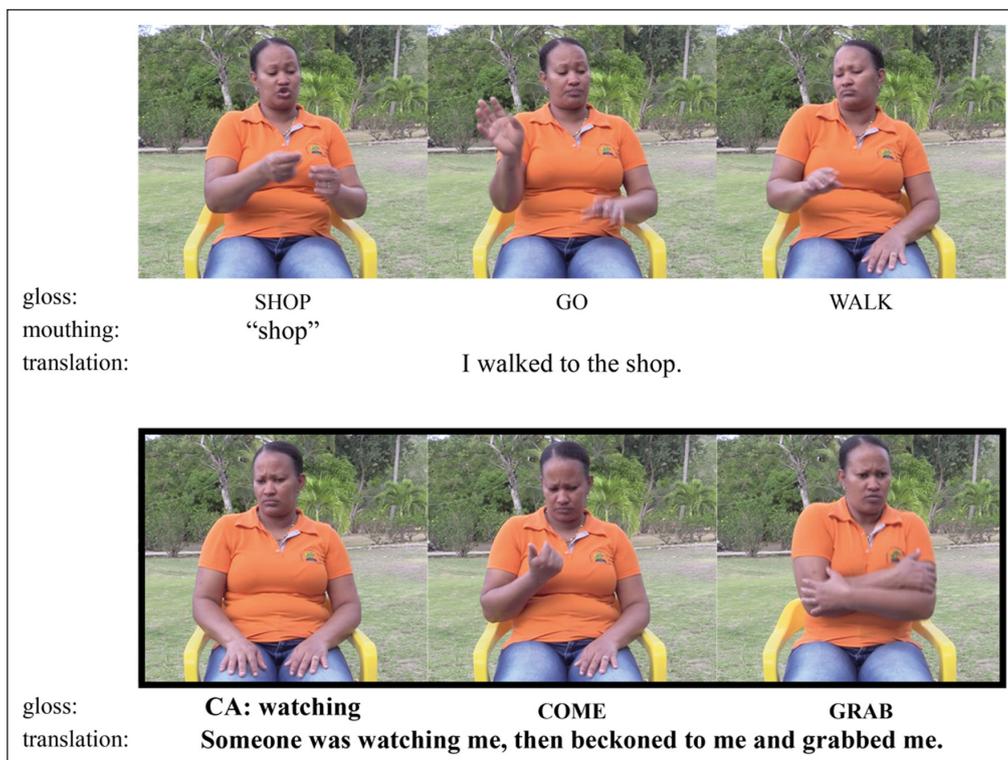

Figure 12: Constructed action.

changes her body position, facial expression and mannerisms to make it clear she is embodying another person. She uses this constructed action strategy to depict the person watching her, beckoning her then grabbing her. In this case, it is not the identity of the attacker but their actions that are important and thus highlighted in the retelling.

4.5 No explicit reference

Sometimes, signers did not explicitly introduce a new referent. In 2% of all REs, there was no explicit introduction, yet some other strategy made it clear that a new referent had entered the discourse (n = 2). In both cases, this was done through subject omission.

In these REs, signers used verbal predicates, or conventional signs that convey actions, without the subject being introduced. In these two instances, signers first introduced the action of the referent, then later in the discourse circled back to add more specifying information, in the form of conventionalised signs, mouthings or pointing. In one instance, the signer describes her relative who is an alcoholic. She begins the utterance by signing DRINK multiple times, to indicate a referent drinking. Only later in the conversation does she then signed MY + FAMILY + WOMAN + DRINK (*my female relative drinks*), to clarify the identity of the drinker.

5 Discussion

Our results reveal that PISL signers use many of the same strategies for displaced person reference that are attested in both signed settings and multimodal spoken settings. This suggests that referring in the visual-gestural modality is accomplished using similar semiotic repertoires across different cultures and settings. Indeed, the strategies used most frequently by our signers, such as conventionalised signs, mouthing and pointing, parallel those found in studies of reference in other sign languages. Notably, however, there is not full overlap with other attested referring strategies in sign languages. Furthermore, some features that are prominent in reference in macro-community sign languages are not found in PISL, and thus not used in PISL reference, such as fingerspelling.

In the sections below, we discuss in detail the different semiotic strategies used by PISL signers in referring and how they connect to strategies attested in other micro- and macro-community sign languages. We devote particular attention to the context that signers invoke when formulating referring expressions.

5.1 Embodiment serves as a resource for highly specific referring acts

In our dataset we frequently saw PISL signers combine conventional labels and improvised depictive strategies in order to refer. In some cases, this combination was facilitated by the embodied nature of a given conventionalized sign: elements of the sign that depict embodied behaviours could be modified to enact an idiosyncratic or context-particular performance of the

behaviour. Such strategies have also been observed in macro-community sign languages. Ferrara and Halvorsen (2017), for example, discuss this phenomenon in Norwegian Sign Language, examining how signs such as SLEEP – in which the signer appears to be sleeping – are produced both as simply conventional signs but also as depictions that reflect the particular sleeping act of a particular referent. We find a similar instance in our data with the conventional sign BALD (see **Figure 11**), where the signer uses a conventional sign, however exaggerates the depictive properties. Similar to the example in Ferrara & Halvorsen (2017), the signer marks the sign with a pause and accentuated non-manual features, tailoring the sign to perform a depiction of a particular referent's baldness.

The embodied nature of many conventional signs is, of course, no accident. Highly particular recognitional depictions can and do lay the foundation for signs that become conventional in signing communities. Nowhere is this more transparent than in the case of personal name signs: idiosyncratic and highly personalised descriptions are among the most common motivation for name signs in many macro-community sign languages (e.g., McKee & McKee 2000; Börstell 2017) and are indeed the only motivation for name signs in some micro-community sign languages (Nyst & Baker 2003; Lutzenberger 2018). These descriptive name signs become conventional in the communities where they are used, but like many other conventional signs with embodied foundations, they retain depictive properties can be exaggerated or 'de-conventionalised' in use.

Recognitional depictions, then, are not only powerful tools for sign creation, but offer unique opportunities for indexing shared knowledge of characteristic traits and behaviours during signed person reference. Such strategies are not limited to signed communication, and have been noted to in co-speech gestures that accompany spoken person reference. On the Caribbean island of Bequia for example, Sidnell (2005) describes speakers producing improvised representational gestures to depicting a referent's dreadlocked hair. These strategies provide a direct visual link by capitalising on familiarity of how specific referents behave or look, extralinguistic knowledge that is much more likely to be shared in small communities.

5.2 Name signs vs. description: a matter of recipient design

Names in PISL are usually used within signer's individual networks for third person reference. This is somewhat different from macro-community sign languages where they are most often given in institutional settings often and used for self-identification (in addition to third person reference). This difference in context of name giving and use has led to a somewhat puzzling yet persistently cited claim that PISL does not use name signs (Washabaugh 1986: 69). Our data and fieldwork observations provide evidence that name signs are indeed used in Providence, however suggest there are some restrictions on their use. Signers may use depictions to refer to people whose name signs they know, suggesting that (i) naming conventions are not shared across all signing networks, and (ii) signers are sensitive to this fact when choosing a referring strategy.

That name signs in PISL are not known to all signers should not come as a surprise: across signing communities, names signs are created and maintained to identify people within specific social networks (Meadow 1977; Day & Sutton-Spence 2010; Paales 2010) and signers communicating across networks may not anticipate sharing the same set of naming conventions. For example, in McKee and McKee's (2000) survey of names in New Zealand Sign Language, used by the urban deaf community of New Zealand, they find that most informants had multiple name signs, each used in a different network. They find that deaf children of deaf parents are commonly referred to via name signs by their peers, but via a string of relational descriptions by their parents' generation. In such settings, signers favour descriptions over name signs because they provide identifying information that is more accessible to their interlocutor. This practice of designing referring expressions that best allow the addressee to identify the referent is also widely found in spoken language research, and it is considered to be a fundamental preference in the formulation of person reference, referred to as the preference for recognition (Sacks & Schegloff 2007; Enfield 2012).

5.3 Mouthings reflect the multilingual experience of PISL signers

PISL signers clearly use mouthings to capitalise on shared multilingual knowledge within the signing community, using mouthings from both Creole ("come") as well as Spanish ("abuela"). Many other micro-community sign languages exist in multilingual settings and signers have been observed to use mouthings from multiple spoken languages. In Inuit Sign Language for example, Schuit (2014) notes signers incorporating mouthings from both English and Inuktitut. She also notes a large degree of variation among signers' mouthing patterns. Similarly, we also find individual differences in how signers combine mouthings and signs, specifically with prominent use of mouthed names and manual signs by one signer. While individual differences may be influenced by signers' heterogeneous experiences in home life, work and education, it is difficult to convincingly connect any one factor to mouthing preferences given the few signers and their complex, idiosyncratic backgrounds. Indeed, the sociolinguistic factors explaining mouthing preferences are unclear even for well-studied sign languages (see Bank, Crasborn & van Hout 2016).

Mouthing is a powerful resource in PISL referring: it is found in combination with manual signs, but also as a freestanding referring strategy for several signers. This use of stand-alone mouthings appears to be somewhat typologically peculiar. While mouthings are quite commonly reported in both macro-community (e.g., Ebbinghaus & Heßmann 2001; Nadolske & Rosenstock 2007; Crasborn et al. 2008) and micro-community (e.g., Nyst 2007; Adone et al. 2012; Bauer 2014; Schuit 2014) sign languages, stand-alone mouthings without a manual sign are very rarely observed and/or reported in either category (Bisnath 2020). In the few instances where they are reported they are used in a limited role. Bank (2015: 96) examines mouthings in the Sign Language of the Netherlands Corpus, and reports signers use stand-alone mouthings

overwhelmingly for backchanneling purposes, either saying "yes", "no" or repeating what the interlocutor just signed.

What, then motivates PISL signers to refer using stand-alone mouthings? To understand this, it is helpful to return to the daily communicative setting of deaf signers. It is common practice in Providence for hearing people to mouth, or exaggeratedly pronounce people's names when attempting to communicate with deaf people. This type of mouthing is a pervasive feature of signed interaction, since deaf-hearing signing is the norm in Providence. The strategy of mouthing is so ingrained in signing practices that stand-alone mouthings can be maintained by deaf signers: one deaf woman within a multigenerational deaf family in Providence was referred to by her deaf relatives using simply a mouthing of her name. Notably, the frequent use of mouthing in PISL extends beyond names. Some concepts, such as *lie*, are very often expressed by only mouthing and no manual sign (Washabaugh et al. 1978).

As a result of living within a majority hearing society, most deaf signers acquire some degree of multilingual competence in their signed language and the surrounding spoken language. Providence is no exception. Similar to other signing communities, signers blend elements of the majority spoken languages into their signing, using mouthings to accompany signs. Interestingly, the availability of stand-alone mouthings in PISL demonstrates that deaf people's collective experiences in navigating deaf-hearing communication can shape even deaf-deaf communication practices. To fully understand these meaning-making strategies and the practices that underly them, analysing deaf signers' communication from a translanguaging perspective (Kusters et al. 2017), which de-emphasises distinctions between named languages and linguistic and non-linguistic elements, may be particularly useful (for an analysis of translanguaging in a small-scale signing community, see Safar 2019).

5.4 Real-world pointing serves multiple functions: referent identification and discourse-linking

PISL signers point to real-world spaces and objects when establishing first reference, a practice widely attested in various small-scale signing (de Vos & Pfau 2015) and speaking communities (e.g. Levinson 2007; Sidnell 2007). These points function metonymically: by pointing to a location, signers are able to refer to the person who lives in this location.

Our findings show that real-world points are used for more than simply identifying referents. They can also perform anaphoric functions in first reference when signers use them to triangulate introductions of new characters. When a point back to a previously targeted location forms the first part of a relational expression (e.g., when the point is used in a construction like IX + FRIEND to mean 'her friend'), signers must resolve the referent of the point using real-world knowledge *and* discourse context, then connect the referent to another person based on information in the relational expression.

Anaphoric pointing to real-world locations has also been described in other micro-community sign languages, such as Kata Kolok (de Vos 2012: 197) and Yolngu Sign Language (Bauer 2014: 149), with signers of these languages repeating points to real-world locations for subsequent reference to individuals linked to those locations in previous discourse. In these communities, just like among our PISL signers, points to real-world locations perform a discourse linking function. This is analogous to the way pointing to empty space is used for discourse linking in macro-community sign languages. We conclude that the fundamental difference between macro- and micro-community settings is not in the functions that pointing is fulfilling, but instead in the motivation for the direction of the point. When 'assigning' referents to abstract locations via pointing, signers participate in a practice of infusing empty space with meaning. In metonymic pointing, however, the direction of the point is determined from broader real-world context. Both means of deriving a direction for the point can be harnessed in service of person identification and discourse linking.

5.5 Unframed CA is infrequent, but attested in PISL first reference

An unexpected finding in our data was the use of unframed constructed action. Embodied strategies that depict a referent's actions, such as CA in a sign language, are normally reserved for when a referent is already primed and highly accessible. For example, two studies examining spontaneously produced narratives in American Sign Language (Wulf et al. 2002), Auslan and New Zealand Sign Language (McKee et al. 2011) find that across languages, when CA is used in a switch reference context, where the subject of the clause is different from the subject of the previous clause, signers are much more likely to explicitly state the subject of the CA sequence. Data from narrative retellings, examining both sign and co-speech gesture, suggest that first mentions in the visual modality most often use strategies that convey information about properties of the referent itself (Debreslioska et al. 2013; Hodge et al. 2019). Looking specifically at CA framing in British Sign Language, Cormier et al. (2013) find that when CA is used in first mention, it is usually accompanied by specifying information like a preceding noun phrase.

The use of unframed CA in our data may have two possible explanations. Firstly, it is possible that some stories are already well known to the signer and interlocutor, making referents already accessible by shared context. This can be observed in other small signing communities. For example, Sandler et al. (2011) observe a narrative retelling in Al-Sayyid Bedouin Sign Language where a signer recounts a well-known story to family members and uses few pronouns and explicit introductions to maintain reference. Clearly, already knowing the story can affect referent accessibility and this in turn may make these well-known characters less necessary to explicitly introduce. This follows theoretical accounts which notes some new referents are more accessible than others due to extralinguistic world knowledge (Vogels et al. 2019).

A second explanation, however, better fits the observations within our dataset: signers use unframed CA to make referent identity less prominent to the interlocutor. In our data, we find unframed CA is used within a particular domain, specifically for (i) background characters, whose identity was not central to the story but included to move the plot along and (ii) referents who did not seem likely to be recognisable to the interlocutor, also called non-recognitional referents (Sacks & Schegloff 2007). In in **Figure 12**, the referent is both; a strange man who attacks the signer on a neighbouring island. It seems in these contexts, unframed CA may a technique for signers to downplay a particular character's identity while foregrounding the action sequence or to signal to their interlocutor that a specific character is not meant to be recognisable.

While the use of unframed CA raises many questions, it must be acknowledged that this referring strategy was used infrequently in our dataset. On one hand, this low prevalence might reflect low use. Indeed, most of what we know so far suggests that signers use more conventionalised strategies in introductions; this makes the use of unframed CA unexpected as it capitalises on context. However, as pointed out by Hodge et al. (2019), less conventionalised strategies are harder to code for, harder to agree upon among coders and even harder to identify in the data. This suggests that strategies may not be as low frequency as our (or previous) data suggests, and instead may simply slip through the coding process. In order to successfully identify these cases, we may need to adopt more fine-grained methods, such as reviewing narratives with both signer and addressee. More dedicated attention to these strategies may help clarify what motivates their use, and possibly reveal differences in use among communities with varying degrees of shared context.

5.6 Sources of shared knowledge

We found that PISL signers draw on a range of different sources of shared knowledge when introducing referents. These sources can be distilled down to three broad categories. Firstly, signers draw on **conventional linguistic knowledge**, most centrally the understanding that specific forms link to specific meanings. These forms include conventional signs from PISL, but also mouthings from Spanish and Creole. Secondly, signers draw on a vast well of **community-based knowledge**. This includes knowledge about particular community members, such as their role in current events, their personal histories, their family relationships, their physical features and mannerisms, their occupation(s) and their habitual locations. Crucially, signers also draw on common ground that is built up through the discourse, that is, **discourse context**. Signers monitor the topic of the conversation and the characters already introduced into the discourse, and relate these to new characters as they are introduced in first reference.

Weaving together these distinct sources of information to produce and interpret first reference is a remarkable communicative achievement – yet it is the stuff of everyday conversation performed around the world. Communicators across cultures show sensitivity to the types of information available to participants in the discourse, and it is utterly normal for them to design

references tailored to understanding of their recipient (Sacks & Schegloff 2007). If this is the case, the question remains, why have micro-community sign languages established such a strong reputation for context dependency?

Our study of first reference has pointed us to several key reasons. First, most studies of micro-community sign languages, including the present one, are done by outsiders to the community. This puts researchers in the position of lacking background information to resolve reference, or at the very least highlights the importance of community knowledge in reference resolution (Washabaugh 1986; Sandler et al. 2011). Nonetheless, it is certainly possible that use of highly context-dependent referring strategies is not simply an artefact of the researcher's gaze. It is highly conceivable that community size and structure can affect the scope of contextual information available to signers, and in turn, influence the decisions of signers to use more context-dependent strategies. Take the example of shared geospatial knowledge. While an macro-community signer may have small circles in which this is shared e.g., the neighbourhood or the office, a PISL signer is likely to share spatial knowledge with all of their fellow islanders. The difference in use of specific strategies that draw on shared geographic context may simply be one of scale: signers in small-scale communities may invoke these strategies more frequently than signers in large-scale communities, because the relevant knowledge is more pervasively shared across their language community.

In addition, the way researchers collect sign language data from macro-community sign languages might supress context-dependent referring strategies, or make them difficult to recognise in the collected data. In urban settings, spontaneous conversation is often recorded in a closed room with a greenscreen backdrop, while choices like what to wear and whom to sign with are highly controlled (cf. Schembri et al. 2013). In rural settings such as our own, filming takes place in homes: participants chat with their neighbour on the porch, as people pass in and out of the house and drive past on the street in front. Clearly the amount of context available – both to the signers in conversation, and to the analysts reviewing the recordings – is very different across these situations.

Finally, we observe that topic and conversational setting clearly influence how signers draw upon context in their referring strategies. De Vos (2012: 422) notes that when signers of Kata Kolok were asked to perform elicitation tasks that involved unknown individuals for whom they could not invoke via known habitual locations, they did not point, but instead used list buoys, a strategy that associates topics or people with the fingers on the hand. Similarly, Bauer (2014: 153) found that when signers of Yolngu Sign Language were taken away from their home settlements to a nearby city and asked in an elicitation session to discuss familiar referents, they also made use of strategies that did not rely on knowledge of the space immediately surrounding them. Thus, when contextual information is not readily available to ground referring, signers of micro-community sign languages appear to draw upon more conventionalised strategies and use them in ways similar to those used by signers of macro-community sign language. Given this observation, de Vos (2012) hypothesises that when placed in situations where rich context is available, macro-community sign language users may also capitalise on this by using more context-dependent strategies.

While PISL signers use several sources of contextual knowledge to scaffold referring expressions, the use of community-based knowledge in particular appears to have led to PISL's reputation as context-dependent. Shared community context allows signers to tailor expressions to their interlocutors, facilitating precision in referring. This kind of recipient design is also likely to be utilised in tight-knit groups of macro-community sign language users, however linguistic data from these languages is collected in very different settings which may suppress these strategies. We therefore suggest that context dependency is better described not as a feature of a particular language, but a feature of language-in-use: all languages can be used in more or less context-dependent ways, given the communicative setting.

6 Conclusion

This paper describes the diverse semiotic strategies signers of Providence Island Sign Language use when performing initial reference to non-present people. Using spontaneous conversational data, we analysed how PISL signers design referring expressions. We find that signers use semiotic strategies common to many sign languages, yet deploy them in ways that reduce ambiguity by maximising shared context. By combining context-independent strategies like conventional signs with context-rich strategies like pointing, signers balance out the referential ambiguities of both. Referring strategies are also shaped by signers' day-to-day communicative practices, leading to strategies that may be to some extent typologically unusual, such as the use of stand-alone mouthings.

These findings add diversity to a body of literature on sign language reference that is dominated by macro-community sign languages. Our study focuses on spontaneous signing in a small tight-knit community and examine exactly what context dependency looks like in practice. By describing the strategies signers use to refer, we show that many context-dependent features of PISL can be explained by general communicative principles, such as recipient design. Signers adjust to their interlocutor's knowledge and strive to incorporate as much of that knowledge as possible when referring. We point out that this phenomenon, while centred in our data, may be obscured in parallel research in urban settings where signers are given specific communicative tasks or recorded in highly controlled environments, and therefore have very little context to draw on.

Our study raises the question: how do urban signers make use of context when it is available? While macro-community sign language data is often collected in context-poor settings, there are also existing corpora that target maximally informal signing. These datasets, such as the Argentine Sign Language corpus used by Manrique (2016) and the Sign Language of the Netherlands Interactive Corpus used by de Vos et al. (2015), focus on informal recordings among friends in familiar spaces including deaf clubs and homes. Examining referring strategies in these corpora may provide insights into just how signers in urban settings capitalise on context when it is available to them, potentially revealing similarities with our PISL signers or other small-scale signing communities.

Abbreviations

CA = constructed action; PISL = Providence Island Sign Language; RE = Referring Expression

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The authors have no competing interests to declare.

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