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“Our Hands Must be Connected”: Visible Gestures, Tactile Gestures, and Objects in Interactions Featuring a Deafblind Customer in Mumbai

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ANNELIES KUSTERS has engaged in ethnographic research on deaf lives and sign languages since 2004. She currently is Assistant Professor in Sign Language and Intercultural Studies at Heriot-Watt University, Edinburgh. From 2017 through 2022, she will head the European Research Council-funded MobileDeaf project, undertaken by a deaf research group focusing on international deaf mobilities.

Annelies Kusters
Dept of Languages & Intercultural Studies
School of Social Sciences
Heriot-Watt University
Edinburgh EH14 4AS
United Kingdom

Phone: N/A

Email: annelieskusters@gmail.com

Abstract (200 words)

This article is based on the analysis of customer interactions of Pradip, a deafblind man, with street sellers and shopkeepers in Mumbai. Pradip made use of visible and tactile gesturing including pointing at and tapping on objects (to indicate them), using emblematic gestures, and tracing the shape of objects on the hand. The fact that the sensory ecology is not reciprocal for the interlocutors is crucial for our understanding of what interaction means in these contexts. The material contexts themselves exert pressure on practices, because of the constraints they pose to Pradip and his interlocutors, and routine/patterned ways of interacting in those contexts also exert pressure on practice: conventionalised schemes for customer interactions do not necessarily work in interactions between a deafblind and hearing sighted person. Pradip, as an experienced customer, negotiated the lack of shared conventional mechanisms for coordinating and signaling attention by abundant repetitions and by establishing tactile contact either immediately prior to, or during the utterance, including the production of signs on the interlocutor's hand. The study thus shows that an experienced customer can successfully initiate new participant frameworks, without naturalising the constraints that are negotiated.

Keywords (6)

Multimodality, pointing, misunderstanding, access, senses, participant frameworks

Introduction

This article is based on the analysis of customer interactions between Pradip, a deafblind man, and hearing sighted street sellers and shopkeepers in the city of Mumbai. These interactions were recorded and analysed within the frame of a larger research project on deaf-hearing communication practices in public and semi-public spaces such as street markets, indoor shops, food joints, coffee houses, tea places, and public and private transport in Mumbai. Deaf people were either the ones buying or ordering, or the ones selling or serving, which are contexts where people *have to* interact with each other if they want the transaction to be successful. This however does not imply that customer interactions are the only contexts where deaf(blind) and hearing strangers interact: the study also documented informal interactions between train commuters, for example.

In the documented interactions, fluent deaf signers and hearing non-signers in Mumbai who were sighted used gestures to communicate with each other. In these contexts the use of the visual-gestural modality (ie, gestures) takes high significance because of one of the interlocutors being deaf, rather than because of a difference in spoken language backgrounds, which also can lead to increased use of gestures in customer interactions (Blackledge and Creese forthcoming). Yet participants in this study did not ditch the auditory-oral modality (ie, speech) as an entirely useless one even though its affordances are limited within these communicative interactions. Indeed, gestures were persistently present (hence the term *gesture-based* interactions) but were often combined with mouthing (speaking without voicing), speaking and/or reading and writing in different languages. People engage in prompt and rapid combining of modalities and switching between modalities, negotiating the constraints and possibilities imposed by these different modalities (Kress and Van Leeuwen 2001) *and* by different sensorial access to these modalities (Kusters forthcoming a). For example, hearing people might switch from speaking to gesturing; people might repeat a gesture and produce a mouthing in the repetition; or they might switch from mouthing in one language to mouthing in a different language (Kusters forthcoming a).

However, while mouthing, lipreading and speech do frequently occur in deaf-hearing gesture-based interactions, they are not visually perceptible for Pradip, and he did not make use of speech and mouthing during the documented customer interactions. In general, there is large variation with regard to residual hearing and eyesight of deafblind people. Deafblind signers with limited or no residual eyesight, such as Pradip, perceive signs and gestures by holding one or two hands of the signer, under or on top of the signer's hand (Mesch 2013). Most deafblind people were born deaf and sighted and their vision declined over time. This is the case for Pradip as well: Pradip was born deaf and grew up in Kolkata, where he was taught to read, write and speak Bengali. He became blind when he was twelve and a bit later, he moved to Mumbai, where he learned English and American Sign Language at a school for deafblind children. Later, he became fluent in Indian Sign Language, in an Indian Sign Language teacher course for deaf adults. He is in his thirties, and at the time of research, he worked as a teacher in a school for deaf and deafblind children in Mumbai.

Pradip can only vaguely distinguish light from dark, so he could not see the products for sale in shops or street stalls: Pradip gains information about the environment and the items for sale through the tactile and olfactory senses and proprioception, touching, feeling and smelling particular objects or the general scent of a location. There is variation in tactile and olfactory access across contexts: for examples, items could be openly displayed and could be touched and smelled, or could be tightly packaged and/or for show behind glass or counters. It is crucial for the success of the transactions featuring Pradip that interlocutors (have to) touch not only objects, but also each other's hands and arms. Indeed, as Pradip said in an interview about these customer interactions, "Our hands must be connected."

By analysing the role of tactile contact with objects and people in customer interactions, the article contributes to the analysis of multimodality in communication. The study of multimodal communication, such as within the subfields of conversation analysis and ethnomethodology, has been focused on speech, eye gaze, the mutual orientation of the bodies of the interlocutors, the material structure of the surround, pointing, (co-speech) gestures, and (hand)writing-in-interaction (eg. Goodwin 2003, 2013). A growing body of research has focused on objects in interaction (such as products that are for sale): objects differ from talk or gestures since they are not fleeting and evanescent, and can be “noticed, appreciated, assessed, imagined, created and made sense of, or can be given and received, shared or distributed, shown and demonstrated, described and explained, or disputed” (Nevile et al. 2014, 7). While objects are everywhere around us when interacting (bodies, clothes, counters, cash tills, tables, pens, papers, products for sale), they are “made relevant through participants’ pointing, referencing, naming and touching” (Nevile et al. 2014, 15), ie, they become *semiotically charged* (Goodwin 2013).

Research on gestures, multimodality, and objects generally explicitly focuses on visually and/or auditorially observable interactions, e.g. Kendon’s (2004, 7) definition of “gesture” is “visible action when it is used as an utterance or as a part of an utterance”. Criticising this visual and audiological bias, Mondada (2016, 336-337) states that a focus on multimodality means considering “the involvement of entire bodies in social interaction, overcoming a logo-centric vision of communication, as well as a visuo-centric vision of embodiment”. For example, she discusses the necessity of a focus on how objects (such as cheeses) in over-the-counter interactions are handled by palpation. In this article, I am taking this focus on “the whole body” further, by discussing how the interlocutors necessarily touch not only objects but also each other, using different tactile gestures.

Retail communication is defined both by its orientation toward a specific end (sale/purchase) and by the mediating function of the materiality of commodities (specific goods or services, to be sold/bought). Variations in communication practices were co-shaped by the (material) contexts where they take place, which impacted the role of body positioning and of tactile access to objects for sale. The examples that are discussed involve Pradip touching products and communicating with a street seller who sits on the pavement, and communicating with a shopkeeper standing behind a counter. The fact that the sensory ecology is not reciprocal for the interlocutors is crucial for our understanding of what interaction means in these contexts. The material contexts themselves exert pressure on practices, because of the constraints they pose to Pradip and his interlocutors; for example, Pradip cannot access objects displayed in cupboards behind the counter, and he has to stoop and move to access the street seller on the pavement. In addition, hearing and sighted customers’ and sellers’ routine/patterned ways of interacting in those contexts also exert pressure on practice: their conventionalised schemes for customer interactions do not necessarily work in interactions between a deafblind and hearing sighted person. Such routine patterns include speech, and asking for visually displayed objects behind a counter (by speaking and pointing), and obviously have to be re-negotiated in order to make transactions involving Pradip successful.

Importantly, when communicating with his hearing sighted interlocutors, Pradip made use of the fact that they could hear and see him: he occasionally produced sounds to call people’s attention, often used gestures without touching the interlocutor’s body, and occasionally wrote on paper, inbetween frequently establishing tactile contact with sellers to ensure shared attention. In addition, a large number of gestures and text were produced and accessed within tactile contact between Pradip and the sellers, including gestures made on the body of the seller, tracing the shape of objects on the seller’s hand, and finger writing on the hand.

Referring to the pragmatic use of intercultural skills among traders in London, Wessendorf (2014) has coined the notion of “cornershop cosmopolitanism”. She gives the example of a shop assistant serving a Turkish woman with the assistance of a third person acting as ad-hoc English-Turkish interpreter over the phone. Another example of this is Blackledge and Creese’s (forthcoming) analysis of the role of gestures in interactions of Chinese and British butchers in Birmingham market with their customers. Wessendorf (2014, 65-66) contends that in contexts where shopkeepers deal with linguistic diversity on everyday basis, “language barriers are rarely encountered with surprise or resistance”. In this article I focus on Pradip as an experienced customer interacting with different sellers rather than on an experienced shopkeeper receiving different customers, which is a crucial aspect to this study.

I am analysing these interactions as distinct from those where hearing sighted people interact with other hearing sighted people; or with deaf sighted people. Similarly, Edwards (2014a, 2014b) documents the emergence of Tactile American Sign Language in the context of deafblind people orienting towards each other in Seattle. By analysing this phenomenon, her work differs from other works on deafblind signing, which have typically framed deafblind people’s sign language use as variations on sighted deaf people’s sign languages. Similarly, I do not treat the interactions of Pradip as a deafblind person with hearing sighted interlocutors as a variation on interactions between deaf sighted and hearing sighted people studied in the wider project (as documented in Kusters forthcoming a). In framing these interactions as distinct, I am inspired by Edwards’ (2014a, b) use of Hanks’ (1990) “participant framework” theory (a term coined by Goffman’s (1981). Edwards (2014a, 130) summarises “participant frameworks” as “the emergent configurations that communicative agents occupy in the unfolding of an interaction ... Participant frameworks require participants to assume certain bodily configurations, and these configurations become regularized (or not) along with other aspects of interaction.” Examples are conventions for turn-taking and attention getting in different material environments.

Pradip usually does not need to inform his interlocutor that he is blind: his blindness is visible in that his pupils are blue rather than black, and he uses a cane. He uses particular attention getting strategies, has to tell people regularly that he is deaf and to explain people how they can communicate with him. He has communicated with sellers of widely different linguistic and social backgrounds, who displayed more or less skill and willingness to communicate. Thus, over time, in customer interactions, Pradip has developed particular participant frameworks, a process in which diverse hearing sighted people have participated. While shopkeepers are often adaptive and cooperative, Pradip is the experienced customer initiating these participant frameworks, making most of the decisions regarding choices of mediums and modalities of communication, and when to switch between them. Importantly, this customer-focused (rather than shopkeeper-focused) case study happens in different material environments, and as such showcases how switches in participant frameworks are related not only to different interlocutors but also to (access to) objects and material environments.

Going forward, the article discusses the project methodology, then describes two examples in depth, and then analyses what these examples teach us about attention-getting, mutual orientation, repetition, co-formation of tactile gestures, techniques of indicating, the material environment, and misunderstandings.

Methodology

The data on Pradip’s interactions with various interlocutors across Mumbai comprises 44 video-recorded gesture-based interactions, short impromptu interviews after interactions (18

with Pradip and 9 with hearing sighted interlocutors), and a 45-minute home interview. The interviews focused on how interlocutors experienced particular gesture-based interactions, whether they felt limited or enabled when communicating and why they made use of particular strategies. Within the broader research project, an 80-minute ethnographic film called *Ishaare: Gestures and Signs in Mumbai* was created, with five other protagonists in addition to Pradip. The film is subtitled in English and can be watched online (<https://vimeo.com/142245339>). Parts of the examples offered in this article are included in the film and I have indicated in the text where that is the case.

The research team consisted of a Belgian deaf sighted researcher (I); Sujit Sahasrabudhe, an Indian deaf sighted research assistant who conducted and transcribed interviews; and Amaresh Gopalakrishnan, an Indian hearing sighted research assistant who transcribed the gesture-based interactions and interpreted during interviews; all of whom were present during all recordings. Informed consent was obtained in Indian Sign Language by Sujit, and was video-recorded. For a detailed account of the project methodology, including the production of the film and its role within the methodology, see Kusters, Sahasrabudhe and Gopalakrishnan (2016).

This article discusses visually displayed touching and gesturing (by Pradip), which is accessed visually by the seller and by the researchers, and tactilely by Pradip and the seller. While the data include a large set of interactions between Pradip and hearing sighted strangers (such as in the context of guiding and direction-giving), the interactions analysed in this article mostly pertain interactions between *acquaintances*. Still, interactions between Pradip and his acquainted interlocutors were featured by frequent misunderstandings, a fact that is further explored in this article.

Example 1: Buying onions on the street

Figure 1 about here

Pradip frequents a number of street stalls close to his flat in Ghansoli (Navi Mumbai), where goods are spread out on canvases and/or in bowls and crates on the sidewalk. Pradip is a regular here, so he knows what the sellers usually offer, as well as their usual locations. In this example, Pradip arrives at a particular stall and first explores what is on offer: he stoops to feel some onions (Figure 1a) with his right hand, holding his cane in his left hand. He then turns towards the adjoining stall which offers different sprouted pulses in bowls. (*Ishaare* 00:12:47). He touches some of them (Figure 1b), palpating different pulses with his fingers, then turns back to the onions, touches some onions, and reaches his hand in the direction of the usual location of the seller (Figure 1c). Indeed, while mutual eyegaze is crucial in establishing joint attention in sighted gesture-based interactions; in this participant framework, Pradip works towards establishing joint attention by extending his arm.

The seller, whose eye gaze was already directed towards Pradip, promptly gives him a steel bowl in which to put his selection (Figure 1c). Pradip receives the bowl with his right hand, simultaneously moving his cane from his left hand to his left armpit, moves the bowl to his left hand, hesitates, then gestures “half” (Figure 1d): his right index finger makes a slicing movement on the index finger of his left hand. In response, the seller stoops to take the onions, but at the same time, Pradip reaches for the seller’s hand, so the seller puts his hand on Pradip’s instead. Pradip repeats “half” while holding the cane under his left arm, the bowl in his left hand, the seller’s hand in his right hand (Figure 1e). Thus Pradip first makes a

visible gesture (ie a gesture that is accessed by the interlocutor by *seeing* it), and the seller demonstrates understanding by stooping to take the onions, which is not visible for Pradip. Pradip then establishes tactile contact, maintaining it by holding the seller's hand while repeating his request.

The seller nods and withdraws his hand, and both Pradip and the seller start selecting onions (Figure 1f), which indicates that Pradip actually did not mean he wanted the seller to take the onions, but that Pradip would select onions himself and then give them to the seller to weigh them and remove/add onions to amount to half a kilo. The misunderstanding becomes apparent when the seller offers two onions to Pradip by starting to put them in the bowl Pradip is holding. Upon feeling an onion enter the bowl, Pradip pushes away the seller's hand with his right hand, and then gestures "No" with the same hand (Figure 1g). Holding the bowl with his left hand, he takes and palpates each onion in the bowl with his right hand (probably checking for soft spots that can indicate rot), and selects three more of the heap of onions. He offers the bowl to the seller by stretching it in the latter's direction.

The seller, who was already gazing at Pradip, immediately takes the bowl and empties it in another bowl that is standing on the scale in front of him. At the same moment, Pradip signs "half" again (Figure 1h), but the seller has his eyes trained on the onions and thus does not register it, and Pradip does not register that the seller is not looking, given the absence of tactile contact at this point. Pradip possibly presupposed that the seller was still having his eyes trained on him since Pradip had given the bowl only a moment before. After weighing, the seller returns one onion to the heap of onions. Pradip then steps closer to the seller and stoops lightly and stretches out his right hand, thus organising improved tactile contact by repositioning his body. The seller notices it and offers him a potato from the heap next to the onions, by bringing it to Pradip's right hand, probably aiming to ask if Pradip also wants to buy potatoes (Figure 1i). Pradip takes and palpates the potato and gestures "no" while still holding the potato (Figure 1j, *Ishaare* 00:13:18), returns the potato to the man, gestures "no" again (as in Figure 1g), points at the onions (Figure 1k) and gestures "one", to indicate "only that". The seller nods and puts the onions in a plastic bag. Pradip gestures "half" again, and points at the onions. The man registers it and looks at the onions again.

Pradip reaches out his hand (probably waiting for the bag with onions), but withdraws his hand just at the moment that the seller wants to put the bag in Pradip's hand (Figure 1l) so the seller has to make a slightly wider arch with the bag than he initially set out to. Pradip stretches his hand out again, feels the seller touching his hand with the bag, takes the bag, palpates the onions along the outside of the bag (*Ishaare* 00:13:50). He reaches his right hand towards the seller's location, to get his attention, and after the seller touches Pradip's right hand with his left hand (to indicate he is paying attention), Pradip gestures (with his right hand) "how much?" (Figure 1m), then stretches out his right hand to indicate the seller should write in his hand. The seller writes "10" with the forefinger of his right hand in Pradip's right hand palm, stabilizing Pradip's hand with his own left hand (Figure 1n). Pradip then reaches out to take the seller's right hand, finger-writes "10" with his right hand (holding the seller's hand with his left hand) to ask for confirmation. The seller wobbles his head to confirm and gives a tactile confirmation by shortly touching Pradip's fingertips (Figure 1o). Pradip takes a 10 rs note from his breast pocket, offers it, and then walks away to another vegetable seller who's located two stalls further.

On street stalls like this one, Pradip has immediate tactile access to what is on offer, and in this case, he makes the selection himself (rather than asking the seller to give him the preferred objects). In an interview, Pradip explained that he finds indoor shops typically more challenging than market stalls: most grocery shops in Mumbai do not offer a display that can be readily tactilely and olfactorily accessed, and offer objects in closed packaging behind counters and behind glass.

Example 2: Buying biscuits in a grocery shop

Figure 2 about here

Pradip approaches an over the counter grocery shop, and the shop owner, who did not stand behind the counter yet, moves behind the counter before Pradip and says “bolo”, which is Hindi for “say/tell”, a term that shopkeepers frequently utter when signaling to customers that they are ready to attend to them. At the point of the seller saying “bolo”, Pradip is still moving, walking towards a further spot behind the counter (and the seller moves along with him). When Pradip stops, he reaches out his hand and puts it on the counter (Figure 2a) in order to indicate he is ready for contact. The seller takes a pen from beneath the counter (Figure 2a) and a block of paper which was already on the counter, and offers them by touching Pradip’s hand. When Pradip feels what the seller is holding, he ignores the offer (in some situations, Pradip does write: see Kusters, forthcoming b).

Instead, Pradip gestures his request for “a packet”, by producing a gesture that shows its size and shape (Figure 2b) and points to the back of the shop where as far as I can see, soaps and toiletries are stored (Figure 2c). The seller looks into that direction and returns his gaze to Pradip. Pradip adds: “biscuits” (producing the Indian Sign Language sign for “biscuits”), signing with his right hand while holding the seller’s right hand with his own left hand (Figure 2d), and then repeats the “packet” gesture and the pointing (in the same direction). The seller takes a pack of biscuits from another place than the direction in which Pradip pointed (but looks in that direction as if wondering what Pradip could have meant— see Figure 2e) and says “Marie” (the name of these biscuits) when handing them over to Pradip. The speed of understanding indicates this was a regular order of Pradip. Pradip receives the packet with his left hand, and then does a series of actions with his right hand: he taps the packet with his index finger (Figure 2f), lightly touches the seller’s hand in order to make sure the seller is attending to his question, gestures “how much?”, and reaches out this hand in order to indicate that the seller has to write his response on Pradip’s hand. The seller writes with his middle finger, without holding Pradip’s hand (in contrast to the onion seller) (Figure 2g). Pradip then repeats the tapping on the packet, puts it down and repeats himself, but *not by copying the seller’s writing* (as he had done with the onion seller), but by gesturing it in two different ways: first he gestures 1-0 with his right hand (Figure 2h, 2i), then gestures with both open 5-handshapes to indicate “10” (Figure 2j). He does not wait for the response and reaches in his breast pocket to pay, feels for the seller’s hand with his left hand and hands over the money with his right hand. The seller had in the meantime bagged the biscuits, takes the money and hands the bag over, and Pradip starts to walk away.

Then, Pradip suddenly seems to remember that he also wants to buy another type of biscuits. He taps on the Marie biscuits which he has put on the counter (*Ishaare* 00:22:14) and traces an oblong shape with his thumb and index finger (Figure 2k) on his hand to indicate the shape and size of the biscuits, then explaining that the biscuits he wishes consist of two sandwiched layers. He communicates the latter in two different ways: first by pressing his hand palms on each other (Figure 2l), and subsequently by pressing together the forefingers and middle fingers of each hand, in an asymmetrical way (Figure 2m). He then repeats his request by taking the seller’s hand with his left hand, tapping the Marie biscuits (on the counter) with his left hand (as such making clear he’s communicating about the category “biscuits”), tracing the oblong shape *on the seller’s hand* now (rather than on his own hand, as he did in the previous instance, in Figure 2k) (Figure 2n), and again puts his ring-and middlefingers on each other to repeat that it’s a sandwiched kind of biscuit. The seller moves away, to the left, and does not see Pradip pointing in the same direction as

before (ie, the back of the shop).

The seller returns with a sandwich in plastic packaging, offering it by holding it against Pradip's hand. Pradip takes it, points at it and gestures: "no!". He engages in a series of repetitions in the following order, with his right hand (holding the sandwich in his left hand): pointing at the Marie biscuits on the counter, pointing to the back of the shop, the gesture "no", touching the seller's hand with his right hand, moving the sandwich to his right hand, gesturing "no" with the hand holding the sandwich, putting it down, touching the seller's hand again, taking the biscuits in his left hand, tapping at them with his right hand, putting the biscuits down, tracing the shape of biscuits on the seller's hand, adding a gesture on the seller's hand delineating the length of the biscuits (Figure 2o), the sandwiching gesture in a third different way (putting index and middle fingers symmetrically on each other, Figure 2p, see contrast with Figure 2m), and tapping the Marie biscuits again. The seller goes, (and Pradip probably realises that he is gone since his searching hand doesn't find the seller anymore), and comes with a larger package of Marie biscuits and hands it over to Pradip. Pradip immediately understands it's the wrong product and he puts it down, takes the seller's hand with his left hand, taps at the package, and now traces *a round shape* on the seller's hand, gestures "no" (to indicate he does not want round biscuits like the ones the seller gave him), then traces the rectangular shape, repeats this sequence (now shortly taking the packet rather than tapping it and doing the tracing gesture twice), and ends by pointing in the back of the shop, which the seller did not see since he already had taken away the large packet of Marie biscuits.

The seller comes back with rectangular biscuits. Pradip feels the packet, touches the seller's hand, makes the sandwiching gesture by pressing his both hands on each other thrice, and gestures while holding his left hand on the seller's right hand: "where are they?" (Figure 2n). He takes the packet, rubs it, puts it down, and now traces the shape/size *on the counter, with two hands* (Figure 2r) (rather than on his hand or on the seller's hand, since the biscuit's size fits in the hand palm, but the packet's size is larger), to indicate the shape and size of the packet he wishes. He adds "one" in gesture, but the seller does not see the latter as he is already away looking for the biscuits.

The seller now returns with a smaller packet of the same biscuits. Pradip palpates the packet, touches the seller's hand, taps the packet in his left hand with the index finger of his right hand, puts it down and asks if this is the sandwiched one, (by doing the "sandwiched" gesture with both his hands), taps at the biscuits, gestures "what?", takes the seller's hand and makes *a smearing movement on the seller's handpalm* (Figure 2s), as if he is spreading something, to indicate there is cream in-between the layers, then makes the sandwich gesture *by putting his own handpalm on the seller's handpalm* and thus producing a 4th different way of the sandwich gesture (Figure 2t). The seller was already moving away when Pradip made the sandwiching gesture, even though Pradip was still holding his hand and added a gesture signifying "give it". The seller returns with another pack of biscuits and offers it to Pradip who held his hand up.

Pradip palpates the packet elaborately, smiling and very slightly wobbling his head (ie the common Indian head wobble to indicate agreement or understanding) to indicate it's the correct one. The seller says in English/Hindi "Cream ke hai" which means "made of cream". Pradip puts the biscuits down, taps the packet, the seller also taps it, and Pradip gestures "sandwiched with cream". The seller then says "Cream hai, haan" ("yes, it is with cream"), and then produces a tactile version of "yes" by tapping lightly on Pradip's hand (Figure 2u).

Attention-getting, mutual orientation, and repetition

When Pradip wants to get someone's attention, he searches tactile contact with the seller by reaching out his hand. In the case of Example 1, Pradip also adapts his body posture by stooping (since he is standing and the seller is sitting) and later also by moving closer to this seller. Thus he is negotiating the constraints posed by the material environment.

When Pradip has requests, he repeats them several times. Pradip mostly makes use of self-repetition but also made use of allo-repetition (repetition of others, Tannen 2007) when he repeated the price. Tannen (2007) has outlined a number of functions of repetition in conversation; the ones which are relevant to this article are: facilitating comprehension by way of redundancy, placing emphasis, attempting to get or keep the floor, and providing back-channel response. Abundant repetition happened in the interactions between sighted deaf people and hearing shopkeepers as well (Kusters forthcoming a), yet Pradip's repetitions might be additionally motivated by the fact that people do not always see him. Indeed, a crucial aspect in the interactions is that eye gaze from the side of the interlocutor is sometimes absent, sometimes present, thus visible gestures produced by Pradip are not always registered. Pradip knows that these disconnects in attention happen, although he mostly does not know when exactly the seller is looking. When he wants to heighten the chance that the seller attends to his gestures, he either holds the seller's hand when gesturing (such as "half" in Example 1), or gestures immediately after touching the seller. Thus mutual orientation is established and maintained by tactile contact either immediately prior to, or during the utterance.

Repetition can be exact, or one can paraphrase, or repeat something with variation (such as changing just one word or one gesture in a longer utterance) (Tannen 2007). Pradip makes use of all these techniques. For example when the shopkeeper asks for 10 rs by writing in Pradip's hand, Pradip repeats "10" by gesturing it in two different ways (Figures 2h, 2i, 2j) rather than writing back in the shopkeeper's hand. When rephrasing his request for biscuits, Pradip alternates between visible gestures and tactile gestures: he traces the shape of the biscuits on his own hand *and* on the seller's hand, and he made the "sandwich" gesture with 1. both his own handpalms, 2. two of his fingers on each hand in an a) asymmetrical or b) symmetrical way and 3. with one handpalm on the shopkeeper's handpalm.

Co-formation of tactile gestures

Thus, on several instances, Pradip recruits the shopkeeper's hand for communicating: when he makes the sandwiching gesture on the shopkeeper's hand, traces shapes in the other's hand, and he "smears cream" on the other's hand. Mesch et al. (2015, 280, my emphasis) document similar co-constructed signs in deafblind-deafblind signing: "This practice of co-formation involves both interactants contributing to the form (and thus meaning) of the sign, with the (primary) signer guiding the participation of his or her interactant." They suggest that the co-formation of signs is a consequence of the close physical proximity between the interlocutors: "deafblind signed language ecology involves co-constructed actions" (Mesch et al. 2015, 282). In this case, where a deafblind person communicates with a hearing sighted (rather than other deafblind) person, we see these forms are mainly used during a rash of misunderstandings, in a series of repetitions. Interestingly, when this series of misunderstandings occurs, Pradip employs a type of (tactile) gesture that would be perceptually salient if he were the addressee, now treating his interlocutor as if he perceives signs in a reciprocal manner¹.

Pradip is not the only one using tactile gestures. The onion seller and grocery shopkeeper both produce a *tactile version of "yes"* (Figure 1o and 2u). I have observed

¹ Thanks to Terra Edwards for this insight.

multiple times how Pradip's hearing interlocutors tap his hand to indicate "yes" and wave/swipe on his hand to say "no". Similarly, Mesch (2013) has documented several forms of tapping (such as with the thumb, with 4 fingers or with 5 fingers) in conversations between deafblind people in Sweden; indicating understanding or agreement. Since so many hearing sellers in Mumbai use it without being instructed by Pradip (and without Pradip using this tactile "yes" to communicate with shopkeepers himself!), it seems to be a quite intuitive way of communicating agreement in a tactile way. I also saw street sellers do a pinching movement holding Pradip's fingers (*Ishaare* 00:14:45, Figure 3) to indicate 5 or 10 (a common gesture for "five" is opening and closing the hand, which sellers do holding Pradip's fingers).

Figure 3 about here

The counter, and techniques of indicating

A very central feature in Example 2 is that it takes place between Pradip and a shopkeeper who stands *behind a counter*. The counter takes on "a dividing role between the semi-public space of the shop, and the semi-private space behind the counter" (Brown 2004, 28), and it therefore comprises several asymmetries. Indeed, the area behind the counter is not open to customers, yet on display to customers, but not in Pradip's case, so in his case the asymmetry is more palpable. The counter has a role in constituting interactants' body posture (oriented towards each other over the counter), and in their choice of modality. Sighted deaf people often point and write in such situations, or use conventional gestures (Kusters forthcoming a, b), but since Pradip simply cannot see what is on offer, other participant frameworks are authored in these contexts.

The counter not only marks asymmetries, but also provides the common surface where objects are rendered tactilely accessible to Pradip by placing it on the counter, following which Pradip and the shopkeeper can successfully negotiate the transaction. Clark (2003) regards the placement of objects as being a technique of indicating: when objects are placed, interactants "presuppose an existing indexing site [such as the countertop] and establish the referent with respect to it", and in this way it differs from pointing, where interactants "create the indexing site with respect to the referent" (Clark 2003, 249). The placement of objects (such as products, bags, money or paper) on the counter (or in the bowl as in Example 1) or holding it for the other ready to grasp it, enables the other to touch, tap, palpate, manipulate and identify objects. While Clark argues that object placement on the counter is central to customer interactions; in Pradip's case, object placement plays an even more crucial role in every step of the interactions since it is a crucial way for him to perceive objects. The counter, though, could be considered to be anti-tactile, since it's a barrier that has been negotiated: the material environment actually prohibits the kinds of tactile contact that are crucial for Pradip to navigate the city².

Clark (2003, 262) states that "Directing-to [ie pointing to a distant object, person or location] tends to be transitory, and placing-for, continuing. Also directing-to generally gets its interpretation from language associated with the indication, and placing-for, from its indexing site [such as the countertop]." Clark goes on explaining the advantages of placing-for over directing-to: the object remains accessible (while pointing is transitory) and it serves as a common object of reference. In this respect, Pradip repeatedly taps the pack of Marie

² Thanks to Terra Edwards for pointing this out.

biscuits (to establish the category of “biscuits”) and the packets of sandwiches and wrong biscuits (to indicate they are not what he wants). Pradip uses the counter also as a surface to store the different packets of biscuits and the sandwiches during his further interaction and to trace the size of the desired pack biscuits. When Pradip bought onions on the street, a space where a counter was lacking, he gestured while handling multiple objects (onions, a potato, his cane, the bowl, the bag), which is not necessary in the shop with the counter.

Pradip *traced* the oblong and round shape and size of biscuits, or of packets of biscuits, on his own hand, on the seller’s hand, and on the counter. Goodwin (2003) has described tracing as a way of superimposing iconic shapes on pointing gestures. In other words, Goodwin regards tracing (such as on a map) as a form of pointing and thus indicating, which can provide precise information such as the exact size and shape of an object. While Goodwin did not consider tracing on the body, Edwards (2014) documents deafblind signers tracing shapes on each other’s hand in a task during which they were asked to describe objects. Goodwin (2003, 239) also demonstrated that tracing “frequently requires a simultaneous formulation of what is being pointed at”– Pradip did this sequentially rather than simultaneously: he established the category of biscuits by tapping the biscuits; and employed several additional ways of explaining which biscuits he wanted (such as the sandwiching gesture).

Misfiring

We have seen how both interlocutors *misfire* their utterances repeatedly. The seller speaks now and then, in Hindi and English, even though Pradip does not see or hear it. Similarly, Pradip points in the wrong direction and produces gestures that are not attended to by the seller, who does not always see or attend to Pradip’s gesturing. What is crucial here, is that since the sighted person kept not seeing Pradip’s gestures, misfiring seems to have as much to do with a lack of shared conventional participant frameworks and mechanisms for coordinating and signaling attention, than it does with sensory capacity³. In most of the analysed customer interactions featuring Pradip, sellers’ eye gaze is short in duration rather than sustained, and Pradip taps the seller’s hand repeatedly to establish and maintain their attention.

Pradip’s use of distal pointing is another form of misfiring that provides us with an interesting case. Pointing establishes a reference between a pointer’s body (ie the pointing gesture) and the target region, and it involves a series of shifts in eye-gaze of the interactants, indicating where they focus their attention (Goodwin 2003). Iverson and Goldin-Meadow (2001) and Bruce et al. (2007) observed that while blind and deafblind people with no residual vision use a wide range of gestures, distal pointing was extremely rare because of the lack of visual access to distal objects. This did however not mean a failure of blind and deafblind people to indicate, which happened for example by holding and shaking an object or by tapping on an object, as discussed above. Here, however, we see that Pradip does make use of distal pointing as well.

In Example 1, Pradip pointed at the onions which he knew were directly beneath him (Figure 1k): he had previously located them by touching them. However, in Example 2, Pradip consistently points in the direction where he seems to think the biscuits are, without having visual or tactile access to their exact location. Pradip probably had felt the seller move roughly in the direction of this point on an earlier occasion, as sellers sometimes brush along

³ Thanks to Terra Edwards for this insight.

Pradip's hand or produce vibrations and air replacements when they move. He was however not pointing to the cookies but to the back of the shop. Pradip's pointing in the grocery shop is not an isolated example: data featuring Pradip contains numerous other examples of pointing, not only in shops but also situations where he asked strangers for guidance to a train station for example. Sometimes he pointed in the correct direction, other times he did not (which sometimes led to confusion and misunderstanding). People often accompany pointing by speech or gestures to narrow down possible interpretations of the point (Goodwin 2003, Kusters forthcoming a), and Pradip does the same by integrating the points in longer and repeated sequence. Hence, while perhaps not being helpful in this case, the points ultimately did not prevent the shopkeeper from understanding Pradip's request. Still, there is thus an actual or potential disconnect when Pradip points since Pradip is trying to make use of the visual deictic field rather than a shared deictic field (Edwards 2015). Edwards studies the way deafblind people orient toward a shared deictic field through a shared deictic system, and they can direct one another with no difficulty to things in the environment. Pradip and his interlocutors are missing such a shared system.

Conclusion

This study demonstrates how Pradip, as a deafblind man interacting with hearing sighted shopkeepers, negotiates linguistic and sensorial diversity, through using visible gestures, tactile gestures, and object handling. In short, Pradip is in charge of the communicative situation and he is establishing the customer space as one that is effective when tactile contact is established. Tactile contact involves Pradip touching the other's hand before gesturing; sellers gesturing *in/on* the Pradip's hand (tapping for "yes," gesturing "how much?," pinching for "five" or "ten"), Pradip gesturing with one hand while holding the other's other hand ("half", "where?"), Pradip gesturing *with* the other's hand (the sandwiching, the smearing of cream), or both finger writing on each other's hand. Objects are tactilely accessed when they are on display or when they are provided on request, and Pradip holds, touches, palpates objects to check and identify them, and shakes with them or taps on them to indicate them. Elsewhere I discuss how Pradip also uses text in addition to the different tactile and visible gestures discussed in this article: in addition to finger-writing on the hand (not just prices but also words and names), Pradip sometimes writes on paper, and uses a "spices booklet" where names of spices are written in English (Braille and Roman script) and Marathi (Devanagari script) to mediate asymmetries in literacies on the one hand and in access to different (visual and tactile) scripts on the other hand (see Kusters forthcoming b).

Thus Pradip makes use of the fact that his interlocutors are sighted (he produces gestures and written text to be seen), but he and his interlocutors eventually establish mutual orientation and understanding *when they touch hands*. Indeed, it is central to the participant frameworks that are authored here, that one interlocutor is deafblind and the other is hearing and sighted: the participant frameworks authored are specific for these customer interactions.

Pradip and the sellers have a shared orientation towards products that are offered for sale and they know how the process works (selection of product, payment, closing transaction), however the way in which they happen has been modified. We also see a lot of variation, taking shape in a series of repetitions: Pradip does not always use the same strategy, and if he is not understood, he expresses himself in alternative ways. The strategies used by Pradip are also specific to different material environments, involving counters and canvases on the street between the interlocutors. Indeed, "Participant frameworks can be highly contingent on momentary dynamics in the physical or interactional environment" (Edwards 2014a, 195).

The wide range of different configurations is due to the fact that these participant frameworks are not conventionalised or typified. According to Hanks (1990), when participant *frameworks* become conventionalised, they become “participant *frames*”: after repeated use and habituation, “certain physical relations in interaction ... become expectable, such as standard distance between speaker and addressee, relative symmetry in height, reciprocal sensory orientations, etc.” (Edwards 2014a, 238). In her study in Seattle, Edwards shows how, over time, a repository of participant *frames* emerged in a deictic field organized around tactile modes of access and orientation. The participant *frames* of regularized shopkeeper interactions between hearing sighted people are only partially usable in the interactions featuring Pradip, thus leading to the emergence of participant *frameworks* which are not conventionalised and therefore highly variable and prone to lack of mutual orientation, misunderstanding, and to misfiring.

In all of the examples above, Pradip is on the leading hand as regards the choice of communication means: he initiates tactile contact, he repeats his utterances multiple times in multiple different ways, recruiting objects, the space around him (the counter), and the hands and arms of the sellers. Pradip as the customer possesses the keys to successful interaction and takes the lead. Thus, in Pradip, we are seeing a kind of *customer cosmopolitanism*; in analogy to Wessendorf’s (2014) *cornershop cosmopolitanism*, resulting in a (re)configuration of the customer space to one where tactile contact takes high significance. However, at the same time as recognising Pradip’s agency, I am wary of naturalising the very asymmetrical patterns in interaction and naturalising the constraints of the surrounding space and the pressure exerted by more established (hearing sighted) participant frames. We need to wonder what a city would look like if it had been designed by deafblind people. Would there be counters in shops and would street sellers sit behind canvases? How would objects for sale be accessed and how would people communicate about these objects and their prices? How would mutual attention be established and maintained, and what would a conventionalised deictic system look like? Or on a less ambitious scale, what if shopkeepers in general were acquainted to frequently communicating with deafblind people? Participant frameworks would become more conventionalised and develop into participant frames, such as in Edwards’ study. Pradip’s language practices only lift a small tip of the veil of what is possible.

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Figure captions

Figure 1: Pradip buying onions

Figure 2: Pradip buying biscuits

Figure 3: Seller pinching Pradip's hand twice to say "ten"