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Thematic Issue

Object-centred sequences in social interaction

edited by

Sylvaine Tuncer / Christian Licoppe / Pentti Haddington

We dedicate this special issue to Charles Goodwin.

Not only does his work play a seminal role in the papers of this special issue,
but – as was also evident in the panel we organized
at the IPrA conference in Belfast in 2017 –
his support and encouragement was crucial for this project
of researching object-centered sequences.

We sorely miss his warm presence, intelligence and acumen.

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Editorial
When objects become the focus of human action and activity: Object-centred sequences in social interaction

Sylvaine Tuncer / Christian Licoppe / Pentti Haddington

This special issue originates in a series of data sessions where our attention was drawn to intriguing phenomena of joint orientation to, manipulations of, and talk about objects. Considering emerging directions in the field of ethnomethodology and conversation analysis (EMCA), 'object-centred sequences' seemed a relevant analytical issue and conceptual problem in its own right. We, then future co-editors, convened a panel at the *International Pragmatics Association Conference* (IPrA) in Belfast in July 2017. The panel presenters' enthusiasm towards the theme, and the rich range of analytic observations around it, have now come to fruition in the form of this special issue. Throughout the process, our goal has been to provide empirical, systematic and detailed studies of 'object-centred sequences' so that it can become a shared and established concept for future research. In the following editorial, we first delineate related research areas and topics to demonstrate the relevance of this agenda. We bring together advances in research on embodied interactions in the material world, and describe the progressive emergence of the notion itself. Then, we describe the main features of what could be defined as an 'object-centred sequence', and its bearing on studies on social interactions and practices. Lastly, we introduce the six contributions to this special issue, in all demonstrating that and how they advance the themes and issues which have recently emerged in EMCA, video-based research, and beyond.

1. A timely topic and focus for video-based research in EMCA

1.1. From conversation analysis (CA) to objects in interaction

It did not take long for conversation analysis to broaden its scope from talk-in-interaction to the diversity of semiotic fields relevant to participants in the particulars of their situation, and to explore how participants combine, articulate, and coordinate those different fields in the accomplishment of action in face-to-face interactions (e.g., Goodwin 1981; Heath 1986). Ethnomethodology's attention to lived practices and particular settings, as well as E. Goffman's ground-breaking argument within sociology of an 'interaction order', were major moves in this movement, albeit from two perspectives. Additionally, and more particularly, C. and M.H. Goodwin's research on collaborative action and activities in diverse professional and mundane settings has had a major influence in drawing attention to embodied conduct and the material environment within studies of human communication more broadly (Stivers/Sidnell 2005; Streeck/Goodwin/LeBaron 2011; Nevile 2015). As

a matter of fact, today, research on language and social interaction commonly rests on multimodal conversation analysis (Deppermann 2013).

Within this strand, some studies focus specifically on objects in interaction (Nevile/Haddington/Heinemann/Rauniomaa 2014). Objects in interaction can feature, and be studied, as tools or commodities – for interaction and/or for practical activities. While some studies explicitly circumscribe their focus on interactional practices such as turn-taking (e.g., Day/Wagner 2014), others, including C. Goodwin, unpack how participants intricately involve objects in the pursuit of various activities (e.g., Goodwin 2007). In a pioneering study, Streeck (1996) explores the ways two businessmen talk about and manipulate cookie packages, providing them with various semiotic and symbolic meanings, using them as proxies for other abstract or concrete entities. Objects' status thus changes on a moment-by-moment basis in the course of the encounter according to the momentary interactional purpose. Many other studies – and this is not a complete list of them – have explored the role of objects in the organisation of social interaction. For example, Kidwell/Zimmerman (2007) show that children commonly establish joint attention by showing objects to each other, such as shoes or toy figures, and thus initiate object-mediated activities. Heath/Luff (2013) study how auctioneers and buyers produce the price of a work of art around the movements and strike of a hammer. De Stefani (2014) shows how couples shopping together coordinate joint mobility in the store through joint orientation to objects. Mondada/Sorjonen (2016) show that customers and sellers in convenience stores, as they orient to and manipulate newspapers, sweets or cigarette packets in different ways, can project and anticipate whether the customer will make one or several requests, and what type of goods will be requested. In this case, particular ways of orienting to and manipulating objects enable the smooth progression of the economic encounter (see also Mondada this volume). Interactive technological objects are also studied: while Haddington/Rauniomaa (2011) and Rauniomaa/Haddington (2012) study how drivers and passengers begin mobile phone calls in cars, DiDomenico/Raclaw/Robles (2018) show how co-participants manage the reception of a text message by orienting to and handling the mobile phone. In all, this bulk of studies addresses how participants interact *with* and *through* objects, or how objects feature as means for the interaction.

We find that within the same strand of 'research on objects in interaction', a number of studies remarkably stand out from those mentioned above, targeting *objects as resources for interaction*. Here, objects are the central concern in the interaction and activity in progress. They are both the focus and the product of participants' interactions with them. Thus, two types of interactions – object-focused interactions and object-implicating interactions – can be distinguished with respect to participants' forms of involvement with objects, as well as to objects' status in the interaction. The distinction itself surfaces sporadically and *sotto voce*; nevertheless, it remains unspecified, despite its major consequences on sequential organisation, progressivity, intersubjectivity and sociality.

1.2 An emergent conceptual distinction

Far from claiming discovery of this distinction, we contend there is a pressing need to formulate and clarify the features of this second type of interactions about objects.

It seems that the first explicit mentions of 'object-focused interaction' as relevantly distinct appear in the fields of human-computer interaction (HCI) (Hindmarsh et al. 2000) and computer-supported cooperative work (CSCW) (Hindmarsh et al. 2001). One can see this as a result of more than a decade of EMCA-oriented research stimulated by the development of technologies at work and for work (Suchman 1987), and designers' aim to improve the design of distant communication technologies in particular. Workplace Studies emerged, and began to explore the particular demands put on technology for participants to be able to jointly refer to and maintain a shared perspective on objects in the unfolding of an activity. This prominence of joint orientations to objects in technology-rich, collaborative settings is nicely put forward in the concise and efficient title "Formulating planes" (Goodwin/Goodwin 1996)[1], for instance. Through their actions involving objects, participants "infuse them with characters and actions […] that may otherwise remain unavailable" (Hindmarsh/Heath 2003:43), such as the resistance of an object's rubber surface through gesture.

More recently, the bi-partition of the edited volume "Interacting with objects" (2014) reflects the basic conceptual distinction we aim to reinforce: "Objects as situated resources" and "Objects as practical accomplishments". In the same book, Weilenmann/Lymer (2014) distinguish "object-implicating interactions" and "object-focused interactions": participants are "incidentally involved" with objects in the former and "essentially involved" in the latter, and objects' statuses are contrastive too, either "incidental" or "essential". Lastly, the authors emphasise that in object-focused interactions, the very aim is to create a shared understanding of a feature of the object. Analysing the progressive soothing of a child by other children through manipulations and joint orientations to a toy, Kidwell (2012:524) uses in turn the expression "object-focused interactions". Kidwell argues that the toy helps to stop the child from crying, not only because it distracts him, also because joint orientation to the toy projects the possibility of a joint activity with and through it. Another example of this type of interaction through objects can be found in Licoppe's (2017) study of participants showing objects to each other in video-mediated interactions. In some cases, a "gestural showing" is produced as a contribution to the ongoing talk-in-interaction; while in other cases – called "showing sequences" – the visual display of the object becomes the focus of the interaction. As a final example, Ekström/Lindwall (2014) distinguish sequences where the interaction is aimed at "intersubjectivity or the progression of the communicative exchanges *per se*", and sequences where the interaction is aimed at "the achievement of material objects". The authors observe that in the former, "orientation to and manifestation of progressivity change" (244). This is also what this special issue, in many ways, aims to unpack and demonstrate.

A number of video-based, EMCA studies on multimodal interactions deal with object-centred sequences and activities, more or less explicitly. Studying fashion designers assessing a clothing item, Fasulo/Manzoni (2009) show in particular how jointly and progressively produced verbal assessments are inseparable from concomitant joint orientations to and manipulations of the clothing item. Also in relation to fabrics, Ekström/Lindwall (2014) show how instructors and students in crochet lessons can locate mistakes, make the students perceive them, and propose

[1] Again, their work has been a major influence to the authors in this special issue, and it is also visible in the contributions.

remedial action, through touch, vision and talk, gradually manipulating the fabric, looking at it and talking about it. These trajectories exemplify a characteristic feature of object-centred sequences: once the instructors have responded to the students' call for help, they are committed to one another until they have generated and agreed on a shared understanding of this piece of fabric, so that the student can resume the task on her own. Fox/Heinemann (2015) focus on how customers in a shoe repair shop proffer, move, and verbally refer to their shoe during the openings of these service encounters. Retailers' anticipations show how these multimodal practices frame and project a yet-to-be-stated problem and request from the customer. The encounter's trajectory is tied to how objects will be characterised, and not only jointly oriented to as, for example, a purchasable object as in Mondada/Sorjonen (2016), which otherwise share many similarities with Fox/Heinemann (2015). In the hair salons studied by Oshima/Streeck (2015), the progressive and collaborative production of a final assessment is a particularly delicate matter since the 'object' is part of a participant's body, and the final assessment wraps up the service encounter and determines the customer's satisfaction.

To sum up, object-centred sequences are far from overlooked but they remain underspecified as such. In the following section, we provide a definition and describe the characteristics of object-centred sequences. We aim to direct the readers to the articles in this edited volume and highlight how they approach different aspects of object-centred sequences.

2. What are object-centred sequences?

Participants can make objects a relevant focus for a stretch of interaction in different ways. For instance, they can treat objects as 'mentionables' and refer to them in talk, to further elaborate on them. However, objects that are locally available to participants can also be shown and manipulated so that participants collaboratively create a shared material environment and establish a relationship through these objects and the broader environment. This special issue, in the framework of multimodal conversation analysis, focuses on the latter phenomenon, where embodied actions towards objects and talk-in-interaction are sequentially articulated, as participants orient towards getting and exhibiting a shared grasp of some feature of their environment. A typical situation for object-centred sequences is when participants bring some physical object to the foreground and establish it as a relevant concern in interaction. This projects and leads to further talk about the object, as well manipulation and physical consideration of the object so that it can be jointly apprehended and considered. Participants do this by handing over the object, inspecting it visually, moving it around, touching it, smelling it, and so on.

Because of this constitutive articulation between object-oriented actions, embodied conduct, and talk, multimodal object-centred sequences are not "just" talk-in-interaction; they are recognisable sequences on their own. They provide for distinctive stretches of sequentially-organised interaction, with a beginning, a development, and a closing. The beginning phase of an object-centred sequence involves two concomitant, occasioned, and methodical achievements, and is in turn recognisable through the same achievements as potentially the beginning of an object-centred sequence. First, participants steer the focus of the interaction towards an object by making it relevant in a certain way, for instance through prefaces

(Licoppe/Tuncer this issue), or requests (Mondada this issue). Such preliminary work provides a particular frame of relevance for the object as an "attendable" (Licoppe/Tuncer this issue), setting up an opportunity for "instructed vision" (Tuncer/Haddington this issue) or classification (Keisanen/Rauniomaa this issue). Second, participants manipulate the object so that it is available for scrutiny, and that its 'inspection' becomes relevant and achievable as a public accomplishment (on the notion of 'inspection sequences', see Mortensen/Wagner this issue). The object's features or qualities are revealed in the course of the sequence, in an emergent fashion (Mondada this issue; Smith/Goodwin this issue). In such an inspection phase, the sequential organisation of talk and embodied conduct are rearticulated, so that further talk becomes contingent on the object as it is made relevant and manipulated at a given moment, that is, the way in which it becomes "progressively witnessable and discourseable" (Garfinkel/Lynch/Livingston 1981:138).

During their opening phase, typical object-centred sequences include ostensive practices, such as displaying and showing, but they may also involve object transfers, either in ordinary settings (e.g., Tuncer/Haddington in press) or in more complex gift sequences (Good/Beach 2005; Robles 2012). The crucial and characteristic feature of object-centred sequences is therefore that they make talk-in-interaction topically and sequentially contingent on participants' joint orientation to the object. In this progressive and reconfiguring articulation of talk and embodied, object-oriented conduct, talk is sequentially produced and topically designed so as to be 'about the object'; it may be made into a 'viewable', a 'manipulatable', or a 'mentionable' in the here and now. In other words, in object-centred sequences participants both handle and assemble objects, and make objects accountable for the occasion (Hindmarsh/Heath 2000). This progressive and collaborative constitution of objects' qualities is both a resource and a topic for the unfolding interaction.

Following the establishment of a sequential frame for an object-centred sequence, the second, development phase, unfolds in which turns-at-talk are designed and treated as accountable with respect to the moment-by-moment consideration and manipulation of the object, both in terms of sequential positioning and topicality. Indeed, on the one hand, manipulations provide emergent slots for talk, such as assessments, or displays of recognition (Keisanen/Rauniomaa this issue); on the other hand, talk relevant to the object of interest, assembled in a certain way to be considered in the here and now, is somehow expected, and its absence might be treated as an indication of trouble (Tuncer/Haddington, this issue).

In the closing phase, participants display that they have achieved an adequate enough grasp of the object, for all practical purposes (Tuncer/Haddington this issue), through agreement tokens, and by progressively disengaging from the object with their bodies. Such displays may then be treated as opportunities to move on topically and sequentially, for instance to discuss the object itself, or introduce some other topic, shifting back to the sequential organisation of ordinary conversation.

Object-centred sequences can be brief, or they can expand in time. One example of the latter comes from foetal ultrasound scan encounters in clinical settings where the operator is – for an extended stretch of time – engaged in a continuous exploration of the pregnant woman's body, searching for potential showables related to the baby, in order to present them on the screen, to be considered and scrutinised by her and the parents (Nishizaka 2014).

Object-centred sequences can be placed on a continuum. At one end of the continuum, they can be a shared achievement through and through, so that participants jointly orient to and discuss the object from the beginning to the closing of the sequence. At the other end, they can involve individual moments with one participant withdrawing from the interaction to inspect the object on her own (see especially with tasting: Morten/Wagner this issue; Mondada this issue). In the latter case, once an object-centred sequence has been initiated, participants work in concert to open a slot where bodily joint orientation, joint orientation to the object and talk about it are suspended. The sequence is resumed when the participant who is still involved with the object displays that she has reached a different perception of the object and is now ready to re-engage in interaction. These sequences can have marked openings and closings and thus feature as inserted sequences within the object-centred sequence. Alternatively, cues of suspension and disengagement can be subtle and the individual inspection be less jointly oriented to.

Additionally, it is important to note that the focus on an object in interaction is an ongoing, dynamic achievement. Objects and the ways in which they can be apprehended through various sensory mediations are co-assembled for the occasion. The ways in which objects are made relevant for consideration and inspection therefore may be (and often are) revised and adjusted in the course of unfolding interaction. Objects and the perspective in which participants consider them (and particularly apprehend them perceptually), are therefore continuously produced and reproduced in the course of object-centred sequences.

In the case of vision, which has been discussed more extensively, this resonates with Wittgenstein's idea of 'aspectual seeing'[2] (Wittgenstein 1953; Mulhall 1990). For Wittgenstein, several ways of 'seeing-as' may become relevant with respect to objects through time, with the famous example of the duck-rabbit drawing, first seen as a duck, then as a rabbit. The paucity of language does not do justice to the richness of perception-in-action (Coulter/Parsons 1991): if seeing is assembled for the occasion, then there is an infinite number of ways of 'seeing' (and more generally 'perceiving'). Moving from individual to shared, intersubjectively-built perception, these different ways of perceiving objects can be occasioned, jointly made relevant and publicly exhibited in the course of an interaction. That very richness is the kind of stuff on which object-centred sequences build as a resource.

It must be noted that, while vision and gaze in interaction have been given a lot of attention in EMCA studies and are often treated as paradigmatic cases for philosophical concerns, other sensorial as well as semiotic fields and interactional resources are available and resorted to in human interaction. EMCA studies have begun to expand towards other sensorial fields (see Mondada 2019), to understand how participants both use them in interaction and try to establish a shared perceptual apprehension of the world they have constituted in the here and now. The investigated sensory modalities involve taste (Wiggins et al. 2001; Wiggins 2002; Mondada 2018; Mondada, this issue; Keisanen/Rauniomaa this issue), touch (Cekaite 2015; Nishizaka 2017; Iwasaki et al. 2018, Smith/Goodwin this issue), and smell (Mortensen/Wagner this issue). Any of these modalities to approach and apprehend the world can be(come) relevant in object-centred sequences. In these joint multi-

[2] Wittgenstein uses this notion for another purpose, that of countering mentalist, sense data-based theories of perception.

sensorial productions, objects and relevant orientations to them are mutually elaborative, continuously elaborated, and produced so as to be available for various relevances to be scrutinised. The lived and witnessable work of such joint multisensorial productions is the core phenomenon of object-centred sequences.

The joint consideration and handling of objects creates opportunities for achieving intersubjectivity locally and in a dynamic way. In addition to this, such an achievement has moral and relational implications, integral to object-mediated relationships. In the course of object-centred sequences, participants can claim, deny or negotiate their respective rights and obligations, expertise or entitlement. One can be deemed worthy of, allowed to, or accountable for making relevant a specific object in a certain way; or capable of considering and assessing an object in a certain way. For example, a seller can deny a customer's deontic right to manipulate a piece of cheese (Mondada this issue), or a novice mushroom picker can expect that the more experienced partner has the final word to qualify the mushroom (Keisanen/Rauniomaa this issue). The moral and relational enactments involved in the initiation and accomplishments of object-centred sequences are intimately tied to membership categorisation issues (Sacks 1992; Hester/Eglin 1997). Membership categories can emerge with the object-centred sequence, that is, to paraphrase Sacks' notion of 'interaction-generated' categories, (Sacks 1992), be 'object-sequence generated'. Just like a telephone call can generate 'caller' and 'called party', "standard relational pairs" (Sacks 1974) such as 'show-er'/'show recipient', or 'giver'/'taker', may become relevant as an integral part of the collaborative work of initiating an object-centred sequence. These categorial devices and incumbencies enacting rights and obligations are category-bound to the object, and might be consequential to the way an object-centred sequence unfolds. This categorial work through an object is oriented to and produced in the detailed way access and orientation to the object are achieved. Friendship and intimacy can become a lived and witnessable accomplishment in the here and now, for instance when, and in the details of how, a Skype conversationalist initiates the showing of an object framed as her latest purchase, subsequently manipulating and elaborating on it in a dynamic and collaborative fashion (Licoppe 2017). Or, a novice-expert "standard relational pair" becomes accountably relevant when the two parties try to make sense together of some potentially perceptible shape in the dirt for archaeologists (Goodwin 2000).

From a praxeological perspective, object-centred sequences also retain an important relationship with verbs of perception such as "to see". Ryle (1956) notes that such words are not processual and do not account for an experience. Rather, they index an endpoint, at which "I have seen it", or "I have not seen it". This particular indexical feature seems to operate in object-centred sequences because they involve displaying that one 'sees' or perceives objects in this way at some point (Keisanen/Rauniomaa this issue; Tuncer/Haddington this issue). The orderly articulation of talk and embodied conduct through which and as which they unfold is oriented so as to provide an opportunity for participants to display that they have arrived to a recognisably adequate enough (for all practical purposes) shared perceptual apprehension of material features in their environment. In that sense object-centred sequences inherit the directional and indexical gradient which Ryle finds to be characteristic of some verbs of perception, and such an orientation towards an endpoint appears as a constitutive feature of object-centred sequences. One of the ways in which such directionality may become visible, is in the kind of talk which

is produced as objects are manipulated in the course of object-centred sequences, and its relation to the trajectory of the overall sequence. In showing sequences it is for instance common for the response to an assessment by the show recipient to be further manipulation of the object by the show-er. This is intelligible as a treatment of the prior assessment as displaying an inadequate grasp of the object, and of its further manipulation as having a remedial character, in providing an opportunity for another and different display of understanding from the show-recipient. Conversely, when the show-er does not do this but affiliates with the assessment and steers the interaction into another sequence, she displays that an adequate understanding of the object in play has been achieved, and that the show-recipient has grasped the object in a way which is adequate with respect to all practical purposes: the sequence has been 'successful' in the same sense Ryle (1956) discusses with verbs of perception ('A now sees X').

Moreover, this feature intersects with the moral and relational character of such sequences. Object-centred sequences may often work as a kind of 'relational bid', where the perceptual endpoint, at which participants display that they somehow 'grasp' the object together, is also one at which they have enacted the kind of categorial relationship which looking at and then seeing together this object, in this particular way, progressively makes relevant. By constituting co-participants as able to share, worthy of sharing, and competent to share, a perception of some features of their world potentially in common is achieved, adequate enough for the purposes of the current activities, through a process which also enacts participants as members of an emergent, locally defined community of practice (Lave/Wenger 1991).

Because they require frequent opportunities for displays of intersubjectivity, and because such displays may work as potential interactional building blocks for local communities of practice, object-centred sequences tend to feature prominently and saliently in interactions between professionals, or experts and novices, where the outcome depends on co-participants' success in getting one another to recognisably orient to some feature of the environment in a certain way. Such public procedures for recognisably perceiving and acting together "in the middle of things" (Livingston 2008) are cumulative and "through such accumulation highly varied settings, cultures and distinctive ways of knowing and operating upon the world are created and lodged endogenously within particular communities, whether it be foragers (Keisanen/Rauniomaa this issue), laboratory scientists (Tuncer/Hadddington this issue) or geologists (Smith/Goodwin this issue). Members of such communities thus face, as part of the intrinsic organisation of action itself, the task of building "new members who can be trusted to see, understand and act upon the world in relevant ways" (Goodwin 2013:9). In light of this quote, it is interesting to note that many of Charles Goodwin's examples of participants' collaborative efforts of various types to apprehend some features of the environment could be re-specified in the vocabulary of this special issue as object-centred sequences. Even though they occur routinely in everyday settings, object-centred sequences are also powerful resources to enact, display and teach "professional vision" (Goodwin 1994) in highly specialised settings. The very notion of "co-operation" which Goodwin makes central to his understanding of embodied interaction (Goodwin 2017), rests on the achievement of some joint understanding of the prior materials out of which the next action will be built, and the next action makes publicly available some

understanding of these prior building blocks. Object-centred sequences are a primordial site for the production of culture and sociality.

This special volume aims to add to the above work and to contribute to the understanding of 'object-centred sequences' and their orderliness. It brings together a consistent series of cutting-edge studies in ethnomethodological, multimodal conversation analysis, studying naturally-occurring interactions with video recordings from different settings.

3. Overview of the contributions

In the first article of this joint volume, Kristian Mortensen and Johannes Wagner bring together a collection of similar interactional instances from various settings (e.g. design workshops, supermarkets and tasking fairs) to investigate and describe 'inspection sequences'. From the opening and closing of 'inspection sequences', through the way unfamiliar objects are handled, the paper shows that inspection sequences are composed of particular actions occurring in a particular order and that the resources utilised for the inspection are contingent on the features of the object and the environment. The authors explore how human senses – not only vision and touch, which have hitherto been the main focus of interaction analytic research, but importantly also taste and smell – are involved in the action of inspecting an unfamiliar object. The paper also provides different cases, from sequences in which the participants share the focus of attention on the inspected object, to those involving inserted, individual inspection sequences with inspectors gazing away or momentarily withdrawing from the F-formation. Thus, the authors show that inspection sequences can be '*private'* sequences that are publicly available to co-participants, or shared ones through and through. In any case the inspection is made witnessable to co-participants as a sensorial activity.

Objects can also be tasted and require individual inspection, as shown in Lorenza Mondada's article on requests for products in food shops. Her paper is part of a series of studies on interactions among professionals and customers in cheese shops. The article focuses on the initiation of this particular type of object-centred sequence. It identifies several mobile, bodily and verbal practices in relation to the placement of goods in the shop, such as requests with body orientation and walking towards the location of the product, or requests including pointing and naming. While customers' initiations can sometimes occasion a new negotiation of asymmetrical deontic rights to approach and/or manipulate cheeses, it is shown that, besides their location, various sensorial characteristics of products can become relevant through talk and embodied conduct, such as touch, smell and taste. The paper therefore unpacks how shared assessments are both revealed and jointly produced in the course of request sequences through multiple senses. It thus sheds light on fundamental achievements of these service encounters, in which the aim is that the seller and customer find together which product the customer likes and may want to purchase.

Sylvaine Tuncer and Pentti Haddington's paper "Looking at and seeing objects: Instructed vision and collaboration in the laboratory" follows biochemists jointly orienting to and discussing a work-oriented object. Through detailed analyses, they show how scientists may manipulate, inspect, and talk about the object so as to see it together as potentially problematic. Here, object-centred sequences are embedded

in laboratory work and pervaded with a concern to progress the tasks under way. Highlighting that a prior distinction in the Science and Technology Studies literature between immediate recognition ('mere' seeing) and interpretation (or the scientific interpretation of the visible features of objects of knowledge) may be less clear-cut, they focus on the early phases of these object-centred sequences, and the way these display phenomena of 'instructed vision' and 'seeing work' in which the ways to see the object together are constantly updated and transformed in an emergent fashion. From the moment a common perception is established, biochemists can look for new knowledge in and of the object.

The next paper by Mick Smith and Charles Goodwin's called "Revealing objects via aspectual-seeing in situated work" also explores interaction between scientists at work; more specifically, geo-scientists in the laboratory and in the wilderness. The paper focuses on the practices these professionals use for directing attention towards co-present features and/or materials in a given setting, for revealing certain sensorial and corporeal aspects of those for others, for the purpose of revealing those phenomena as categorically-relevant and/or work-relevant objects. Smith and Goodwin show how these practices are systematically organised and display a constitutive tension between the routinely categorisable object and the object which has to be made to emerge from the ecology it is embedded in through a complex set of collaborative practices, both elaborating one another as the object-centred sequence unfolds. What otherwise might be experientially ineffable aspects of a given phenomenon are transformed into public resources for interlocutors to build current and subsequent action. What is empirically available are precisely those situated practices through which participants reveal their experience to others in a community of practice. Because of the embeddedness of the objects, there is a particularly tight relationship between the perceptual qualities being oriented to and aspects of the objects being scrutinised which are relevant to that community of practice.

Tiina Keisanen and Mirka Rauniomaa investigate another, non-professional community of practice: family members or foraging groups picking mushrooms in the wild, to address issues of classification, sensoriality, and developing expertise. The authors unpack how object-centred sequences are initiated as one participant draws attention to the mushroom through talk and ostensive practices, and then another participant is oriented to and solicited for her expertise through recognisable methods. Phenomena of guided inspection are publicly accomplished and exhibited, with foragers positioning themselves as more experienced taking a moment to examine the find before confirming or disconfirming the proposed classification. The analyses shed light on particularly emergent processes which bind participants together in object- and sense-mediated relationships. The authors also identify a variety of possible classifications and forms of assessments involved, such as edible vs. non-edible, for eating or for other purposes, or simply naming. The chosen examples give an overview of the variety of senses possibly involved in foraging mushroom, from vision to smell through touch, nicely observing that "stroking and tapping enable quite different types of access to the mushroom", more to the surface or to the texture. In the last section, the ineffability of some senses is demonstrated when participants fail to create a shared perception of the mushroom.

In "The initiation of showing sequences in video-mediated communication", Christian Licoppe and Sylvaine Tuncer study object-centred sequences where co-

participants show objects to each other during Skype video calls. They focus specifically on the beginnings of 'showing sequences'. Their analysis illustrates that 'showing sequences' can be initiated first, at moments of topic shifts; second, as side sequences after a noticing of a 'showable' object; and third, after there has been a mention about a potential showable object, making the showing an expected next action. They also argue that as object-centred sequences, 'showing sequences' follow a particular pattern: the showing is preceded by a verbal preface that initiates the sequence; the object is manipulated and brought to the recipient's view for seeing; and the recipient produces 'appreciative talk' that indicates the 'seeing' of the object. Manual actions with the objects are inevitably constrained by the video-mediated character of the interaction, as much as the latter seems to encourage efforts to build a material world in common. The paper highlights that these object-centred sequences touch upon delicate, intimate matters as participants have visual access to one another's personal environment, often their homes. Pointing to an object and shifting the conversation to it enacts certain claims, and is also inseparable from the material practices deployed to give the other perceptual access to it.

The six contributions provide converging findings about object-centred sequences as a type of interaction, oriented to by members as such, with recurrent and constitutive features. The edited volume reinforces this by bringing together studies from a variety of settings and with different foci. We hope it provides new knowledge and will be useful for future video-based research on multimodal interaction, and offers new knowledge that such research can build on.

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Inspection sequences – multisensorial inspections of unfamiliar objects

Kristian Mortensen / Johannes Wagner

Abstract
The social world is inextricably linked to its physical environment. The way in which social interaction makes material objects relevant to meaningful practices has consequences for the flow of interactions.

In this article we examine how participants inspect unknown objects and how their different materiality determines the course of such inspections. We are interested in the resources that are mobilized in the inspection, how participants initiate, organize and complete these inspections; how they use different senses, depending on the materiality of the objects they are inspecting, and how they become momentarily unavailable for the surrounding interaction, while performing recognizably "private" activities.

Our data come from design workshops, tastings, grocery shopping and teaching with different participation frameworks (single action, two- and multi-party interaction).

Keywords: Ethnomethodology – multimodality – multisensoriality – inspection – objects – unknown objects – tastings.

German Abstract
Die soziale Welt ist untrennbar mit ihrer physischen Umgebung verbunden. Die Art und Weise wie in sozialer Interaktion materielle Objekte für sinnstiftende Praktiken relevant gemacht werden, hat Konsequenzen für den Ablauf von Interaktionen.

In diesem Artikel untersuchen wir, wie Teilnehmer unbekannte Objekte inspizieren und wie deren unterschiedliche Materialität den Ablauf solcher Inspektionen bestimmt. Wir sind daran interessiert, welche Ressourcen in der Inspektion mobilisiert werden, wie Teilnehmer diese Inspektionen einleiten, organisieren und abschließen; wie sie - abhängig von der Materialität der von ihnen inspizierten Objekte - unterschiedliche Sinne einsetzen und sich momentan für die umgebende Interaktion unzugänglich machen, indem sie erkennbar "private" Aktivitäten durchführen.

Unsere Daten stammen aus Design-Workshops, Verkostungen, Einkaufen im Supermarkt und Unterricht mit unterschiedlichen *participation frameworks* (Einzelaktion, Zwei- und Mehrparteien-Interaktion).

Keywords: Ethnomethodologie – Multimodalität – Multisenoralität – Objekte – unbekannte Objekte – Probieren.

1. Introduction

Inspecting objects is a common feature of everyday life, and the reasons for those inspections are manifold. Familiar material objects are usually not inspected; they are used in ordinary practices for whatever purpose. However, familiar objects might have undergone a change, e.g. a glass has fallen down (Is there a crack?), a car door has been close to a parked car (Is there a scratch?), a cup has been taken out of a dish washer (Is it clean? Did somebody already activate the machine?) et cetera.

In this paper, we are interested in the ways inspections of unfamiliar objects are organized. The term 'unfamiliar' refers to how participants orient to them. Those objects may be an unfamiliar specimen of a known class of objects like e.g. new attire in a clothing shop or a new beer from the local brewery, but also unknown objects , e.g. a 'thingy' in an antique shop or an art gallery or an instrument in a medical museum. 'Unfamiliarity', we argue, is visible through the ways in which participants treat objects – they are investigated as mere objects of ('new') perception – what Heidegger (1927) calls *Vorhandenheit* ('present-at-hand'). Taking or passing such unfamiliar objects typically initiates what we refer to as inspection sequences, in which objects are put under scrutiny for sensorial inspection (e.g., Streeck 1996; Mondada 2018a, 2018c). In this paper, we are interested in the ways different human senses are involved in the inspection, be it vision, touch, taste or smell or any combination of those. We draw on data in which both tangible objects and beverages are inspected. We will argue that (i) inspection sequences are organized as a systematic and witnessable social practice that can be recognized by (possible) co-participants, but (ii) that the resources for accomplishing the inspections depend on the type of object that is being inspected and the local environments in which an inspection is undertaken.

We will start with a very simple example to clarify central issues for our analysis. Our first extract is taken from a study of shopping behavior in a supermarket. A male customer, shopping alone, inspects some packaged food items, i.e. an unfamiliar specimen of a known class of objects, before he chooses one and puts it into his basket. Although it can be argued that his actions are not designed for others,

they are publicly available, recognizable for what they are, and recognizable as a common social practice, in short they are part of the "witnessable social order" (Livingston 2008). As a practice, the customer's shopping behavior has a recognizable beginning and end and can be analyzed as a sequence of ordered actions. Since no talk is involved, we will present several screenshots to document the unfolding action.

In the extract, the customer approaches the Deli counter at a supermarket, looking at packages with ready made meal offers with his left hand under his chin in a 'thinking face' posture (Goodwin/Goodwin 1986). From arrival (pict. 1.1) to departure (pict. 1.2), the activity takes 55 seconds.

(1) Inspecting and choosing food items in a supermarket

Picture 1.1:
Customer approaching the counter

Picture 1.2:
Customer leaving

After having scanned the counter, the man lifts packaged food out of the shelf and looks at it (pict. 1.3). The food is wrapped in solid transparent plastic that allows the customer only to inspect it by vision. This prevents other inspection methods that are available in for instance cheese shops where cheese is inspected by vision, touch, smell and taste as Mondada shows in a number of studies (Mondada 2018a, c, forthc., this issue).

Picture 1.3:
Customer inspecting a package sample

Picture 1.4:
Customer reading the text on the sample

The inspection proper is sequentially organized: The customer starts looking at the package (pict. 1.3), then tilts his hand so he can read the content declaration on the front (pict. 1.4). When done, he returns the package into the counter and grabs another one that he inspects visually as well in similar ways as with the first one (pict. 1.5).

Picture 1.5:
Customer inspecting a package sample

Picture 1.6:
Customer reading the text on the sample

He keeps this package in his hand while looking at other samples in the Deli counter (pict. 1.6) before he finally puts it into his shopping basket and leaves.

The customer coordinates the movement of his hand with his gaze when picking up and turning the package. As Merleau-Ponty (1945) has pointed out, human beings experience the world through bodily engagement. Indeed, "[w]e gain most of our tactile information about the world through taking, holding, using, and handling things" (Streeck 2009:47). In this case, access to the food item is limited since it is packed the way it is. But we see the unique status of the human hand as the prominent way in which humans engage in the physical world including taking, holding and feeling material objects. Indeed, it has been argued that grasping things is the most basic function of the human hand (MacKenzie/Iberall 1994).

In moments of social interaction objects are passed or taken, offered or requested, and sometimes exchanged in highly ritualized ways e.g. giving and receiving gifts. In grasping or receiving an object, the configuration of the human hand displays an understanding of the object's properties and projected use. From a phenomenological perspective, the meaning of an object lies in the practices through which it is used, and is hence visible in the contact between user and object i.e. grasping and its action projection. Similarly, the way in which an object is passed to a co-participant displays how the object is to be received and used (Tolmie/Rouncefield 2011; Heath et al. 2017; Fox/Heinemann 2015; Heinemann/Fox 2019), and may even be corrected if the pass is done in what participants treat as improper ways – such as instructing children to pass scissors and knives. In addition, taking an object may result in a change in the participation framework, and may induce co-participants to look at or comment on the object (e.g., Hindmarsh/Heath 2000; Kidwell/Zimmerman 2007) or it may have to do with turn design and rights to the floor (cf. Day/Wagner 2014; see also Mondada 2007). In sum, the ways in which objects are grasped, taken, inspected, passed and received reveal

participants' understanding of how the object is to be used, and hence their displayed knowledge about the object itself.

The extract calls for some methodological considerations. The data were collected by a fixed camera that was set up in the shop. Since the shopper is alone at the Deli counter, there is no interaction with other shoppers, clerks or observers, nor does the extract include talk. Does that mean that the data cannot be analyzed as recognizable social actions in conversation analytic or ethnomethodological terms? CA-based studies may be more prone to take talk and interaction between participants as the condition for the analysis of sense-making. However we will follow Rawls and Garfinkel in the argument that social order is intelligible – and therefore describable – through the recognizable and witnessable actions of participants: "the EM analyst needs to discover how intelligible patterns of behavior *are actually being constructed and recognized on the spot*" (Rawls 2002:30). There is no next turn proof procedure in example 1 since there are no turns at talk but just sequentially organized action. But the customer's behavior is still intelligible for an observer (of the videotape) who can make sense of it by drawing on the situation.

2. Data

People grasp familiar objects in their daily routines at countless occasions. However, unfamiliar objects are encountered more rarely. We have systematically mined corpora from three different environments where participants encounter unfamiliar objects and have assembled a collection of 50 instances for this paper. All data are collected in Denmark, and feature interactions in both Danish and English.

In environment one, design workshops and design education, we found frequent instances of inspecting objects. Here, material objects are ubiquitous, since they are the focus of what designers do. Further, designers themselves work with a multitude of materials and tools (Heinemann 2011; Matthews/Heinemann 2012; Mortensen/ Lundsgaard 2011). In some of these data, design students try to make sense of material objects with which they have no experience at all. In others, designers know the type of object they inspect, but features of the specimen have an element of unfamiliarity. All in all, 15 instances in our collection were drawn from design workshops. The second environment were tastings where the inspection of unfamiliar beverages is the focus of the activity. The data have been collected at a whisky-, gin and rum tasting fair,[1] and 15 instances were selected from the corpus. 10 instances come from the aforementioned supermarket study[2] and 10 others from miscellaneous environments.

Our collection is quite diverse with respect to the sensory resources brought about by the different materialities in the three environments. It gives us the chance to show the consistency of certain features of inspections across environments including the sequential organization and motivates our decision to call all instances in our collection for 'inspections of unfamiliar objects'. Rawls continues her argument (c.f. above) with the following words:

---

1 We are grateful to Carsten Hjort Petersen, Peter Møller Mikkelsen and Niclas Bauenhøj Juhl for making these data available for us.

2 We are grateful to Jacob Buur to allow us to use these data.

> This is not something that can be done once and for all cases. Every situation has different patters of order that are required for the coherence of action within that situation. Therefore the EM analyst needs to discover how intelligible pattens of behavior are being constructed in each case all over again, as Garfinkel says, for 'each next first time'.

By drawing on data from various situations and enviroments we are able to describe 'inspections' as a context-free systematic and recognizable social practice that is not tied to specific participants, settings or activities.

3. The sequential environment of inspections

Our second extract comes from a design workshop where students (A, B, C, D from left to right) work in groups with unfamiliar ('weird') objects. The students work with a metal object which actually is part of a bird feeder. C has inspected the object. For a while he has played with it, jokingly suggesting creative uses, for example using it as a monocle. The extract starts when A reaches out and takes the object that at that moment dangles from C's hand in the middle of the joint workspace.

(2) Bird feeder

```
1    D:   (          )

2    C:   #ja:er. (.) ja:. (   )
            yeah (.) yes (   )
     fig  #pict. 2.1
```

Picture 2.1: A acquiring the object from C

3 D: #(det var i hvert fald ikke os der sagde)
a least it wasn't us who said
fig # pict. 2.2

Picture 2.2: Inspecting it

4 (0.7)

5 D: ( )

6 (1.3)

7 C: XX#GRE::::
fig #pict. 2.3

Picture 2.3: C attempts to scare the inspecting person A

8 (2.1)

9 B: ∆er der noen af jer der [kender∆
does anybody of you know

```
10  *A:                              [jamen det et #instrument ja
                                     it's a (musical)instrument yes
     fig                                        #2.4
```

Picture 2.4: Bringing the object back into shared space, gaze at co-participants, and verbal assessment

```
11  *A:   (jeg enig) huu hu[
            I      agree

12  *C:                     [huu
```

Participant A initiates the inspection bodily by leaning over and extending her hands (pict. 2.1), and we see how the object is grasped with the tips of the fingers in a rather delicate way (see section 7.1, 7.2). After receiving the object, A leans back and engages in the inspection proper (Streeck 1996). In other cases the inspector may lean over the object, but always avoids eye contact with co-participants (Mondada 2018a) and does not talk to others who however may observe the inspector (pict. 2.2). In Extract 2, the other participants keep talking in a low voice in the group, but neither here nor in other instances in our collection does the inspector engage in the ongoing talk of the others during the inspection. A does not even react to C's attempt to scare her (line 7, pict. 2.3) where C, firmly gazing at A, suddenly puts his hand forward and makes a loud noise. The inspection is closed as the inspector leans forward again, makes the object available for the others and comes with an account about the possible use of the object (line 10, pict. 2.3).

In the analysis of Extract 2 we have observed a sequence of different actions:

1. The inspection sequence is initiated as the object is taken or requested and received.
2. The way the object is grasped informs about the user's epistemic position towards the object. We see an unspecific 'pinching' grip in the case of the unknown objects. That is, the hand's prehensile posture (MacKenzie/Iberall 1994) is shaped by the object's intrinsic properties, not its projected use.
3. The object is removed from the central stage and moved close to the body of the inspector who creates a 'private' version of Goodwin's 'ecological huddle' (Goodwin 2006). The object is thus not merely 'looked at', but 'inspected' or 'scrutinized' (cf. Coulter/Parsons 1990, see also Goodwin 2007; Koschmann et al. 2011; Streeck 1996).
4. The object is inspected primarily through vision and touch. However, the inspector can easily transgress these limits and allude to tactility and haptics or

even taste and smell (see section 7.2). The inspection is a silent embodied activity (Mondada 2018b), and the inspector does not talk during the inspection proper.

5. By grasping the object and disengaging from the established participation framework the inspector indexes the inspection as a publicly available 'private' activity as opposed to inspections that create a shared focus of attention for the participants (see e.g., Goodwin 2018:349ff.)
6. The end of the inspection sequence is accomplished by bringing the object back into the common space and making it available for others.
7. Depending on the actions in which the inspection is embedded, the inspectors use some form of an account that addresses the reason for the inspection and brings the sequence back into the general talk. Talk thus may be resumed as part of the closing of the inspection proper.

In the next section we will discuss a case from our corpus of tasting beverages. We argue that 'doing tasting' here is organized as an inspection sequence with the same sequential structure as in extract 2 above.

4. Inspecting taste

In the inspection of material objects, we see how vision and tactility are the main resources through which participants interact with the object. Other types of materials, however, may require or afford other sensorial experiences such as smelling (e.g., perfume) or tasting (e.g., coffee or cheese). Streeck (2013) has argued that research on social interaction has largely been based on auditory and visual information. In part, he argues, this visual focus was established by Goffman (e.g., 1963) and became a core interest in interaction as an "exchange of words and glances between individuals" (Goffman 1963:13, cit. in Streeck 2013:69). On the other hand, the audio-visual focus is inevitably a result of the limitation to sound and vision by the technology of (video)recordings. However, participants' haptic experience in the above extracts may be equally important for their experiencing of the objects in questions. The haptic experience is at least in part visible and thus available as a resource for intersubjectivity (Streeck 2017). This new line of research has been coined multisensory interaction (Mondada 2016; Streeck 2013, 2017). In many professional settings, participants have undergone formal instruction in order to develop embodied practices for sharing their individual sensorial experiences. For instance, professional coffee tasters make their descriptions and assessments available to co-tasters with the aim of arriving at an objective description of each coffee; a description that is deeply embedded within social structures (Liberman 2013). Here, vision, olfaction and haptics might be relevant for describing and assessing the quality of wine, coffee or cheese (Liberman 2013; Fele 2019; Mondada 2018a, 2018c, forthc.) and indeed such sensorial experiences serve and inform the tasting experience itself. Thus tastings as an institutional practice has its own sequential organization (Liberman 2013). For instance, in (professional) wine and coffee tastings the sample is examined through vision and smell before it is tasted.

In this section, we describe inspection sequences in which the inspection is of a

gustatory beverage. We focus on the tasting itself, and describe how tasting is organized as an inspection sequence. Later, in section 6, we will look at the inspections themselves and compare how the nature of the inspected object affords the format of the inspection. In extract 3, a customer attends a fair where various sellers serve small tasting samples of whisky, rum and gin. Here, the customer tries a specific brand of rum for the first time. Although he might be familiar with rum as a generic category (or the particular brand), he now tastes a specific rum sample. In this sense, the sample is treated as an unfamiliar object and this is visible in how the tasting is made publicly available.

(3) Rum tasting

```
18   S:   og du siger til hvis du vil ha' mer'
          and do let me know if you want more

19        det ba'r hvis du ska:: komme igennem hele dagen
          it's just if you want to make it through the entire day

20        så det måske en go' ide og bare ha' en lille smu[le
          it might be an idea to have just a little bit

21   C:                                                    [jamen
                                                            right

22        #det klart (.) det klart
          sure             sure
     fig  #3.1
```

Picture 3.1 SEL disengages from F-formation

23 (1.5) #(4.6) #(1.3) #(0.8) #(1.0) #(0.2) #(0.3)
((9.7))
fig #3.2 #3.3 #3.4 #3.5 #3.6 #3.7

Picture 3.2:
CUS raises glass to nose

Picture 3.3:
CUS lifts glass to mouth

Picture 3.4:
SEL finds a drinking co-participan

Picture 3.5:
SEL gazes away from drinking co-participant

Picture 3.6:
SEL monitors CUS

Picture 3.7:
SEL gazes away from drinking co-participant

24 S: #fyrre procent
forty percent
fig: #3.8

Picture 3.8: SEL gazes at tasting co-participant

```
25   S:   (0.8) #(1.0) ((1.8))
     fig        #3.9
```

Picture 3.9: CUS inspects taste

```
26   S:   og du burde ku:eh altså (0.8)hentyde til det til det jeg
          and you should be able to eh I mean(0.8)refer to what I

27        sa'e før
          said before

28   C:   jaer
          yeah

29   S:   °ti::l (0.3) til smagsnuancerne°
           to (0.3) to the taste flavours

30        (1.3)

31   C:   jamen den er meget blød i smagen=
           yes it does have a very soft taste

32   S:   =det er den
            it does
```

The extract starts as the seller has just described a specific rum label, and is now pouring a sample of it into a glass, and makes an account for the small quantity (line 18-20). The customer acknowledges this (lines 21-22) as he puts the money on the counter.[3] As the seller takes the money, he disengages from the established F-formation (Kendon 1990) by turning to a colleague on his right and drops the money in a box behind the counter (pict. 3.1). In overlap with the seller's body torque (Schegloff 1998), the customer takes the glass, and lifts it to just below his nose (pict. 3.2). He then moves the tip of the glass to his mouth (pict. 3.3), and by tilting his head backwards he slowly pours a part of the liquid into his mouth (pict. 3.4).

At this point, the seller reorients his body and gaze towards the customer (pict.

[3] During this tasting exhibition, most samples are free of charge, but fees are required for more expensive/exclusive samples.

3.4), but in finding a 'drinking co-participant' his gaze continues to the left past the customer (pict. 3.5). Indeed, throughout the customer's drinking, the seller does not fix his gaze towards him (see also Mondada 2018b). However, he monitors the customer's drinking by briefly looking at him (pict. 3.6) only to turn the gaze away again (pict. 3.7).

This gazing behavior shares characteristics with what Goffman (1963:84) refers to as *civil inattention* in which

> one (participant) gives to another enough visual notice to demonstrate that one appreciates that the other is present (and that one admits openly to having seen him), while at the next moment withdrawing one's attention from him so as to express that he does not constitute a target of special curiosity or design.

The seller's gaze also shares similarities with self-grooms in which a co-participant's gaze is "driven away" from the self-grooming participant (Goodwin 1986: 40ff.). However, the seller's avoidance of maintaining his gaze towards the customer seems to be related only to drinking: as soon as the customer removes the glass from his lips – but visibly still with the liquid in his mouth – the seller turns the gaze towards him, and produces an online comment about the alcohol percentage (line 24, pict. 3.8).

The customer produces a minimal acknowledgement – a subtle head nod – before turning the gaze down in a kind of middle distance gaze (Heath 1986) as he 'chews' the liquid with the glass maintained in chest height position (pict. 3.9). Indeed, as the customer displays tasting the liquid it bears more similarities with the three-part structure of eating (put food in the mouth – chew – swallow) than with the two-part structure of drinking (drink – swallow).[4] Now the seller prompts an account by referring back to his prior description (line 26-27) while the customer is still 'chewing' the sample with his gaze in a middle distance. The customer produces an acknowledgement, and, following the seller's increment (line 29), the customer makes an account of the tasting (line 31) thus publicly displaying his sensorial experience.

The tasting in extract 3 is organized as an inspection sequence, i.e. through participants' emerging construction of the activity as a momentary change in the social activity. The move into the inspection is characterized by a stagnation of bodily movement in relation to lower and upper body (see section 6 below). The inspection sequence ends with the inspector's release of the bodily immobility and a reengagement in the focused encounter with the co-participant. Similarly, the inspection proper is composed of various bodily features including maintaining the glass in high chest position, middle distance gaze, and bodily immobility. This is treated as a temporal unavailability for talk.

5. Drinking beverages, using objects

As we have seen, inspections are a systematic and recognizable social practice. However, they are not the only way of using beverages and objects. On the contrary, objects are most typically grasped, passed and received to be used; beverages are typically taken for drinking. In this section, we will shortly discuss two extracts

[4] This comment was made by Jürgen Streeck (personal communication).

where this is the case.

5.1. Drinking, but not inspecting

We argue that the customer's drinking in extract 3 is beyond merely drinking, but is a publicly available and recognizable practice for 'doing tasting' (Mondada 2018a, b). As such, tasting goes beyond a private or individual sensory experience, but is lodged within a public social domain for which it is designed (Wiggins 2002). As a way of comparison, consider extract 4 in which drinking is embedded within and structured around the interactional progression of the activity. Here, seller and customer discuss the local facilities of the whisky distillery with which the customer is familiar.

(4) Drinking and talking

```
36   C:    øh det var der i: ø:h (0.2) det var der i byggede [ikk os
           eh that's where you eh (0.2) that's where you build right

37   S:                                                      [jaer
                                                             yeah
38   C:    ja
           yeah

39         #(2.3)
     fig   #4.1
```

Picture 4.1: CUS raises glass to nose

```
40   C:    de:t et lækkert område
           it's a wonderful area
```

41 S: #ja (.) ej det dejligt stille o:g (0.7) xxx tilbagetrukket
yeah (.) it's nicely quiet and (0.7) remote
fig #4.2

Picture 4.2: CUS drinks

42 (0.5)

43 C: nemlig
e*xactly*

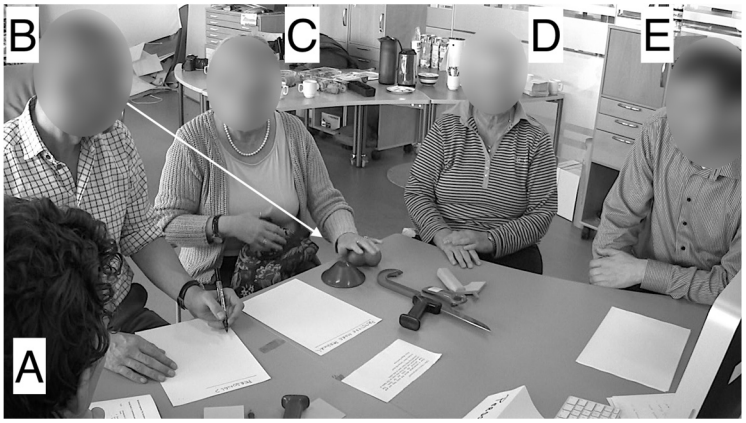
During participants' talk, the customer maintains the glass in head-high position while repeatedly lifting it to his nose thus visibly engaging in smelling the sample (pict. 4.1). In line 42, the customer makes an assessment of the geographic location of the distillery, and lifts the glass to his mouth (pict. 4.2). A first assessment projects a second assessment by the/a co-participant (Pomerantz 1984; see also Lindström/Mondada 2009) and thus functions as a first pair-part of an adjacency pair. In this way, the sequential position in which the customer starts drinking is a position in which a second pair-part is recognizable and projectable. Drinking is thus embedded within and organized around the unfolding talk (Hoey 2018). Drinking and talking may here be described as a multi-activity (Haddington et al. 2014), which are mutually exclusive – besides vocalizations such as *mmm* one cannot generally drink and talk at the same time (Wiggins 2002; Hoey 2018). Participants, then, do not orient to the *tasting* of the sample.

5.2. Taking an object, but not inspecting

Returning to the inspection of physical objects, we noted in extract 2 how the inspector did not account for taking the object, and how the inspection was done as a publicly available individual activity. As a way of comparison, in extract 5 the object is *not* taken-for-inspection, but rather as a component of the turn-design of a first pair-part. The extract comes from a designer workshop in which arthritis patients (C and D) present various facilitating tools for designers (A, B and E). Just prior to the extract, C has presented a heart shaped foam ball from her purse. She demonstrates to D how she uses it as a training tool by squeezing it with her hand. D indicates her appreciation (line 1) and C puts the ball on the table and addresses her handbag again.

(5) Foam ball

```
1   D:    syn's jeg er en god id[e
          I think it's a good idea

2   B:                          [(ok)
                                 (okay)
3   D:    (ja ok)
          (yeah okay)
          C puts ball on table

4         #(1.8)
    fig   #5.1
```



Picture 5.1: B gazes at object

```
5   B:    #what's tha:t
    fig   #5.2
```

Picture 5.2: B grasps object prior to turn beginning

```
6          #(1.0)
     fig   #5.3
```

Picture 5.3: Manipulates object

```
7    C:    it's for your ha:nds

8          (0.3)

9    B:    yea- to make o:h
```

When C puts the ball down, she catches B's gaze that rests at the ball (pict. 5.1). He then reaches for it, just prior to his turn beginning and picks it up precisely at the onset of talk. During the turn in line 6, he moves the object into his personal space, and manipulates it (pict 5.3). Taking the tool, then, is not a move into a 'private' inspection sequence, but is part of initiating talk about this object (Day/Wagner 2014; see also Mondada 2007).

5.3. Summing up

So far we have described the sequential organization of inspection sequences. We have argued that such sequences are found both in relation to inspecting physical objects and gustatory beverages. We have shown how such inspections are not merely 'drinking' or 'taking an object' as part of taking a turn, but are recognizable as publicly available '*private*' activities in which the inspector momentarily withdraws from the ongoing interaction. Inspection sequences thus produce a change in the participation framework. We shall now turn to a closer analysis of how inspection sequences are initiated (section 6), how inspections differ in relation to the type of object that is put under sensorial scrutiny (section 7), and how the ending of a sequence is achieved and recognized (section 8).

6. Initiating an inspection sequence

Inspection sequences are organized in relation to the turn-taking system, and they are - as the next extract demonstrates - typically initiated in transition relevant position (Sacks/Schegloff/Jefferson 1974). In this way, the inspection is marked as a relevant next-action. In extract 6, we see how the inspection sequence is initiated at the end of a storytelling. Here, the interaction is put on hold with participants being engaged in more or less individual activities (Heath et al. 1995): customer 1 initiates an inspection sequence while the other two customers disengage from the encounter by torqueing their bodies and looking back behind customer 1.

(6) Peach and citrus flavours

75	S:	det faktisk det sjove det er at den- den starter
		in fact the funny thing is that it actually starts
76		egentlig når vi: når vi brygger den
		when we when we brew it
77		og øøh (.) og så: så er der masser af af fersken og
		and eh (.) and then there's lots of peach and
78		citrusno[ter
		citrus flavours
79	C1:	[jaer
		yeah
80		(0.2)
81	S:	og øh og ferskennoterne er faktisk i løbet af
		and eh and the peach flavours are actually during
82		fadlageringen der er de egent- (.) der har de faktisk
		the storage in the barrils there they actual- (.) there
83		ændret sig til at blive ti:l (.) til pære[noter i ø:h
		they have changed to become (.) pear flavours in the eh
84	C1:	[huu
		huu
85	S:	(.) i fadet
		in the barril
86	C1:	kh hee
87	S:	og det sådan lidt eh (.) det(h) l(h)idt
		and that's quite eh (.) that's quite
88		i(h)nteressa(h)nt
		interesting
89	C1:	jaa
		yeah

```
90   S:   at det gå:r går den vej men det synes jeg er blevet
          that it changes that way but I think it's

91        meget tydeligt i den her
          very clear in this one

92        (1.7)# (0.5)# (0.5)# (1.0)# (3.0)# (0.8)# (2.1)  ((9.6))
     fig       #6.1   #6.22  #6.3   #6.4   #6.5   #6.6

93   C1:  altså det er bare sjov hvor meget den (.) den ligner en
          well it's so funny how much it resembles a

94         slivovitzer
           slivovitz
```

As the extract starts, the seller initiates a ('funny', line 75) telling (Jefferson 1978) about how the whisky changes its taste from peach to pear during the time it spends in the barrel, and finishes the description by accessing it as 'interesting' (line 87-88), which he produces with laughter, and he receives an agreement from C1 (line 89). He proceeds with a personal assessment ('I think it's very clear in this one', lines 90-91). The end of the telling is thereby clearly recognizable, and provides a slot for C1, to move on.

Picture 6.1: SEL extended gaze towards CUS1

Picture 6.2: CUS1 raises glass to the mouth

The seller maintains his gaze towards C1 beyond turn-completion in line 91 (pict. 6.1). His extended gaze might display an orientation to this being a sequential position in which C1 could do the necessary actions for experiencing the taste himself, and C1 raises the glass to his mouth (pict. 6.2) and starts drinking. Similar to what we observed in extract 3 above, the seller turns his gaze away from him and directs

it towards customer A on the far left (pict. 6.3) and down towards the table (pict. 6.4).

Picture 6.3: SEL removes gaze from CUS1

Picture 6.4: SEL turns the gaze towards the table

Having poured the liquid into his mouth, the customer removes the glass while circulating the liquid in his mouth (pict. 6.5). Now the seller returns his gaze towards him (pict. 6.6). CUS1 makes an account of his tasting experience by claiming its similarity with another kind of liquor – slivovitz (line 93-94) – a similarity which he has already stated earlier in the tasting. This ends the inspection sequence. His account, however, is directed not to the seller, but to a fellow customer.

Picture 6.5: CUS1 finishes drinking and starts tasting

Picture 6.6: SEL reorients the gaze to CUS1

Next, in extract 7, the seller disengages from the F-formation by grasping a coffee cup and drinks from it, following which the customer grasps his glass, drinks, and moves into an inspection sequence.

(7) Soft flavor 1

```
48   S:   eh:: (0.5) men det var meget interessant fordi det du
          ah (0.5) but it's quite interesting because you re- (.)

49        f:- (.) du fjerner oss (.) altså du gir' den lidt mere
          you do remove (.) I mean you give it some more

50         tid
           time
51        (0.7)

52   S:   og så (.) interagerer den meget mere med træet og gør
          and so (.) it interacts much more with the wood

53   S:   du får den her (0.5)° ↓bløde smag.°
          so it gets this        soft flavor

54   C:   #ja #
          yes
     fig  #7.1 #7.2
```

Picture 7.1:
S gazes at a cup on the counter

Picture 7.2:
C takes cup

```
55          (2.0)# (1.5)#   (1.9) ((5.4))
     fig         #7.3    #7.4
```

Picture 7.3:
S raises cup to mouth w/ gaze on C

Picture 7.4:
C raises glass. S removes gaze

As the seller reaches possible completion in line 53, he gazes at his coffee cup on the counter (pict. 7.1) and reaches for it (pict. 7.2). His turn has reached a pragmatic, syntactic and prosodic completion, and reaching for the cup indicates that he has finished with his lengthy explanation of the flavor. An obvious next action for the customer would be to move on and do his tasting. Moving his cup to his mouth, the seller maintains his gaze towards the customer (pict. 7.3) until the customer moves his glass to his mouth and the seller removes his gaze from him (pict. 7.4).

One could even argue that the seller by drinking himself models a possible action for the customer. Building on Goodwin's (2013, 2018) notion of substrate, we can see how the customer builds on what he finds in his perceptual field (Streeck 1996), here a co-participant's action, which he copies in his own action (Brouwer/Mortensen, forthc.).

In extract 7 then, we see how the initiation of the inspection sequence is sequentially fitted to the local environment, and how the customer builds on the seller's action, drinking, which he mirrors. Indeed, inspection sequences are typically initiated in a transition relevance position following a turn-at-talk by a speaker *other* than the inspector. In this way, the inspection sequence occurs when transition to a next-speaker might be relevant (Sacks/Schegloff/Jefferson 1974). In the case of tasting liquids, we might say that moving the glass to the mouth and projecting drinking (or tasting) is a way to refrain from taking a turn-at-talk as talking with liquid in the mouth is difficult if not impossible besides vocalizations such as *mmm* (Wiggins 2002; Hoey 2018).

What we see in extracts 6 and 7 then is how the seller creates a slot in which an inspection sequence can be launched. This is done in relation to the turn-taking organization and may be followed by actions such as drinking, which does not project an immediate upcoming next turn-at-talk.

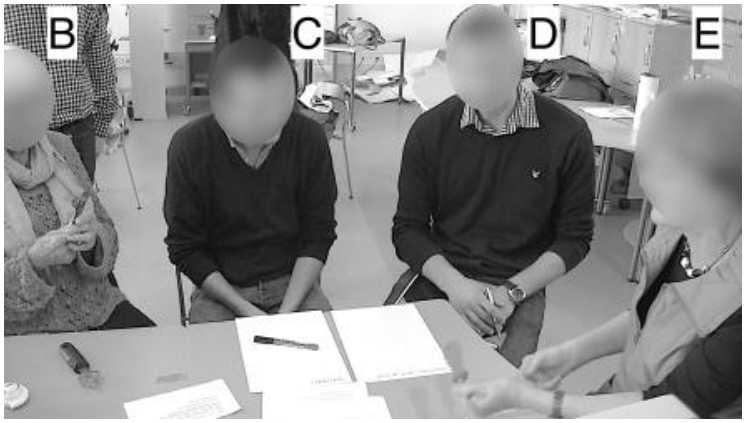
6.1. Changing participation frameworks

So far we have described cases in which the inspection momentarily puts the interaction on hold, that is, participants treat the inspection as the main activity. Here, talk is typically withheld, and the inspection thus constitutes a moment of silent embodied activity (Mondada 2018b). However, when the encounter is made up by

three or more participants the inspection may be organized as a momentary disengagement from the encounter in which talk continues between the other participants. As such, the inspection marks a shift in the participation framework. Consider extract 8 below in which a designer inspects an object. Prior to the extract, E (to the right) has just described the object as a specific tool for opening jars.

(8) Jar opener

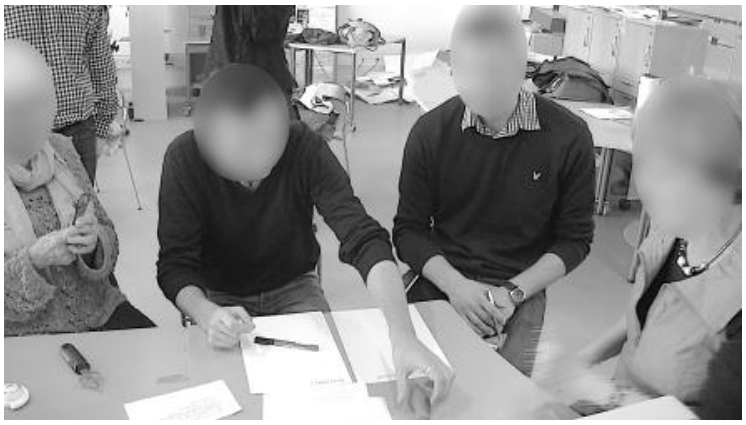
```
1    E:   <den her den har> vægtstangsprinci[ppet med oss.=
          this one has the leverage principle as well

2    C:                                     [ja den (  )
                                             yeah it (   )

3    E:  [=°ikk os
            right

4    D:  [(ja det #kræver kræfter at åbne)
          (yeah it takes force to open
     fig          #8.1
```



Picture 8.1: E puts object on the table

```
5    E:  jaer
        yeah
```

6 #(1.5)
fig #8.2



Picture 8.2: C takes object from table

7 E: #det simpelthen mit bedste (.) hjælpemiddel.
it's simply my best assisting tool
fig #8.3

Picture 8.3: C inspects object

8 E: ∆og jeg ved godt den ikk er køn men den ka ligge i en
and I do know it's not pretty but it can stay in a

9 skuffe
drawer

10 (0.5)

11 D: den ska man oss kun bruge hjemme i køkkenet
you also only use at home in the kitchen

12 E: det er nemlig det jeg gør
that's actually what I do

13 (0.3)

14 B: ja: den her e:r #pænere
yeah this one looks nicer
fig #8.4

Picture 8.4: C puts object back on the table

15 E: jamen det har du helt ret i (0.2) men den her fungerer
well you're absolutely right (0.2) but this one works

16 bedre
better

At the end of her description, E assesses the 'leverage principle' (line 1) as the key feature of the tool. C acknowledges this by verbally producing an agreement token. E now puts the object back on the table (pict. 8.1), and C takes hold of it (pict. 8.2), leans over the table, moves the object closer to his face, and inspects it (pict. 8.3).

Note that E now produces another assessment of the object first by an extreme case formulation (Pomerantz 1986) in line 7 and then by a self-deprecation (Pomerantz 1984, Goodwin/Heritage 1990) and an account in line 8-9. The assessment is followed by an agreement by D (line 11), and a counter by A (line 12). During A's counter, B puts the object back on the table (pict. 8.4). In this way, the inspection sequence does not become a shared focus of attention of all participants.

Note that the inspection sequence here does not end with an account, but merely with C merging back into the ongoing interaction thereby reengaging in the surrounding participation framework. We thus see that an inspection sequence may be a relevant next action in which participants orient to, and indeed co-construct, one participant's inspection.

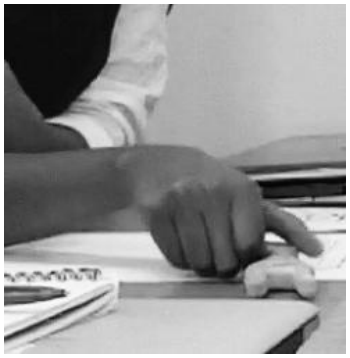
7. The inspection proper

Although inspectors may use a combination of different senses such as vision, tactility and olfaction to inspect material objects it could be argued that the intrinsic properties such as texture affords inspection primarily through touch and vision (Gibson 1979; Norman 2013). Beverages may be looked at and eventually touched,

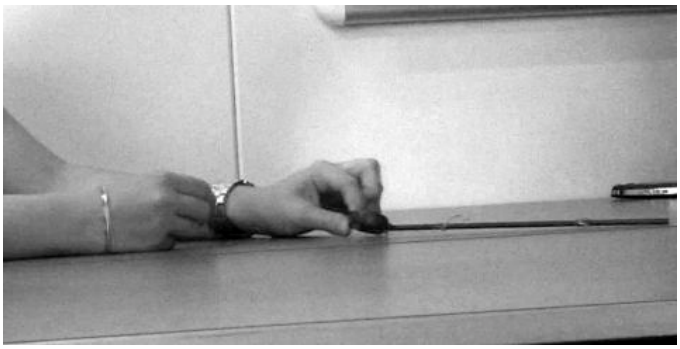
but smell and taste may be highlighted when the inspection is about the taste of the beverage in question. Similarly, touch is central to tasting for instance cheese (Mondada 2016, forthc), but may be less relevant for tasting beverages. As such, inspecting unfamiliar objects might involve different senses for the sensorial experience. In this section, we look at participants' embodied conduct during the inspection proper. We argue that the difference in the materiality of the object under inspection affords different embodied resources for 'doing inspection'. Such practices, however, are lodged within the recognizable action of doing inspections.

7.1. Acquiring objects for inspection

In this section we look at how unfamiliar objects are grasped, passed and received. We note that the grasping hand configuration is that of a precision grip (e.g., Streeck 1996; 2009) in which thumb and index finger (and, at times, middle finger as well) are extended and by pinching the fingers together grasp the object in question. Often, the grip is placed at the extremities of the object. Pictures A and B show how various unfamiliar objects are picked up, picture C shows the transfer of such an object.



Picture A:
Pinching grip



Picture B:
Grabbing the end of the object

Picture C:
Pinching grip when transferring an unfamiliar object

Picture D:
Passing a (modified) familiar object

The way in which the objects in pictures A-C are grasped does not display how the objects are to be used – or rather that they are to be used for anything else but for sensorial inspection. In that way, participants do not rely on their embodied knowledge of the practices in which the objects reside, but rather on different kinds

of categorical work based on the objects' intrinsic properties such as size, material, texture and assumed weight. This categorization is made visible in how the objects are grasped – for instance, that the object might be fragile, heavy, solid, slippery or the like. The grip of the hand indicates an epistemic position where no knowledge about the objects' use is embodied in the grip, compared to e.g. taking a familiar object such as a knife during dinner (c.f. Heinemann/Fox 2019).

Tolmie/Rouncefield (2011:40) have argued that "in handing someone an object you project the way they will engage with it through the manner in which you hand it over. Of course, the appropriate understanding of that projection is intensely situational. All of this is saying that a good measure of the meaning and the significance of shared objects within the world we inhabit is tightly bound up with the interactional methods through which these objects are shared". As we have seen, inspecting unfamiliar objects is significantly different as the configuration of the hand does not project how the object is to be used beside for inspection. In contrast, in picture D, the participant on the left side of the picture receives a can opener. Her grip is different from the three others: she displays knowledge of the object that she is receiving by the local way she receives it. In sum, we observe how unfamiliar objects are taken and passed in a very different way than with familiar objects, where giver and taker display how the object is to be used. In other words, the participant's epistemic knowledge of (familiar) objects is visible through the way it is taken, passed and received.

7.2. Inspecting material objects

Staying with material objects, we now look at the inspection proper. Pictures E to J are from a classroom activity in which design students are inspecting (ontologically) unfamiliar objects. The object in this case is a darning mushroom, a mushroom shaped tool to support darning socks – a practice and tool that has gone out of fashion at least for young students so the object now is unknown for them.

Picture E: looking at

Picture F: smelling

Picture G: looking at

Picture H: turning

Picture I: speaking

Picture J: tapping the cap lightly

Here we see that when the female student has grabbed the object, she moves it towards herself, gazing at it shortly (pict. E) and moves it immediately up to her nose with both hands and sniffs it (pict. F). Note how her eyes go off-focus to her left side while she is sniffing the object. She brings the mushroom back into the space before her eyes and scrutinizes it by looking at it from different angles, turning it upside down (pict. G and H) – in much the same way as in the supermarket in extract 1. In picture I she displays it and makes a short comment about it. It takes 7 seconds from picture E to the point where she starts speaking in picture I.

Shortly before her turn-at-talk reaches completion, a male student in the group stretches out his hand and starts talking about the mushroom. Picture J shows that just before taking possession of it he softly knocks with his finger on the mushroom's cap.

We note that the other participants in the group do not talk when the female student takes the object and moves it close to her body (cf. Mondada 2018c). However, as she displays the mushroom and moves it away from her person into a space that is available for everybody (e.g. Day/Wagner 2014), the others reengage in talk.

We see in many instances that the participants move the object from the grasping location to their personal space. They bring it close to their face and sometimes lean over the object (Fox/Heinemann 2015). Goodwin (2006:20) has described something similar as "ecological huddle":

> The embodied framework of mutual orientation created by Pam and Jeff's bodies, which both bounds their ecological huddle from the world outside its perimeter, and provides a visible locus for shared vision and joint action within the space it creates, has deep affinities with many physical structures in the built environment such as arenas, classrooms, lecture halls, etc.

Differently from Goodwin, our student 'huddles' for herself in the co-presence of others. She brings the object close to her body, she does not orient to the students around her by gaze, and she does not talk to anybody for the time in which she performs a sensorial inspection of the object. The student deploys different sensorial operation in an ordered way: she looks at the object, she smells it, inspects it visually (gazing it and manipulating the object).

7.3. Inspecting gustatory beverages

Tasting beverages in professional or semi-professional settings entails a range of embodied practices that are organized in standardized sequences. These include vision and smell, and are typically done prior to the tasting itself (Liberman 2013;

Fele 2016; Mondada 2018a, b, c). In this paper, we focus on the tasting itself. Here we note systematic practices for participants' embodied conduct.


Picture K


Picture L


Picture M


Picture N

Firstly, the inspector remains silent throughout the inspection. We do find assessments done through facial mimics, but this happens only towards the end of the inspection sequence. Secondly, the inspectors never put the glass (back) on the counter during the inspection, but maintain the glass in his hand in a chest high position (see pictures K-N). The glass thus becomes a resource for displaying some ongoing social action that has not yet come to a completion, not unlike that of maintaining a physical contact with the desk during service encounters (Mortensen/Hazel 2014). Thirdly, the inspector becomes rather immobile, that is, their lower and upper body and hands remain largely in the same position during the inspection. Movement and stagnation of movement of the body, then, become a resource for displaying changes in social action and changes in the participation framework (e.g., Scheflen 1972; Goodwin 2000). Fourthly, the inspector's gaze is withdrawn from co-participants (most typically the seller), and moves into a middle distance gaze (Heath 1986) (pictures K-N). Comparing this observation to picture F above, in which the inspector smells an unfamiliar object, we might suggest that when vision is not the main resource for the sensorial inspection, gaze is withdrawn from both the object under inspection and from co-participants. As such, the 'gaze into nowhere' might be a public display of cognitive processes such as thinking (Goodwin/Goodwin 1986) or 'sensing' and thus a resource for displaying that the inspector is momentarily unavailable for (other) social actions.

7.4. How different material leads to different embodied practices

In order to sum up, we here discuss some of the differences between inspections of material objects and beverages.

(i) Immobility: During inspections participants remain rather immobile. Whereas participants typically move the upper and lower body prior to the inspection (e.g., when taking/receiving the object or lifting the glass from the counter), they move into a stage of immobility during the inspection proper. This immobility is primarily related to the upper and lower body, although for inspection of beverages it also includes gestures and a lack of manipulation of the glass.

(ii) Engagement with the object: During the inspection of material objects, inspectors manipulate the object: they look at it, turn it, move it, feel it, handle it in different ways and even sniff it. In tastings, participants hold the glass in a chest high position that indexes the glass as a relevant component for the current activity. And they 'chew' the liquid in different ways, thus publicly displaying the ongoing sensorial experience.

(iii) Being unavailable for others: Maintaining the gaze on material objects is a resource for displaying unavailability for others. In the same way, the middle-distance gaze during tastings displays the taster's momentary involvement in a visible and recognizable 'private' activity. The materiality of the object (material or liquid) thus affords different ways in which gaze can be used as a resource for displaying the inspector's current focus of attention.

7.5. Ending the inspection sequence; orientation to post-inspection assessment

As we have described above, inspection sequences in tasting environments may be followed by an account from the inspector. These accounts take the form of a description, categorization, or assessment. As such, it is an account for the inspection sequence itself, and a way to change the participation framework. In extract 9, we see how the co-participant orients to the account being normatively expected in post-inspection position.

(9) Soft flavor 2

51	S:	og så (.) interagerer den meget mere med træet og gør
		and so (.) it interacts much more with the wood
52	S:	du får den her (0.5)° ↓bløde smag.°
		so it gets this soft flavor
53	C:	ja
		yes
54		(5.4)

55 S: #fyrre procent alkohol
forty percent alcohol
fig #9.1

Picture 9.1

58 (5.0)# (6.0)# ((11.0))
fig #9.2 #9.3

Picture 9.2

Picture 9.3

59 C: man ka #stadig godt mærk- (lissom) man ka godt smage
you still do sense (like) you do taste
fig #9.4

Picture 9.4

60 C: hvor det er (.) det kommer fra
where it comes from

61 (0.4)

62 S: præcis
exactly

Extract (9) overlaps partly with extract (7) where we described how the seller avoids looking at the customer during drinking (pic. 9.1). However, about 6 seconds after the customer removes the glass from his mouth (pic. 9.2), but while clearly still 'doing tasting' the seller turns his gaze towards him, and maintains it on the customer (pic. 9.3). The seller thus clearly projects (or prompts) a turn-at-talk from the customer following the inspection. This follows in line 59 when the customer brings the inspection sequence to an end by giving an assessment of the rum while pointing towards the bottle on the counter (pic. 9.4). We see the participants orienting to the assessment as a normatively expected action, which brings the inspection to a close.

8. Conclusions

In this paper we have shown how inspections of material objects and gustatory beverages can be sequentially organized as a systematic and recognizable social action – an inspection sequence. We have argued that inspection sequences reveal a social practice that is different from 'merely' drinking or grasping an object during a conversation. The paper has shown how inspection sequences have a clear sequential structure – a beginning, an inspection proper, and an end.

An inspection sequence is treated as a momentary disengagement from the established focused encounter as the inspector withdraws as a socially approachable participant. As such, the inspection displays an ongoing, publicly available 'private' activity – that the inspector is visibly and recognizably engaged in a sensorial experience. This is done as a visible practice through participants' bodies and their displayed engagement with the object (material or gustatory) in question. For instance, we note how participants significantly reduce the movement of their body posture as they become almost immobile during the inspection proper. And we note how gaze is an important resource for displaying the inspector's visual focus of attention. During tastings, we observe how inspectors move into a middle-distance gaze. We noted the same thing when material objects are smelled. Thus it seems that when vision is not a main resource for the inspection, the participants 'gaze into nowhere'. This observation is similar with Goodwin and Goodwin's (1986) observation that during word searches the participant typically gazes away from the recipient, and here too this is treated as a display of being unavailable for talk.

We thus observe a highly systematic and recognizable social practice which we here call 'doing inspection'. Our starting point was material objects, in which some unfamiliar object was put under scrutiny. As such, the object was no longer used as being *Zuhanden,* i.e., its use reveals practice, but rather as *Vorhanden*, i.e., as an object of theorizing (Heidegger 1927). We then found the same practice during tastings of beverages. Inspections, then, are a visible and recognizable social practice for displaying an ongoing epistemic operation. In sum, we note how inspection sequences are organized in the same way when material objects and gustatory beverages are inspected. However, we also see differences in the embodied ways in

which the inspection proper is formatted. This shows how different kinds of materials afford (Gibson 1979) different ways of doing sensorial work. Here we have focused on how material objects are inspected primarily through touch and vision, and how beverages are primarily inspected through taste. However, as we have seen, objects may also be inspected through olfaction (e.g., Liberman 2013). We may also think of other kinds of material objects, for instance textiles that may be inspected through haptics. Future work will be able to outline how inspections of such and other objects draw on different resources for doing sensorial work.

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Looking at and seeing objects: Instructed vision and collaboration in the laboratory

Sylvaine Tuncer / Pentti Haddington

Abstract
This article studies a type of object-centred sequences common in biochemistry labs: scientists jointly orienting to a problematic object of work, manipulating it, inspecting it, talking about it, to see the same features of it, agreeing on their problematic character, and aiming to progress the scientific task with this object. Focusing on the early phases of these object-centred sequences, we identify and describe instructed vision, a process through which scientists build a common perception of an object, where manipulations and talk about the object are inseparable. From the moment a common perception is established, biochemists can look for new knowledge in and of the object. The article discusses the conventional dichotomy between mere seeing and scientific interpretation of the visible features of objects of knowledge.

Keywords: scientific practice – laboratory studies – ethnomethodology – conversation analysis – multimodality – visual perception – objects in interaction.

German Abstract
Dieser Artikel untersucht eine Art von gängigen objektorientierten Sequenzen in Biochemielabors: Wissenschaftler wenden sich einem problematischen Arbeitsgegenstand zu, handhaben ihn, untersuchen ihn und sprechen darüber, um seine Merkmale zu ermitteln und sich über deren problematischen Eigenschaften zu verständigen, mit dem Ziel, die wissenschaftliche Aufgabe bezüglich des Objekts voranzubringen. Mit Schwerpunkt auf den frühen Phasen dieser objektorientierten Sequenzen identifizieren und beschreiben wir das angeleitete Sehen, einen Prozess, durch den Wissenschaftler eine gemeinsame Wahrnehmung eines Objekts erlangen, die untrennbar mit der Handhabung des Objekts und den Gesprächen darüber zusammenhängt. Vom Zeitpunkt des Erreichens der gemeinsamen Wahrnehmung an können Biochemiker nach neuen Erkenntnissen über das Objekt suchen. Der Artikel bespricht die konventionelle Dichotomie zwischen reinem Sehen und der wissenschaftlichen Interpretation der sichtbaren Funktionen von Erkenntnisobjekten.

Keywords: wissenschaftliche Praxis – Laborstudien – Ethnomethodologie – Gesprächsanalyse – Multimodalität – visuelle Wahrnehmung – Objekte in der Interaktion.

Knowledge is (...) not anybody's knowledge, since it becomes available in the organizing sensibility of inquiry and the very features of the objects under investigation. (Lynch 1982:502)

1. Introduction

Transforming objects through procedures and experiments is scientists' overarching concern in the everyday practice of biochemistry. This article focuses on specific object-centred sequences where two biochemists in everyday interactions look at, manipulate and talk about an object of work. The findings are based on observations and video recordings, analysed in an ethnomethodological perspective and with the methods and tools of multimodal conversation analysis. When they work in copresence, it is commonplace for biochemists to draw each other's attention to an object they are currently working with, thus initiating an object-centred, collaborative sequence about it. During the subsequent interaction, colleagues focus on and coproduce the object and its qualities, by showing the object, inspecting it together, talking about its visible features, moving it, building and establishing a common vision and assessment of it, that is, a common perception, and devising what to do next with it to advance the experiment or procedure. The findings describe the interactional work of 'instructed vision' whereby biochemists build and establish a shared perception of the object. A common perception involves seeing the same features, but also agreeing on these visible features as problematic. Then, we show that biochemists can engage in creating new knowledge about objects of work by looking for some yet-unseen feature, beyond the common perception previously established. These sequences, by interweaving visual perception, problem solving and knowledge of objects play a part in the everyday advancement of scientific work. With these findings, the article aims to shed light on the organization of face-to-face interactions, on lab studies and scientific practice, and on the special issue's topic: object-centred sequences.

The first ethnographic observations of scientists at work were provided in the late 1970s and onwards in laboratory studies (e.g., Latour/Woolgar 1979; Garfinkel et al. 1981; Knorr-Cetina 1981; Lynch 1985; Barley/Bechky 1994). On the one hand, some of these studies, limited by their critical distance, tend to consider technical procedures and the resulting inscriptions as the core of science *per se*, and the source of its particular authority. Consequently, they reduce everyday interactional activities to mere social residues and disqualify them as proper scientific work. On the other hand, the conceptual efforts in laboratory studies still provide grist to the

mill to conduct ethnomethodological investigations, to try and understand how scientists "find their ways through singular troubles, vernacularly organized discussions, and embodied routines of inquiry, […] as an unremarkable competency with 'the facts of daily life'" (Lynch 1983:207). For example, Amann and Knorr-Cetina (1988a, 1988b), studying a molecular genetics laboratory with much resemblance with the one we studied, remark that shop talk is often "not just, as much talk is, about an object; it is directed to a concrete material object which participants hold in hand" (Amann/Knorr-Cetina 1988b:10). The authors also describe shop talk as "a production device for generating knowledge out of the manual and technical dimensions of laboratory work" (ibid.:11). But in another article discussing three practices whereby biochemists visually inspect materials (Amann/Knorr-Cetina 1988a), the same authors assert that "manual enhancement" practices are "treated as unproblematic displays of visual objects" and act as "observation at a glance" (ibid.:138). In other words, a biochemist looking at an object of work with naked eye immediately is assumed to *see* what s/he intended to see, or to check. She/he does not take time to *look at* or inspect it in order to interpret what s/he sees with her scientific expertise. However, since shop floor is said to be a production device for generating knowledge about objects, how can one assert that some instances of object inspection do not involve interpretation?

On the basis of our findings, we argue that the dichotomy between instances of "primary recognition" and "interpretation of a situation, account for a phenomenon" (Knorr-Cetina 1981:50) is a conceptual artefact. With this article we aim to demonstrate that every single time scientists look at objects in the lab, from the most ordinary to the most refined object, they always and inescapably engage with their professional skills to visually perceive and discriminate objects. Our data comprise a variety of manual enhancement practices, especially instances of "holding a test tube against the light to assess the progress of a biochemical reaction" (Amann/Knorr-Cetina 1988a:136). We show that processes of instructed vision, the build-up of a common perception of the object, sometimes followed by an upgraded involvement in joint inspection, achieve full-fledged and essential scientific work.

Biochemistry is a hands-on occupation involving many objects, ordinary ones like aluminium foil, specialized tools like pipettes and beakers, and specialized objects of work such as solvents or bacteria. Knorr-Cetina (1997) calls the latter "objects of knowledge", at the core of experiments, on which scientific publications depend, and to which scientists have a special relationship. An example of this is physicists' subjective involvement with objects which Ochs, Gonzalez and Jacoby (1996) studied through grammar in talk-in-interaction. They constantly monitor their status to evaluate their progress, not only through technologically-assisted means but also, pervasively, through direct inspection, with their hands and naked eye. These objects can and should have varying visible aspects throughout the scientific procedures or experiments they are embedded in, so that biochemists expect them to have a specific aspect in each particular phase.

As we will show in the analyses below, when biochemists handle and talk about objects together, various dimensions of their professional know-how can become relevant, such as theoretical knowledge of biochemical reactions, manual skills to handle the object, visual perception trained to identify specific phenomena (Goodwin 1994), and local information about the object. Biochemists also perceive the

object in the light of how an interactional project is made recognizable, is recognized and is reshuffled in the course of the interaction.

Particularly relevant to the present line of investigation is a series of studies on the mutual constitution of objects and methods in surgical operations. They have shown, for example, how surgeons and novices rely on and refer to the stepwise procedure to look for and identify anatomic elements (Koschmann et al. 2011; Koschmann/Zemel 2011, 2014). Like many of C. Goodwin's studies, these studies use instructional activities as data, where participants verbalize and account for their actions. In this way, practical reasoning in action is more visible and amenable to analysis than in most other types of activities. Likewise, while peer biochemists do not spontaneously explicate their actions in the lab, the object-centred sequences studied in this paper stand out in this respect. The sequence starts with an asymmetry between the biochemist initiating interaction about the object she/he is at grips with, and her/his colleague. As we develop in Section 3.2, a necessary achievement in the first phase of the following interaction is to build and establish a common perception of the object, and thereby balance the initial asymmetry. The work of instructed vision, observable in the initiation and early phases of object-centred sequences, is thus a conspicuous setting to study biochemists' perception of objects, or vision and knowledge in scientific practice. Additionally, the present study is a contribution to the very few video-based studies of laboratory work (Sormani et al. 2017; but see Alac 2008; Sormani 2014, 2016).

Criticising orthodox psychological approaches to perception, Gibson's ecology of perception (1986) shows that a theory of the mind is not necessary to conceive of perception processes, and relocates perceiving bodies in a co-evolving environment. Criticizing Gibson in turn, ethnomethodology warned against an all too direct conception of perception, reminding instead that perception is also mediated and framed by the activities we are involved in (Nishizaka 2000, 2006). Indeed, seeing is an active process inseparable from meaning and environmental affordances, or possibilities for action, so that we see 'more than meets the eyeball' (Coulter/Parsons 1991; Sharrock/Coulter 1998). Visual perception is never immediate, it is inseparable from practices and thus embedded in a complex web of material, temporal and interactional processes. C. Goodwin applied this fundamental idea to study vision in professional practice, with empirical data. The notion of 'professional vision' (Goodwin 1994), which has since become popular across disciplines, refers to actors' practices to isolate meaningful objects in their material world for the specific purposes of joint, ongoing streams of activities. It involves the use of coding schemes, the use of highlighting practices, and the articulation of graphic representation.

Professionals know not only how to look at objects but also how to make objects visible to others in a specific perspective. The manipulation of objects is often central to highlighting practices, like C. Goodwin's geochemist taking a fibre out of its bath to "highlight[ing] and position[ing] it for perception" in order to determine whether it has reached the specific black colour indicating that the chemical process is complete (1997:125). The assessment, with naked eyes, ought to be accurate for the whole experiment to succeed. In the case of biochemistry, scientists recurrently inspect substances contained in, for example, a microtube, a beaker or a microplate, by holding them in front of a light source, at a certain distance from their eyes.

Through these delicate, expert and yet non-standardisable manipulations (cf. Sormani 2016), biochemists can see for example how a dissolution process progresses, or whether bacteria cells have broken and moved from the centre to the borders of a microplate. In other words, those instances where biochemists take a close look at their objects are integral and critical to biochemistry work.

Thus, building on the existing literature and focusing on a specific type of object-centred sequence, the present article aims to offer new insights into objects in interactions, the mutual constitution of objects and technical procedures, vision as a practical accomplishment, laboratory studies and scientists' relationship to objects of knowledge.

2. Data and method

The first author stayed in a biochemistry laboratory in Finland for about two months over a two-year period, to observe activities, talk with scientists, and collect video recordings of their everyday (inter)actions. The corpus totals 120 hours of video recordings. The standard installation was two cameras in the main laboratory room and two cameras in the shared office. At times, some cameras were moved in other, specialized rooms, such as the ones for cell culture or microscopy. All the data used in this article are from the main laboratory room. Fieldwork also included numerous informal conversations with the biochemists. The researcher having no qualification in their domain – adding to each scientist having a specialty in a vast area of her/his own – fieldwork aimed at a general understanding of scientists' activities in the recorded stretches of (inter)action.

The multidisciplinary research group under study originates in a six-year funding obtained by two professors bringing together their respective domains of expertise, namely cellular biology and protein crystallography. They hired several PhD students and postdoctoral researchers from both fields, with another expertise of their own. The team was international, with members from France, Lebanon, Finland, Poland, and Iran. The languages spoken in the laboratory were English as a lingua franca, Finnish and French.[1] Besides their different career stages, the team members also had different levels of experience and skills. All these characteristics played an important role in everyday work, because, as the members themselves said, they were all likely to learn from each other.

From the video corpus, we built a collection of eight instances of co-present biochemists establishing joint attention to an object at hand and thereby becoming involved in an object-centred sequence. The low number of examples does not correctly reflect the ordinariness and frequency of the practice in the biochemistry lab. This low number is mainly due to the fact that activities in such a large workplace are difficult to video record. Consequently, many occurrences of the focus phenomenon escaped our cameras, taking place at times in another room, just outside the camera frame, or only partially in the scope of the cameras and microphones. In other words, the collection includes very few of the practice's occurrences in the period of the recording. Nevertheless, the examples we fully have at our disposal concur with fieldwork observations, and the collection is robust enough for a sound

[1] The transcriptions are produced in the original languages, and an English translation is provided below the original versions.

investigation of the practice. All instances were transcribed following Jefferson's (2004) conventions for talk and Mondada's (2018) conventions for embodied actions. Throughout the transcripts, BC1 refers to the biochemist initiating the sequence, and BC2 to her/his recipient. Therefore, the article also builds on recent developments in conversation analytic research on multimodal interactions using video data (Streeck/Goodwin/LeBaron, 2011).

3. Empirical analyses and findings

In this empirical section, we analyse in detail six examples from the data. Section 3.1 focuses on how co-workers create and establish joint attention to the object (Kidwell/Zimmermann 2007) and initiate an object-centred sequence. Section 3.2 focuses on how co-workers engage in and achieve 'instructed vision': jointly and collaboratively, they build and establish a shared perception of the object (Nishizaka 2014). BC2 observably turns from *looking at* to *seeing* the object (Heinemann 2016), and more specifically: to *seeing this visible feature as problematic.* Lastly, we show in Section 3.3 that scientists can, once shared perception is established, continue to look at the object, and thereby engage in the collaborative search for an explanation of the problem by looking for new features of the object. These findings provide further understanding of two dimensions that are particular to biochemistry work: material objects are central and made accountable through the features that biochemists jointly elaborate in copresent interactions; and the perception of objects of biochemistry is an interactional and progressive achievement inseparable from the scientific task at hand, and integral to the advancement of scientific work.

3.1. Creating joint attention to an object of work: Initiating an object-centred sequence

After first greetings, biochemists, like many workers in shared premises, spend most of the day in a continuing state of incipient talk (Schegloff/Sacks 1973:262; Szymanski 1999; Szymanski et al. 2006). A biochemist at grips with an object often takes the co-presence of a colleague as an opportunity to engage interaction about this object (see also Licoppe/Tuncer this volume), and thus to recruit (Kendrick/Drew 2016) the colleague in her/his current task. Excerpt 1, in which the participants are speaking French, is one of the three examples in our collection occurring in a continuing state of incipient talk. Before the transcript begins, BC2 entered the lab room where BC1 is working at her bench with microplates, and went to his refrigerator to take some of his microplates. The transcript begins as he is heading to his side of the bench next to BC1 and walking behind her, looking at and manipulating his microplates (Figure 1).

Excerpt 1 - Ça m'énerve là à chaque fois (Mon6Lab1-008 04''10)

01 #(4.0)
fig #Fig1

Figure 1

02 BC1 #Ça *m'é↑nerve↓ là à chaque fois ^qu'tu mets au frigo:=#
It annoys me there every time you put in the fridge,
fig #Fig2 #Fig3
bc1 *brings plate closer to her eyes, turns to BC2-->
bc2 ^turns head to plate, balances body left

Figure 2

Figure 3

03 BC1 =ça fait *plein de:, *plein d'eau comme ça là,#
=it makes tons of:, tons of water like this here,
bc1 *----------*transfers plate from right to left hand
fig #Fig4

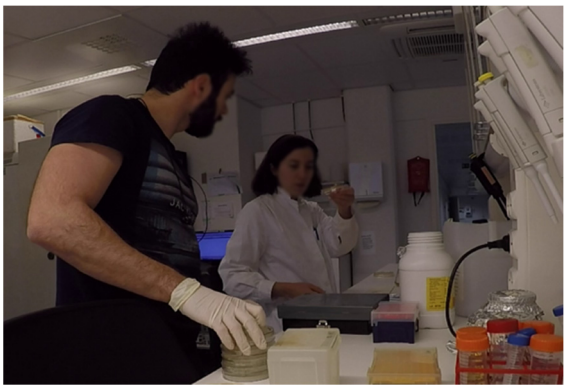

Figure 4

While BC2 places his microplates on his bench (Figure 2), BC1 initiates talk with *Ça m'é↑nerve↓ là à chaque fois qu'tu mets au frigo:ça fait plein de:, plein d'eau comme ça là,* ('It annoys me there every time you put in the fridge, it makes tons of:, tons of water like this here', lines 2-3). Projecting a complaint ('it annoys me') occasioned by something happening to her now ('there'), BC1 can be heard as recruiting BC2 in her current problem with this object. She also accounts for soliciting him by framing the problem as recurrent ('every time') and as a shared concern since it is likely to be experienced by any biochemists (impersonal 'you'). During her turn, BC1 turns the upper part of her body and slowly moves the microplate towards BC2 while following it with her gaze. BC2 turns his head to the microplate after 'every time' and balances his body from right to left, thus coming closer to the microplate so that they are both looking at it at the end of line 2 (Figure 3). BC2 thus makes himself available now and displays his involvement in the incipient interaction about this microplate.

These object-centred and collaborative sequences are systematically initiated with the same multimodal move: BC1 initiates talk about the object while proffering or orienting to it. The object itself can remain unexplicated, like in Excerpt 1; it can also be referred to with an indexical element (e.g., 'this one', in Excerpt 3 below), or even named (e.g., 'manganese', as in Excerpt 3 below). Similarly with gestures that point towards an object or a feature of the environment (see e.g. Hindmarsh/Heath 2000; Mondada 2007), the movement with the object is launched before talk, and reaches its apex during the turn. The recipient responds by turning her/his head and gaze towards the object early on during the first turn-at-talk and by moving her/his body closer to the object, as the latter reaches its apex.

While three examples in our collection occur in a continuing state of incipient talk, five of them occur during a conversation in an environment where a sequence is formally complete and initiating a new sequence is possible. Consider Excerpt 2, in which the colleagues speak Finnish. A few seconds before the transcript starts, BC1 has entered the lab room and launched a conversation with BC2, asking whether he has read some papers. BC1 is holding strips of glass containing a sample, of the sort to be placed in a microscope. BC2 has been working at his bench for some time, and while participating in the conversation he continues his task. Following BC2's turn 'pretty good' (line 1) referring to the papers previously mentioned, BC1 initiates an object-centred sequence about the sample he is currently manipulating (line 2).

Excerpt 2 - Siin on (March 3rd Cam 2 006 14''50)

```
01  BC2   Aika* hyviä.#
          pretty good
    bc1       *extends arm holding object-->
    fig               #Fig5
```

Figure 5

```
          (0.6)
02  BC1   ^Siin on,^#
           here is
    bc2   ^--------^turns face to sample
    fig            #Fig6
```

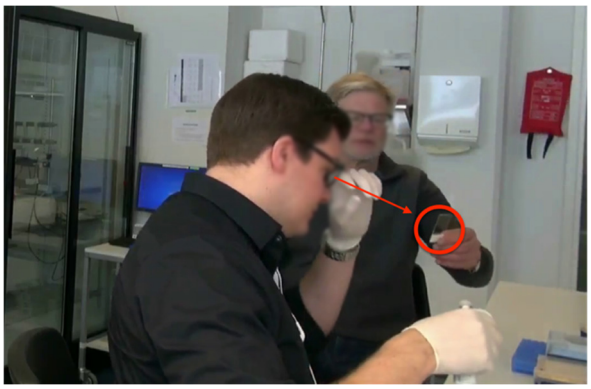

Figure 6

```
03  BC1   (.) pitäs (.) nähä (.) tuo, nii onkohan modifioitu,
              one needs to see that, whether it has been modified,
04        ^katopa vähä.
           have a quick look
    bc2   ^bends closer to sample
05        (1.0)
```

During BC2's closing turn in line 1, BC1 brings the sample closer to BC2's visual field (Figure 5). As BC1 holds the sample in that position, BC2 re-directs his gaze so that he is looking at the sample by the end of BC1's turn *Siin on,* (Here is,) introducing the object (line 2, Figure 6[2]). The initiating move is very similar to the one in Excerpt 1, except for the fact that BC1 first makes the object visually salient by proffering it, and when BC2's gaze is on the object, BC1 initiates talk and secures joint orientation. BC2 bends closer to the object during BC1's subsequent turn *(.) pitäs (.) nähä (.) tuo, nii onkohan modifioitu, katopa vähä* ('one needs to see that, whether it has been modified, have a quick look', lines 3-4). The turn is an explicit request for BC2 to look at and assess a specific feature of the object. With the initial

[2] With his left hand, BC2 is repositioning his glasses.

move and BC2's immediate shift of attention in response, joint attention is achieved and an object-centred, collaborative sequence is on its way.

In this section, we have shown how biochemists initiate object-centred sequences in the laboratory. As they jointly focus on an object of work, they engage in some sort of problem solving and commit to achieve something. Whether the sequences are initiated in a continuing state of incipient talk or during an interaction, they do not emerge out of the flow of a stepwise progression (Button/Casey 1985). Their initiation breaks with the ongoing activity. Besides, the interactional move is self-explicative as to its placement: as a biochemist at grips with an object of work draws a colleague's attention to it, the latter can reasonably infer that a problem is being brought up, along with a request of some sort. In the next section, we show that once joint attention to the object is created, the next step for biochemists is to see the same features and establish a common perception of it, by going through what we call 'instructed vision'.

3.2. Instructed vision: Seeing the same problematic features in the object and establishing a common perception

The objects biochemists manipulate are containers, such as microplates, beakers, microtubes, and samples, so that the actual objects of work are the substances they contain. They are looked at and/or inspected in the light of professional know-how, including for example formal knowledge of biochemistry, local knowledge of the procedure the substance is going through, local indications from inscriptions on the container, and embodied knowledge of how to manipulate the object and expose specific aspects of the substance. Among the most pervasive embodied practices associated with professional vision (Goodwin 1994, 1997), highlighting and positioning for perception are pervasively, recurrently at play in the biochemistry lab.

Processes of instructed vision are organized in a specific, recurrent fashion. In general, BC1 provides a first, candidate description of a specific phenomenon or a feature of the object, through more or less explicit, indexical or embodied means, indicating in which perspective BC2 should look at the object. Then, BC1 and BC2 collaborate for the latter to align to the former's initial perception of the object. Excerpts 3 and 4 are examples of two sets of practices of instructed vision: BC1 can provide indications through talk and bring BC2 to see the phenomenon at a glance; or BC1 can accompany BC2 in looking at the object in a more extended and careful way, while producing verbal indications and moving the object, for her/him to progressively perceive these features. Instructed vision closes when BC2 exhibits understanding (Hindmarsh et al. 2011) or displays that s/he has turned from *looking at* the object to *seeing* (Heinemann 2016) the same features as BC2. Although this may not always be the case, in our data seeing the same features goes along with sharing an assessment of these visible features as a potential topic of talk because they are problematic for the practical purposes of the scientific experiment or procedure.

In general, instructed vision involves not only seeing the same features of the object, but also agreeing on an assessment of these features as problematic: these two aspects form a common perception of the object. *Seeing* means seeing *that the object does not look the way it should,* and therefore seeing that *there is* a problem with this object, which accounts for initiating interaction about it. The latter also

implies that BC1 is stuck in her/his scientific task because of this problem, so that BC1's move is understood as recruiting her/his colleague in the problem, or requesting some form of help to resolve it. In most cases, BC1 does not specify what sort of help (Excerpt 2 is an exception), a point we discuss below in relation to the object's physical availability. The public, witnessable establishment of a common perception of the object is a turning point in the object-centred sequence. In a majority of cases, it is the moment biochemists stop looking at the object.

Shortly before the beginning of Excerpt 3, the colleagues have entered the lab while talking. Their conversation fades out while BC1 prepares to engage in a task by putting on gloves. In line 1, BC1 reformulates her previous turn from the vanishing conversation with quiet voice and falling intonation.

Excerpt 3 - J'ai un problème avec le manganèse (March 1st Cam 1 009 12''10)

```
01  BC1   °No:n, mais j'en referai (d'toute façon je:).°
          °No, but I'll make some more (anyway I:).°
02        (0.5)*(0.8)
    bc1        *turns head to object
03  BC1   #J'ai un *problème avec le manganèse, ^c'est que::,#
          I have a problem with manganese, it's tha::t
    bc1           *turns head mid-way between the object and BC2
    bc2                                        ^turns head to object
    fig   #Fig7                                          #Fig8
```

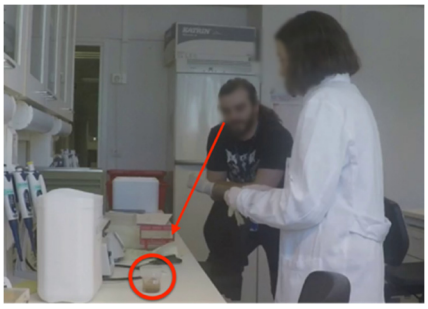

Figure 7

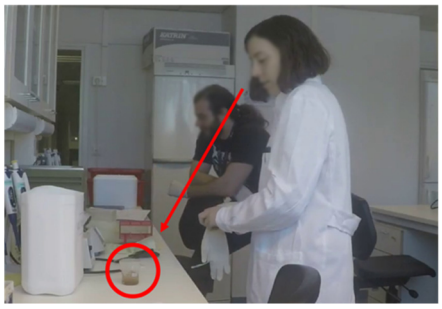

Figure 8

```
04  BC1   *la solubilité c'est à:, (un cinq) mole par litre,
           the solubility is at (one five) mole per litre,
    bc1   *turns head to BC2
05        (0.7)
06  BC1   et là j'suis à *un mole# par *litre,
          and here I'm at one mole per litre,
    bc1                 *sudden gesture with both hands to object
    bc1                             *turns head to object
    fig                       #Fig9
```

Figure 9

```
07          (0.2)*(0.2)
      bc1         *takes object
08    BC1   #e:*:t,*# e:::*:t,#
            a::nd, a:::nd
      fig   #Fig10
      bc1      *lifts object
                  *stops object in front of her eyes, turns towards BC2-->
      fig          #Fig 11
      bc1               *stops object close to BC2's visual field
      fig                    #Fig12
```

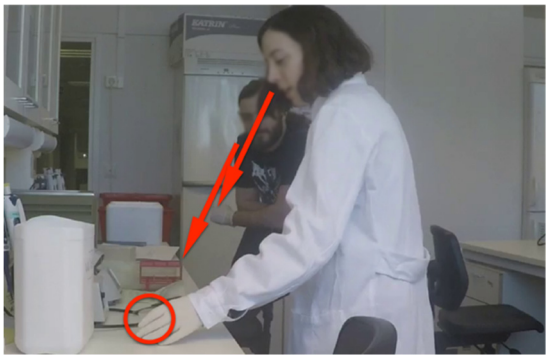

Figure 10

Figure 11

Figure 12

```
09    BC1   °Ça marche pas°.=
            °It doesn't work°
10    BC2   =Nor*maleme:nt t'ajoutes, eu:h pfff-
             Normally: you add e:r pfff
      bc1       *turns the product and her body away from BC2
11          (1.8)
12    BC2    T'ajoutes- eu:h du: HCl,
            You add e:r so:me HCl,
```

During a silence (line 2), BC1 turns her head to the beaker (Figure 7). Then, she initiates a new sequence with an extended TCU in a louder volume than her previous turn: *J'ai un problème avec le manganèse, c'est que::,* ('I have a problem with the manganese, it's tha::t', line 3). Similarly to Excerpt 1, this turn raises a problem and projects its explication. At this point, BC2 is looking away, his upper body half turned to BC1 (Figure 7). After BC1 has turned her gaze away from the beaker early in her turn, BC2 turns his gaze to it (Figure 8), displaying his understanding that she is referring to this beaker. BC1 is looking at BC2 as she progresses her telling: after naming the substance ("*manganèse*"), she tells what she knows about the normal solubility ratio (*la solubilité c'est à:, (un cinq) mole par litre;* the solubility is at (one five) mole per litre, line 4) and then the current concentration of solvent in

the sample at hand: *et là j'suis à un mole par litre,* ('and here I'm at one mole per litre,', line 5), stressing *un* (one, line 6) to emphasize that the proportion of manganese is even lower than it should be. In other words, although she has not fully formulated the problem (yet), the premises she has just set out make it fully understandable: considering what she has done, the manganese should now be dissolved, but it is not. As she shifts from manganese in general to this beaker here and stresses *un*, she makes a two-hand, palm-open pointing gesture towards the beaker (Figure 9). Shortly after she turns her head to it, takes it from the bench during a brief silence (Figure 10), and while uttering *e::t,* ('a::nd', line 8) she lifts the beaker and brings it closer to her eyes, probably to check the solution's aspect now (Figure 11). She then turns to BC2 and brings the beaker closer to his eyes, while uttering another extended *e::::t,* ('a:::nd', Figure 12). She stops the beaker in BC2's sight, turns her head to him and, on lower volume, produces a generic problem formulation: *Ça marche pas.* ('It doesn't work.', line 9).

In response, BC2 proposes a standard procedure as an alternative: *Normaleme:nt t'ajoutes, eu:h pfff—(1.8) T'ajoutes eu:h du: HCl*, ('Normally: you add e:r pfff- You add e:r so:me HCl,' line 10-12). That he can see, or whether or not he can see the same feature of the object is not mentioned. He treats BC1's move as framing visual perception and assessment of the substance as a settled issue, and not as a request to inspect it. Meanwhile, BC1 moves the beaker away from his view: BC2's previous response is aligned and sufficient so that embodied, joint orientation to the object is no longer relevant. Although the achievement itself remains implicit, they have built and established a common perception of this substance. They no longer look at the object together, but they remain involved in the object-centred sequence by talking about other potential solutions.

This excerpt exemplifies one possible organization of instructed vision. While the object is visually available and oriented to by both parties, BC1 engages in a complete problem presentation through talk. Thus, she first tells what features of the substance BC2 should see, and then brings it into his close view for him to see them at a glance.

A different organization can be found in Excerpt 4, the continuation of Excerpt 1. First, BC1's embodied conduct and the indexicals in her turn-at-talk invite BC2 to look at the object in order to see what she is talking about. Second, the initial absence of response from BC2 is treated as a display of *not* seeing, leading to an expansion of the joint inspection and manipulation of the object. Instructed vision is more progressive than in Excerpt 3, and the establishment of a common perception of the object is also more visible.

Excerpt 4 - Ça m'énerve là à chaque fois (Mon6Lab1-008 04''10)

```
01          (4.0)
02   BC1    Ça *m'éĵnerve↓ là à chaque fois ^qu'tu mets au frigo:=
            It annoys me there every time you put in the fridge,
     bc1       *brings plate closer to her eyes, turns to BC2-->
     bc2                                    ^turns head to plate, balances
                                             body left
```

03 BC1 =ça fait *plein de:, *plein d'eau comme ça là,#
=it makes tons of:, tons of water like this here,
bc1 *----------*transfers plate from right to left hand
fig #Fig13

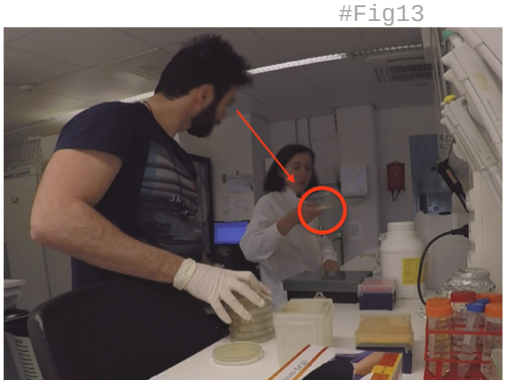

Figure 13

04 BC1 Je sais pas si *c'est ^>normal,
I don't know if it's >normal,
bc1 *looks at BC2's plates
bc2 ^bends to look closer at plate
05 =toi< ça# ^l'*fait aussi,* ou pas.
=you< it does it too, or not.
bc2 ^straightens up, walks closer
bc1 *looks at BC2
bc1 *looks at her plate
fig #Fig14

Figure 14

06 (0.6)
07 DIA Tu vois ^l'eau# dessous? (.) Dans le couvercle?#
You see the water underneath? (.) In the lid?
bc2 ^approaches hand to plate, bends to look from the side
fig #Fig15 #Fig16

Figure 15

Figure 16

```
08          (0.7)
09  FRE     ^Oua::h, ^ha *ha::.#
             Wa::h, hah haa::.
    bc2     ^--------^turns to his own plates, grabs one
    dia                 *turns to BC2's plate
    fig                       #Fig17
```

Figure 17

Framed as a complaint and making the problem purportedly shared, BC1's initial turn *Ça m'énerve là à chaque fois qu'tu mets au frigo: ça fait plein de:, plein d'eau comme ça là,* ('It annoys me there every time you put in the fridge, it makes tons of: tons of water like this here', lines 2-3) is indexical and displays little knowledge about the phenomenon, specifying mainly that there is too much water in her microplate. In line 3 (Figure 13), she transfers the microplate from her right hand to her left hand, thus bringing it closer to BC2's visual field, and then holds it in a tilted position: she *shows* the microplate so that BC2 has good visual access to it through a specific angle. In other words, the indexicals "like this here" combined with BC1's embodied conduct invite BC2 to *look at* the object in order to understand and *see*, at the same time, what she is talking about.

She verbalizes her lack of knowledge about the problem: *Je sais pas si c'est >normal,=* ('I don't know if it's >normal=', line 4), and continues with the question *=toi< ça l' fait aussi, ou pas.* ('=you< it does it too or not', line 5). Asking whether BC2 experiences the same phenomenon with his microplates assumes that he has understood and seen the problem she is referring to. However, during the question, BC2 bends closer to the microplate (Figure 14), a movement she responds to as a display of not yet seeing the quality of the problem. She provides a further indication of the phenomenon, its location, in two parts: *Tu vois l'eau dessous? (.) Dans le couvercle?* ('You see the water underneath? (.) in the lid?', line 7), but BC2 still does not answer and keeps looking at the microplate. Since an answer is expected, he is committed to keep looking until he can see the problematic phenomenon and they can establish a common perception of the object.

Just before the question on line 6, BC2 brings a hand to BC1's hand holding the microplate, and without actually touching it, he guides her movement in order to see the microplate from different angles (Figures 15 and 16). Then, with the response cry *Oua::h, ha ha::.* ('Wa::h, hah haa::.', line 9) while turning away from BC2 (Figure 17), he shows that he has seen the phenomenon. The marked response cry also assesses the phenomenon as remarkable. BC2 turns to his own microplate, in order to answer BC1's initial question: whether he has experienced the same problem in his microplates. They do not look at BC1's microplate any more, and

BC2 answers that he does not have the same phenomenon, and shortly after he will suggest a potential explanation for BC1's problem (not shown in the excerpt).

In Excerpt 4, instructed vision is organized in such a way that BC1 brings BC2 to see the object in the same perspective by making it visually available to BC2 from the onset and guiding him through verbal indications and manipulations. The phenomenon is not visible at a glance: it requires careful and extensive inspection of the object. A comparison between Excerpts 3 and 4 suggests that whether joint inspection occurs or not, and its duration, may be influenced by how BC1 shapes the problem presentation. In situations such as Excerpt 4, where BC1 does not name the phenomenon, biochemists can rely on the object's physical presence and the possibility to inspect it together to overcome the naming problem and progress interaction and the scientific task anyway. In Excerpt 3, on the other hand, BC1 explains in some detail what procedure the substance has been through for BC2 to see at a glance that its visible aspect is problematic.

Excerpts 3 and 4 are examples of the most common trajectory where biochemists put away the object once they have established a common perception of it. They remain involved in the object-centred sequence until something has been achieved, but with the physical object no longer the focus of joint attention, this is achieved mainly through talk. In Section 3.3, we address a different trajectory: once a common perception of the object is established, the colleagues not only remain jointly oriented to the object but also engage in a second, upgraded inspection phase.

3.3. Re-engaging in joint inspection once common perception is established: Problem solving and the creation of new knowledge of objects

Once it is established *that* something has gone wrong, biochemists can remain involved in inspecting the object, or even upgrade their involvement, in order to see *what* can possibly have gone wrong. In other words, object-centred sequences of this sort can also aim at creating new knowledge of objects of work, a work of interpretation using the technical means of manual enhancement only.

In Excerpt 3 above, we showed how BC1 brings BC2 to see that the manganese in the present beaker has not dissolved, although it should have, considering the proportions of manganese and solvent in the beaker. Later the same day, she initiates another object-centred sequence with BC2, bringing up the developments of same problem. A few seconds before the excerpt starts, Elsa, a PhD student newly arrived in the team, has come in the lab room to ask a piece of information from BC2. BC1 participates in their conversation while also pursuing her tasks. She manipulates a measuring cylinder containing brown substance, regularly looking at and moving it (Figure 18). As the transcript begins, BC2 is turning pages in his notebook, looking for an answer to Elsa's question.

Excerpt 5 - What I'm going to do with that (March 1st Cam 1 010 04''40)

01 BC1 W- It should be::- u:::h# o:- e- on the shelf at H,=
fig #Figure 18

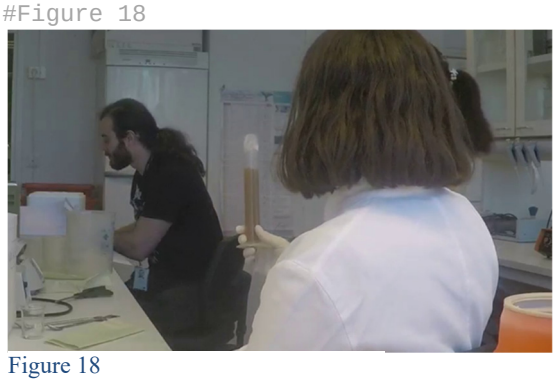

Figure 18

02 BC1 =but I, I (.) don't remember I've seen this.
(1.4)
03 BC1 Fuck, ↑what I'm going to do with ↓that. ^Freddie.# hih ↑heh.
bc2 ^turns head to BC1
fig #Fig19

Figure 19

04 ^(0.4)*(0.6)#(1.0)
bc2 ^turns upper body-->
bc1 *puts second hand on tube, moves it upside down
fig #Fig20

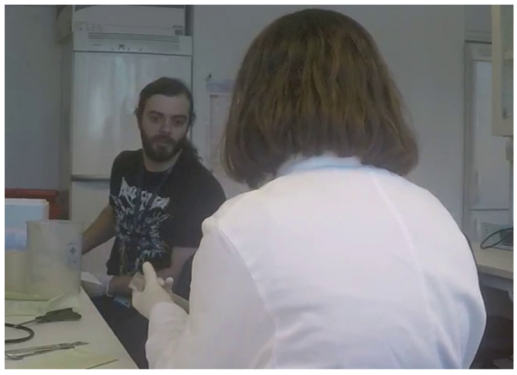

Figure 20

05 BC1 Mmmmmm. ((whining sound))
06 BC2 Mm t-*
bc1 *stands up, walks to BC2
06 (1.3)
07 BC1 (° I just wanted-°) (.)*
*holds tube horizontally close to BC2

```
        ^(0.5)^#(2.0)^(0.6)^(0.3)
    bc2 ^-----^turns to BC1, repositions arms
    bc2               ^-----^raises left hand and takes tube
    fig         #Fig21
```

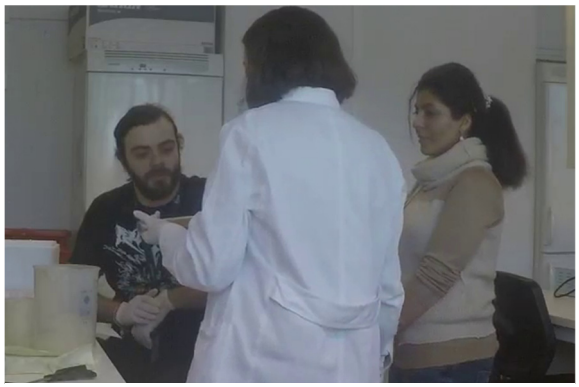

Figure 21

```
07  BC1   I wanted to filter, but in fact^ it wasn't# (  [     )]
    bc2                                   ^holds beaker with both hands-->
    fig                                          #Fig22
08  BC2                                            [I (  )], yeah.
```

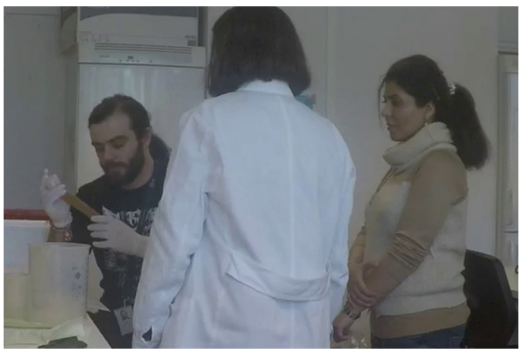

Figure 22

```
09        (4.0)
10  BC1   ^S:hould I just# leave it (.) like this?
    bc2   ^shakes the tube upside down-->
    fig                #Fig23
```

Figure 23

```
11        (4.2)
12  BC2   Check on the ^other (   *      ).
    bc2               ^takes one hand off the beaker
    bc1                          *moves arm to beaker
```

```
13          (0.4)
14  BC1     (°Yeah.°)
15          (0.3)*(2.3)
    bc1          *takes beaker, turns away from BC2
16  BC1     Okay,* let's check the (          ).
    bc1          *puts beaker back on bench
17  ELS     (          ), you are in the middle of your ↑work, ↑hunh?
```

On lines 1-2, BC1 answers Elsa's enquiry with *W- It should be::- u:::h o:- e- on the shelf at H, but I, I (.) don't remember (where) I've seen it*. Then, she breaks with the ongoing conversation by initiating a new sequence, addressing BC2 only, on a different topic: *Fuck, ↑what I'm going to do with ↓that. Freddie.*[3] *hih ↑heh*" (line 3). The swear word, the vocative and the nervous laughter contribute to making this turn hearable as a call for help. BC2 immediately turns his head to the cylinder (line 3, Figure 19), and at the end of BC1's turn, he moves in the same direction with his upper body. Thus, he demonstrably understands that BC1 is referring to the cylinder in her hand, and visibly disengages from his current task to attend her call for help.

During the ensuing silence (line 4), BC1 moves the cylinder upside down (Figure 20), stirring the liquid for BC2, showing him that the substance is not properly dissolved. This common perception of the same object has been previously established, and BC2's tacit alignment shows that he still relies on it. He also seems to understand that BC1 still has not solved her problem despite other attempts since their previous interaction about the substance. BC1 reinforces her complaint with a whining vocalization (line 5). Then, she stands up, walks to BC2 and moves the cylinder closer to his visual field in a horizontal position, thus inviting him to look at it with more than a glance. With his gaze constantly on the cylinder from the start, BC2 pivots his chair (Figure 21) and takes the cylinder, indicating he is going to inspect it manually. He manipulates it, looks at it closely from different angles, and sets the substance inside the cylinder in motion. By taking the cylinder, BC2 also displays his further involvement in trying to help BC1 solve her problem (Tuncer/Haddington, in press).

BC2 holds the cylinder in a sideway position (Figure 22) and looks at it for about 8 seconds. He then blocks the upper opening with the palm of his hand and moves the beaker upside down, to let the substance flow and display its texture (Figure 23). Meanwhile, BC1 reports on her previous, abandoned attempt (line 7) and asks *S:hould I just leave it (.) like this?* (line 10): they are jointly trying to find a solution, relying on the possibility that BC2 sees new features of the substance. A 4.2-second silence follows, after which BC2 suggests where she should look for information: *Check on the ( ).*[4] (line 12). Meanwhile, he turns his gaze away from the beaker and gives it back to BC1 who puts it on her bench while agreeing to the suggestion with *Yeah. (2.) Okay, let's check the (.)* (lines 14-16). Thus, she treats BC2's suggestion as a sufficient response to her initial call for help, making possible the closing of the object-centred sequence. Elsa enters the floor again (line 17), and soon after BC1 leaves the room (not shown), heading to the suggested information source. BC2's inspection of the object does not result in the perception of new features of it, but while looking at it, BC2 makes a suggestion that directs BC1 towards a yet unexplored source of information about the object.

---

[3] Freddie is the pseudonym we chose for BC2.

[4] We were able to show the recordings to BC1, she told us that BC2 most probably suggested she looked at an online resource, although she was not able to remember or hear what he says exactly.

Excerpt 6 shows a similar trajectory, where BC2, after the colleagues have established a joint perception of the object, takes the latter to inspect it. However, in this example BC1 orients to BC2 as more knowledgeable about the substance they examine. BC1 and BC2 have been working at their respective benches for some time, in a continuing state of incipient talk, with their backs turned to each other. BC2 is wearing earphones. Before the beginning of the transcript, BC1 approaches BC2 from behind, looking at a microtube and holding it away from his body in a proffering gesture. When BC1 takes the floor on line 1, BC2 moves his upper body backwards and turns his head to the microtube (Figure 24).

Excerpt 6 - Is it normal that Hoechst is like this?

```
01          (12.1)
02  BC1     #Is it no:rmal that Hoechst is like this?
    fig     #Fig24
```

Figure 24

```
03          ^(0.7)
    bc2     ^removes earphones-->
04  BC2     ↑° Mmmm?° ^
    bc2       ----->^
05          (0.5)
06  BC1     *Is it no:rmal* that *it's::-
    bc1     *-------------* shakes the tube
                               *turns to BC2, freezes
07          (1.2)
08  BC2     °What is it?°
09          (.)
10  BC1     Hoechst.
11          (1.3)
12  BC2     Yea:h. (.) I think normally it's-
13          (0.7)
14  BC2     it's- (.) yellow.
15          (0.5)*(0.5)
    bc1           *turns head to tube
```

```
16  BC2   [(       )]
17  BC1   [No, I mean *it]'s::::#, usually it's more liquid.
    bc1               *raises left hand to tube, hits tube, turns it
                                                      upside down-->
    fig                          #Fig25
```

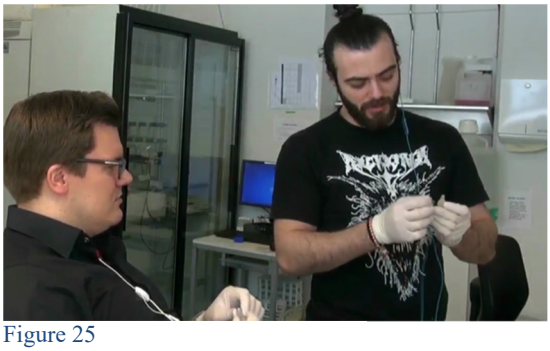

Figure 25

```
16          (1.0)*(0.5)
    bc2          *extends arm-->
17  BC2   °Yeah, that's true.°
18        (0.5)*(0.5)#(4.5)
    bc2          *takes the tube
    fig                #Fig26
```

Figure 26

```
19  BC2   Yea:h. (.) Well, it should be fifty percent alcohol.
```

As soon as BC2 has turned to the microtube, BC1 initiates talk with the question *Is it no:rmal that Hoechst*[5] *is like this?* (line 1). He names the substance and addresses BC2 as more knowledgeable about it, but with the indexical *like this* the question is unspecific as to which feature it refers. Meanwhile, he makes some features visible and highlights them by moving the microtube upside down and turning it around in his hand. After BC1 has repeated the name of the substance at the end of a repair sequence (lines 6 to 10), BC2 provides an answer: *Yea:h (.) I think normally it's- (0.7) it's- (.) yellow* (lines 12 to 14). He treats the question as referring to the object's colour, and grounds his assessment on what he knows is the normal colour of Hoechst. This answer is at odds with what BC1's overall move projects, namely that there is a problem with this substance. Then, BC1 initiates a new process of instructed vision. He turns his head to the microtube again, thus inviting BC2 to take another look at it, rejects the answer and treats it as misaligned with *No* in

[5] Hoechst is a cell-staining substance commonly used in biochemistry. Laboratories receive a base substance which is dissolved by scientists in various concentrations to produce a set of substances they will actually use.

initial position (line 17). Then, with *No, I mean it's:::::, usually it's more liquid.* (line 18), he specifies which feature he was referring to: texture instead of colour. At the same time, he raises his other hand, hits the microtube with one finger, and turns it upside down with both hands (Figure 25): he sets the substance in motion for BC2 to *see* the texture, a feature which becomes visible in movement only. Like in Excerpt 4, BC1 guides his colleague to see particular features of the object through verbal instructions and manipulations. In other words, instructed vision is achieved in a multimodal, collaborative and progressive fashion. Achieving a joint understanding of the specifics of the object's features requires not only manipulations of the object but also sometimes misunderstandings and corrections by which BC1 specifies the object's features relevant for the inspection.

A common perception of the substance is established as BC2 confirms BC1's candidate assessment with °*Yeah, that's true.*° (line 17). Similarly to Excerpt 5, instead of turning away from the object, BC2 takes the microtube, indicating he is going to inspect the substance manually and more carefully (line 18). While the microtube is within BC2's reach from the beginning, he takes hold of it only after they have established a common view of the problem with the substance. Consequently, he takes the tube only after it becomes relevant for him – as the participant who is treated from the beginning as more knowledgeable about this substance – to provide his expert contribution to the issue by spotting details in the substance BC1 cannot see on his own. Similarly to Excerpt 5, this new phase aims to create new knowledge about the object, through upgraded, more detailed and self-administered inspection.

Holding and viewing the microtube so as to let light through it, shaking and moving it, BC2 inspects the substance (Figure 26) for 4.5 seconds. He resumes talk with *Yea:h. Well, it should be fifty percent alcohol* (line 19), drawing on his prior, theoretical knowledge of Hoechst. Later, he gives the microtube back to BC1 and suggests he should wait a little more until the substance has reached the ambient temperature and completely melted (not shown in the transcription). Thus, the second, self-administered inspection leads him to see that the undissolved matter in this sample of Hoechst may be due to temperature, which finally provides BC1 with a suggestion that helps solve the problem.

4. Conclusion

In this article, we have demonstrated through empirical analyses that biochemists discussing objects' visible qualities in their everyday interactions involves fundamental interpretative, discovery work. The objects and substances of biochemistry are intricately embedded in, and therefore always and inescapably perceived from within, the lived activity of scientific procedures and experiments. With these findings, we argue that Knorr-Cetina's assertion according to which materials "appear unproblematically readable" (1981:136) in practices of manual enhancement should be nuanced, if not discarded, along with the radical dichotomy between primary recognition and "interpretation of a situation, account for a phenomenon" (1981: 50). The analyses of different trajectories show that neither the type of object nor the initiating move determine what biochemists will *look for*, as they engage in an object-centred sequence and *look at* an object of work.

The findings were presented in three sections. First, we showed how these sequences are initiated: the initiations break with the ongoing activity, they project problem presentation and even complaints, and they draw attention to a physically present object. Second, we focused on the process of instructed vision: starting from no or little shared background about an object at hand, colleagues jointly and collaboratively build a common perception of it, that is, they come to see the same features and agree on them as problematic. We showed that instructed vision could be achieved in at least two different ways, involving either extended verbal problem presentation and late showing of the object, or joint inspection of the object combined with verbal, indexical indications on how to look at it.

In the last section, we showed that biochemists can engage in a second, upgraded inspection of the object after they have established a common perception of it, to look for a potential solution in yet-unseen features of the object: these objects can disclose more than what has been established. The upgraded inspection and engagement in a joint scientific endeavour involve BC2 taking the object and looking at it while manipulating it, which are decisive moves for the solicited party to engage with a colleague's problem. In other words, while it is generally unclear what sort of help BC1 expects from BC2, while the object's physical availability is a resource for BC1 to initiate interaction without being seen as enforcing BC2 into collaboration, it is also a resource for BC2 to commit in solving the problem. Collaboration in a shared workspace critically relies on physical objects as resources for colleagues to negotiate their engagement in emergent collaboration.

Also, building and establishing a common perception of an object can be critical, in local situations, to make sense of experiences and procedures, but also to collaborate on a daily basis in a shared workplace. These local episodes contribute to the making of professional relationships as fundamentally object-mediated. But while the analyses focused on interactional achievements and trajectories, the findings also shed light on seeing objects of knowledge in scientific practice as a practical accomplishment, and as practical reasoning. The findings have shown that biochemists can perceive different relevant aspects of the same object at different moments and as their practical purposes with the object change. The same features of an object can be seen at a glance, as well as inspected at length to look for new details and better understand these features. Perhaps constitutive of professional vision in scientific practice is this guiding principle that one has never exhausted the relevant features visually available in an object of knowledge. What one can extract and isolate from an object's visible presence is endless, and so is the possibility to understand and discover scientific characteristics of an object of knowledge through careful inspection. The work of biochemistry is inseparable from a material world, it progresses along with the creation of knowledge in commonplace episodes of workplace (inter)actions.

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6. Appendices

Transcript conventions

* * ^ ^	Gestures and descriptions of embodied actions are delimited between two identical symbols (one symbol per participant) and are synchronized with correspondent stretches of talk/silences.
---> ---->*	The action described continues across subsequent lines until the same symbol is reached.
bc1	Participant performing the embodied action
#Fig #	The exact moment at which a screenshot has been taken is indicated with a specific sign showing its position within the turn at talk

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Participants' orientations to material and sensorial features of objects: looking, touching, smelling and tasting while requesting products in shops

Lorenza Mondada

Abstract
The ways participants treat an object vary, depending on the type of activity they are involved in, and the way the object features in it, making relevant a diversity of orientations towards its location, its materiality, its qualities and its specificities. The object's features ultimately depend on the relevance set by the action dealing with them, and are revealed by the way this action is formatted.

In this paper, I examine how the object's features are revealed and at the same time established within the action of requesting it – on the basis of a video recorded corpus of shop encounters in which customers request a food product. Requests are multimodally formatted in such a way that they include not only verbal formats and embodied conducts, but also sensorial orientations towards the object. The paper discusses first requests made without any orientation to the location or visibility of the object, contrasted with requests co-occurring with visual actions such as searching for, looking at, examining, bending on the object. Furthermore, the analysis focuses on requests to touch, smell, and taste the object, revealing the relevance of sensorial features for the achievement and progression of the course of action. In this way, the paper shows how the material, spatial, and sensorial features of an object relevantly emerge within a situated course of action. This invites to a multimodal approach of objects in action that integrates not only movements of the body but also its multisensoriality.

Keywords: Conversation Analysis – social interaction – objects – materiality – multimodality – multisensoriality.

German Abstract
InteraktionsteilnehmerInnen gehen unterschiedlich mit Objekten um. Der Umgang mit dem Objekt hängt von der Aktivität ab und wie das Objekt in die Aktivität eingebunden ist. Auf diese Weise werden räumliche und materielle Eigenheiten des Objekts relevant gemacht. Das Sichtbarmachen von Eigenschaften beruht auf Relevanzen, die durch die Einbindung des Objekts in eine Aktivität entstehen und die durch die Art und Weise, wie die Aktivität von den Teilnehmenden formatiert wird, aufgezeigt werden.

Auf der Grundlage eines Korpus von Videoaufzeichnungen von Verkaufsinteraktionen, in denen Kunden nach einem Lebensmittel fragen, wird untersucht, wie die Eigenschaften des Objekts in der Handlung des Kunden verdeutlicht und gleichzeitig festgelegt werden. Die Handlungen der Kunden sind multimodal so formatiert, dass sie nicht nur verbale Formate und verkörpertes Verhalten, sondern auch sensorische Herangehensweisen zum verlangten Lebensmittel umfassen.

Der Beitrag diskutiert zuerst Fragen der Kunden, die weder auf die räumliche Position noch auf die Sichtbarkeit des Lebensmittels Bezug nehmen. Sie stehen im Gegensatz zu Anfragen, welche gleichzeitig mit sichtbaren Handlungen, wie suchen, betrachten, untersuchen, sich über das angeforderte Lebensmittel beugen,

formuliert werden. Darüber hinaus konzentriert sich die Analyse auf Sequenzen, in denen die Kunden darum bitten, das gewünschte Lebensmittel zu berühren, zu riechen und zu schmecken. Auf diese Weise werden sensorische Merkmale für das Ziel und den weiteren Fortschritt des Handlungsverlaufs relevant gemacht.
Dieser Beitrag lädt zu einer multimodalen Herangehensweise an Objekte ein, die nicht nur das körperliche, sondern auch das multisensoriale Verhalten der Teilnehmenden berücksichtigt.

Keywords: Konversationsanalyse – soziale Interaktion – Objekte – Materialität – Multimodalität – Multisensorialität.

1. Introduction

The way participants treat an object varies depending on the type of activity they are involved in, and the way the object features in it, making relevant a diversity of orientations towards its location, its materiality and its specificities. The object's features ultimately depend on the relevance set by the action dealing with them, and the way this action is formatted.

Shops represent a perspicuous setting for exploring these variations: they represent an ecology densely populated with objects, in which participants engage in activities such as buying/selling, centrally featuring objects that are products. This paper shows how customers and sellers alike might orient very differently to the same objects in the shop, depending on a variety of circumstances. For instance, they might treat an object as well-known in advance and taken-for-granted or as something to discover and explore; they might see and treat the object under various aspects, as pricey vs. cheap, rare vs. ordinary, known vs. unknown, desirable, as well as touchable, smellable and tastable … The paper deals with the variations of objects in action by focusing on how they are oriented to, referred to and bodily treated in various request formats in shops. It reveals how a product can be considered as taken-for-granted, as something to be spotted, seen, and visually inspected, or as a *sense-able* object to be experienced sensorially. This not only contributes to the understanding of how people treat "products" in economic exchanges, but also more generally to the study of different ways in which the relation to objects can

be praxeologically, multimodally and multisensorially instantiated in social interaction (cf. also Mondada 2019a). This opens up a broader conceptual discussion about how to articulate action and objects in interaction.

1.1. A praxeological view on objects in EMCA

Within current discussions about how to handle materiality in social action – such as within Actor Network Theory's approaches to science (Latour 1996) and to the market (Calvignac/Cochoy 2016), ontological approaches (Mol 2003), as well as new-materialist approaches (Kissmann & van Loom 2018) – ethnomethodology and conversation analysis (EMCA) have provided for an original way to tackle objects in social interaction (see Nevile et al. 2014 for a range of studies). Thanks to its specific praxeological perspective, focusing on the primacy of action in order to understand social order, language, culture and cognition, EMCA treats materiality by considering how participants – and crucially participant's bodies – encounter, manipulate, utilize, transform a diversity of materials in the course of their situated activities. Materiality includes objects, artifacts, tools, technologies, and documents. These are not approached *per se*, as static materials in isolation, which would have particular features, affordances or even agentivity; quite the opposite, objects are studied as they are mobilized and used moment by moment in relevant and timed ways within a course of action.

In particular, objects have been analyzed as resources for the organization of social interaction (Day/Wagner 2015, 2019; Mondada 2007; Robinson/Stivers 2001), as indispensible tools for achieving specific activities (such as instruments in surgery, Mondada 2011; Heath et al. 2018; or the Munsell chart in archeology, Goodwin 1994), as well as being the very focus of the activity itself (like objects within museum visits, Heath/vom Lehn 2004). Particular objects such as documents and texts have also enabled important studies of textuality in action (see Mondada/ Svinhufvud 2016 for a review).

This paper deals with a specific type of objects, products for sale. Products are often manipulated in shop encounters, being taken, inspected, negotiated, and eventually selected (see De Stefani 2014 about supermarkets; Fox/Heinemann 2015 about shoe repair shops; Mondada/Sorjonen 2016 and Sorjonen/Raevaara 2014 about kiosks). Objects can be manipulated in a commercial transaction in a way that radically transforms them, for instance from sellables/buyables to possessables and possessed. Streeck draws a "history of things in a situation of interaction" (1996: 367), showing how in a business negotiation, objects such as cookies and their packages can undergo several practical transformations, changing from objects of use into things-at-hand, from exemplars into symbolic artifacts, affording various practices such as inspecting, comparing, and evaluating. Likewise, Mondada (2019a) shows how in the course of a short shop encounter the same object, a cheese, can be seen and manipulated as a buyable/sellable piece, as an epistemic object referring to culture, heritage and geography, as a sample to be touched, smelled and tasted, as an object to wrap and unwrap, each of these aspects being made relevant by distinct usages, manipulations and sensory practices. Food items constitute a particular type of materiality, which crucially involves multiple senses, and more specifically taste. While taste has been discussed by studies of eating

practices (Keating 2000; Ochs/Pontecorvo/Fasulo 1996; Sneijder/te Molder 2005; Wiggins 2004), it has most often been tackled through language, as it is talked about, rather than in embodied and sensorial ways. More recently, papers focused in taste as a sensorial practice have begun to described its embodied aspects, namely in tasting activities. These activities are a perspicuous setting in which to observe how descriptors of taste are collectively discussed (Fele 2016), how they rely on the use of tools and artifacts like aroma wheels and color measurement standards (Mondada 2018c, 2019b), how, on the basis of standard and normative repertoires of tasting categories, they contribute to an objectivization of tasting and taste (Liberman 2013). Selection and decision-taking in commercial encounters typically also involve methodic practices of tasting, which explore and assess the sensorial qualities of the product (Mondada 2018a).

In this paper, I demonstrate how food items as products to sell are variously treated as objects having different qualities and properties – epistemic, institutional, material and sensorial. By examining a diversity of formats through which customers request a food product, I reveal how this object is locally praxeologically treated in its relevant qualities. More specifically I show the importance of embodied practices orienting to these qualities, as well as sensorial practices such as touching, smelling and tasting.

1.2. Data and settings

The data analyzed in this paper come from the *int-counter corpus*, which has been collected in cheese shops in 15 European cities and in 12 different languages. Economical transactions in these shops have been video-recorded with 2 cameras and additional microphones, enhanced by field studies, with the formal agreement and even the collaboration of the participants.

Cheese shops represent an exemplary case of an ecology densely populated with objects. Although their design might vary, the disposition of the products in different refrigerated window cases tends to reproduce the basic taxonomies of cheeses (soft vs. hard vs. blue, cow vs. goat vs. sheep). They are cultural objects coming from different countries and regions, and representing local identity features. Cheese products are objects considered as organically alive and unique – each of them has a particular degree of maturation and evolves in specific ways, for example – escaping from the standardization and homogeneization of many Western industrial products, including food. Moreover, they are considered as objects to be assessed by the 5 senses (including hearing, which is used by professionals to assess the maturation of some hard cheeses). This makes them exemplary products to be studied for understanding how participants – customers and sellers – establish the relevant features of an object *hic et nunc* within the course of the interaction. This also constitutes a perspicuous setting to investigate the multisensorial practices exploring the qualities of these objects and how they are emergently and situatedly established, attributed and recognized in social interaction.

1.3. Sketch of the analysis

In order to reveal how participants orient to, identify, attribute and accomplish relevant features of the objects at hand, the paper focuses on a specific sequential environment and type of action, recurrent in the setting studied, by examining how customers request a product in the cheese shop.

Requests are actions that have been largely studied in the EMCA literature (see Drew/Couper-Kuhlen 2014 for a set of representative studies and discussions). More specifically, requests in shops have been studied within different perspectives, concerning their sequence organization (Merritt 1976), their syntactical format (Fox/Heinemann 2016), their adjustment to the embodied approach of the counter (Sorjonen/Raevaara 2014), and the rapport and service they achieve through politeness (Placencia 2004). The embodied relation to products as material objects has been less investigated (but see De Stefani 2010, 2014, Fox/Heinemann 2015; Mondada 2016, 2018a, and, for business to business communication, Streeck 1996).

Here, I focus on the fact that customers manifest different ways to orient to products in their requests, which display how they treat the object, how they exhibit their knowledge and expertise, as well as their category as a customer (e.g. as a regular), and how they locally shape and categorize their purchase (as planned vs. as occasioned). Moreover, requests also display how customers orient to and establish the relevant material features of the object considered – i.e. as a visually inspectable object, or as a tastable, smellable, touchable object. The analysis shows that these relevant features are not only said in so many words, but are incarnated in the embodied postures of the participants, manifesting their sensorial engagements. In this sense, and more generally, the analysis offers a praxeological approach to objects that considers multimodally organized conducts – paying special attention to the embodied orientations of the participants – as well as multisensorial practices – paying special attention to the ways participants do not only *manipulate* objects (with their hands) but also *sense* them (with different parts of their bodies).

Thus, the analysis shows how requests for products orient to a diversity of features of the objects: the local geography of objects (their location), their materiality and their sensorial properties. Although some requests are uttered without any embodied orientation to the requested object, in a purely verbal way (typically by naming the product without looking at it) (section 2), requests are generally formatted in a multimodal way. The analysis discusses embodied orientations to the materiality of products, from spatiality to sensoriality. First, it examines the location of the products as being related to their taxonomic distribution, revealing knowledge of the object and the category it belongs to (section 3). It also shows how customers typically request a product by turning to, pointing, and sometimes leaning over and inspecting the object (section 4). This demonstrates the relevance of having a visual access to the referent in these actions. Nonetheless, visuality is neither the only and nor the most fundamental dimension of these objects: other forms of sensoriality are involved, although often restricted, by clients requesting to touch and smell (section 5) or to taste (section 6) the product in order to decide whether to buy it or not. By taking into account not only the multimodality of orientations to objects,

but also the multisensorial engagements of participants with objects, the paper reflects on the relevance, situatedness and specificity of embodied sensorial access to materiality.

2. Requests without any gaze/any orientation towards the product

Even in the materially dense ecology of the cheese shop, requests can be made without looking at all at the products. This constitutes a simplest case, which I contrast with the most frequent cases in which customers indeed orient to the objects they request (see the next sections). Customers not gazing at the product they request manifest they know in advance what to buy, and they suppose the product is available. This often concerns either common products or regular customers used to the products sold by the shop (cf. Laurier 2013).

Extract 1, recorded in Finland, shows how clients display that they are requesting some pre-planned product. Both customers, approaching the counter, look at the list she holds (1, Figure 1.1), rather than at the cheese in the showcase. This displays that the purchase has been planned ahead, possibly with other things to buy in the market. The customer reads aloud the name of the cheese to buy (2), in a way that is addressed to his wife, rather than to the salesperson, who is approaching the counter: >°*parmesan(ia)*°< (2) is uttered at fast pace and with a lower voice, but also by accentuating the beginning of the word. This constitutes the last coordination between the two customers, before engaging in the shop encounter with the salesperson (there is another salesperson at the counter, but during this encounter she is busy on the phone, see Figure 1.2, and does not participate to this interaction):

(1) (FRO_FIN_HEL_170415_cli7_883_35.02_parmesaania)

```
1          (1.8)                *£•   #(0.4)
   cus1    >>walks along counter*
   cus2    >>walks holding a list£
   cus1                           •looks at the list->
   fig                                #fig.1.1
```

Figure 1.1

```
2  CUS1    >°parme•saa+n(ia)°<
           >°parmesan°<
                ->•looks at SAL->
   sal     >>walks---+looks at CUS->
3          (0.4)
```

```
4  CUS1    *[#mo•i*
            [hi
5  SAL     *[#hei
            [hi
   cus1    *1 step twd counter*
   cus1       ->•looks at showcase->
   fig       #fig.1.2
```

Figure 1.2

```
6           (0.2)
7  CUS1     parmesaania
            parmesan
8           (0.3)
9  SAL      joo,•+
            yes
   cus1       ->•looks at SAL-->>
   sal           +walks along counter-->>
```

The salesperson – who might have overheard the previous turn– approaches the counter, facing the customer, and they exchange mutual gaze as the customer moves his gaze from the list to the salesperson, just before engaging in mutual greetings, produced at the same time, in overlap (4-5) (Figure 1.2). In this way, they achieve a perfectly coordinated face-to-face positioning, displaying reciprocal availability to engage in the exchange.

As soon as the greeting sequence is completed, the customer briefly looks down at the refrigerated showcase, and utters the request – composed by a unique word, the name of the cheese (7). His gaze displays the transition from the mutual orientation in the opening to an orientation to the products, initiating business. However this gaze is very brief – since the customer looks back at the salesperson just after she positively responds (*joo*, 9) to the request. The customer does not actively search for the named product; the use of the name is enough to complete the request without having actually spotted the corresponding product in the showcase (the product is located at the opposite end of the counter).

After the agreeing *joo* (9), which is usually produced as a first and early response to requests, before the actual compliant response that might take some more time (Mondada/Sorjonen 2016), the salesperson moves to grant the request by walking towards the location of the product.

Although customers might not have a shopping list to read, the multimodal formatting of their request manifests it as concerning an object known in advance, as in this fragment recorded in France:

(2) (FRO_THO17_cli23_chaource ss reg clip 01.31.38)

```
1  SEL     messieurs dame bonj[±ou:r,
           gentlemen and ladies good m[orning
   cus2    >>looks at SEL->
2  CUS1                        [±bonjour
                               [good morning
   cus2                       ->±looks at w-case->
3  CUS2    bonjour. (.) alors on va prendre± un demi
           good morning. (.) so we will take a half
                                        ->±at SEL->
4          chaou#rce s'il-vous-plaît,
           Chaource please
   fig          #fig.2.1
5  SEL     un*: demi chaource (.) oui::,
           a: half Chaource (.) yes::,
             *walks along the counter->>
6          (23.6)
```

Figure 2.1

After an exchange of greetings, the customer produces a request that indicates the name of the cheese and the exact quantity wanted. The fact that this request is prefaced by the connective *alors* ('so', 3) might indicate that the couple of customers have been talking about it, and that the purchase is the result of a previous deliberation. Moreover, the customer looks at the seller (Figure 2.1) rather than at the possible location of the cheese.

The seller responds by repeating the referential expression used and with a *oui* ('yes', 5), while walking along the counter, towards the Chaource, which is located at the other end of the counter. The fact that the product is located at some distance from the customer and that the customer has neither visually searched for it, nor looked in direction of its location, further shows that the request is done without relying on the material-visual accessibility of the product in the local ecology.

In a nutshell, the purchase done by requesting a product by using its name – eventually specifying how much of it is requested – while looking at the seller, and in any case *not* looking or pointing at the product, or searching it in the window-case, constitutes a Gestalt displaying that this is a pre-planned purchase, concerning ordinary products, that the shop is supposed to have available, and/or made by a regular customer, knowing what s/he can found in that shop.

Contrary to these cases, the requests in these specialized shops are most often formatted as a different multimodal Gestalt that incorporates various resources referring to the products in the local environment: pointing gestures, gaze, body orientations, as well as deictic expressions and demonstratives. In this latter case, to which we turn now, the material spatial visual features of the object are made relevant.

3. Requests with body orientation and walking towards the location of the product

Shops are a rich material environment in which numerous products are exhibited. In all shops, products are spatially distributed according to marketing and classificatory schemes; in cheese shops, the localization of products within space corresponds to a taxonomic order, usually distinguishing between textures (hard vs. soft, vs. blue cheeses), as well as animals (cow vs. goat vs. sheep milk cheeses). This distribution of objects defines a particular epistemic geography of the products in the shop, to which both sellers and customers orient to.

The customer displays her knowledge of the product by orienting towards its location when uttering the request. Contrary to the cases analyzed in extracts 1-2, in which the seller was initiating a movement toward a cheese located at some distance, in the case at hand, it is the customer who orients towards the product's location. This spatial knowledge might be derived from the customer having inspected the shop before the request or from previous visits.

We join a first case in France, as seller is typing ("beep" sounds) the price of the first requested product (1). With *oui:?* ('yes:?', 3), she invites the customer to produce her second request:

(3) (FRO_F_STL_100415_01.01.08)

```
1  SEL     beep beep beep
   cus     >>looks at SEL->
2          (0.4)
3  SEL     oui±:? bip bee#e[eep+
           yes:?
4  CUS                      [et +puis ‡euh$‡ (.) un selles sur ch+er:
                            [and then ehm (.) a selles sur cher
            ->±looks on her left->
                                        ‡chin pointing‡
                                  +steps to the left------------+walks->
   ast                                      $walks slowly to the left->
   fig                    #fig.3.1
5          (0.4) * (1) $ (3.7) * (0.2) + (0.3)
   ast               ->$
   sel          *walks to left*
   sel                                 ->+
```

Figure 3.1

Figure 3.2

```
6  CUS     (   ) (bien fra*is/ferme)
           (   ) (well fresh/firm)
   sel                    *extends RH in fridge->
7          (0.3) *      (0.3) #     *    (0.4)    * (0.2)
   sel         ->*touches SsC1/ScC2/*palpates SsC1*takes SsC1->>
   fig                        #fig.3.2
```

The customer ties her request with the previous one within a and-prefaced turn (Heritage/Sorjonen 1994; Mondada/Sorjonen 2016) (*et puis*, 'and then', 4) and asks for a Selles sur Cher. The name is preceded by a *euh* ('ehm', 4), adjusting to the timing of the turn but also the movement of the customer. Already upon the solicitation of the seller (*oui:?*, 'yes:?', 3), the customer shifts her head/gaze towards her left (Figure 3.1); she does one step in that direction while uttering *et puis*, she points with her chin on *euh* and finally she decidedly walks towards the left, while uttering the name of the cheese. This initiates and organizes the progressive transition of all participants from the till to the opposite side of the counter. The seller and her assistant adjust to and align with it, so that everybody reaches the relevant position (5) and leans over the fridge, looking at the cheese (Figure 3.2) before a specification of the request is uttered. This specification – which is not well audible on the recording but refers to the quality of the texture – displays the orientation of the customer to the features of a specific item (vs. the generic type of cheese) and grounds the need to have a visual access to the object. Moreover this specification works as an instruction for the seller, who does not merely fetch the product in the fridge, but actually selects one among two items: she briefly touches their top with one finger and then haptically explores the selected one with her entire hand, palpating it. So, what the customer can witness is not just the visual appearance of the product, but also the haptic features that are possibly revealed by the professional touch of the seller (Mondada in press a) – to whom the customer also delegates the ultimate choice of the best item responding to the specification. The tangible palpable quality of the cheese is here asymmetrically established, touched by the professional and visually monitored by the client, in a form of complementary sensorial access distributed between them.

In similar ways, in the next fragment, from another French shop, the client has been waiting for a while. When the seller comes to serve him, he orients to her (gaze and head orientation) and at the same time to the product he is about to request (steps towards the eggs, 1) (Figure 4.1). Likewise, he projects the request of a second product very early on, by turning his body towards its location (the hard cheese fridge).

(4) (FRO_F_PAR_1007-31-15_oeufs / 31-25_mimolette)

```
1          ‡ (0.4) #
   cus     ‡one lateral step twd eggs-->
   cus     >>looks at SAL---->
   sal     >>looks at CUS---->
   fig             #fig.4.1
```

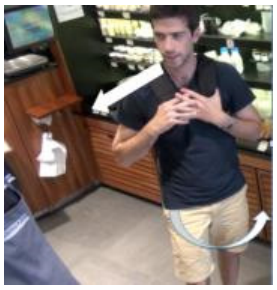

Figure 4.1

Figure 4.2

Figure 4.3

```
2  CUS     °ben° j'vais †vou†s+  pr+end†re†‡# d+es +oeu#:•fs,
           °well° I will    take from you    some eggs
                              +....+qk ptg eggs+,, +
                       -->†...†looks eggs†,,†looks in front->
                                          ->‡pivots twd hard cheese->
   sal                                                 ---->•looks eggs->>
   fig                                       #fig.4.2   #fig.4.3
3          °et [pi:#*†s, ° ‡
           °and [then°
4  SAL         [Øm*#*†hØ  ‡
                ØnodsØ
                  *walks tw eggs------->>
   cus          -->†turns head tw eggs-->>
   cus                   ‡walks tw eggs-->>
   fig             #fig.4.4
```

Figure 4.4

Figure 4.5

```
5          (1.5) # (1.0) ‡(0.2) # (0.6)‡
   cus                  ->‡pivots tw mim‡
   fig           #fig.4.5       #fig.4.6
6  CUS     *et+: de la mimol†#et‡te h+†
           and some mimolette h
              +quick point twd mim----+
                             †gz SEL---†
                                 ‡walks w SAL->
   sel     *comes back tw CUS and walks to counter w eggs->
   fig                       #fig. 4.7
```

Figure 4.6

Figure 4.7

```
          (0.5)
7  SEL    .tsk oui,
          .tsk yes,
8         (1.2)
9  SEL    j'ai une part qui* est coupée‡ là, ça vous irait?
          I have a portion that is (already) cut there, is that okay?
                        ->*walks to mim->>
   cus                              ->‡walks to mim->>
```

The first request concerns eggs, which are located about 3 meters away, on the left of the customer (on the right of the screen shots). Before producing his request, the customer makes a step aside, towards the eggs, while maintaining mutual gaze with the seller (1, Figure 4.1). As he produces the request (2), he looks in direction of the eggs and points at them (Figure 4.2). These practices co-occur with the verb *prendre* ('take', 2). But even before he utters the object (*oeu:fs*, 'eggs', 2), the customer already reorients his body and gaze in front of him (Figure 4.3). This orientation slightly precedes the °*et pi:s,*° ('°and then°', 3) which projects a second request. Indeed, the orientation turns to the location of the second product, the mimolette (requested at line 6). Before he moves on with this second request, the customer accompanies the movement of the seller towards the first product (4, Figures 4.4-4.5); only at this point he repositions himself, turning towards the mimolette (5, Figure 4.6), just before requesting it, when he is fully turned towards it and points at it (6, Figure 4.7).

This extract shows how the customer orients pretty early on towards the second product he is about to buy, as the first request sequence is not yet completed. He turns toward and points at both products, but these pointing gestures are quick and not very precise: the global body orientation towards the location – rather than a precise pointing that would identify the object – displays a recognition of different areas within the shop, attributed to types of products.

In both cases, the customer bodily orients towards the location of the product before uttering the request and before pointing. Turning early on towards the location displays knowledge not only of the product, but of his relative position within an ordered set of products, organized in space, displaying an understanding of its taxonomic features.

Contrary to these cases, requests uttered while pointing at the product close-by orient more to the object *per se* and its specificity and unicity.

4. Requests with pointing

Customers might request products by identifying and referring to them not only verbally but also by precisely pointing at them and leaning towards them. By so doing, customers manifest the relevance of visually accessing the object be it for checking its availability, or quality, for searching for it, or for having discovered it. These practices embedded in the request and making it referentially intelligible, treat the material environment as an important resource. I distinguish two requests formats, both involving pointing, but displaying different types of knowledge concerning the object: the former refers to the product by its name and the second with demonstratives.

4.1. Requesting products by naming and pointing at them

Requests mentioning the name of the cheese display a form of knowledge about the product. This can be acquired locally, on the spot, by reading the label, or can rely on some more general expertise. Although knowing the name of the cheese, the participants multimodally format their request by adopting a body orientation towards the object requested, as they look at and check the product that is actually picked up by the seller. This multimodal format displays the relevance of a *visual access* to the referent.

The inspection of the cheeses while waiting/prior to the request is observable in the way the request is formatted, as in the following case, recorded in a cheese shop in Basel (Switzerland), in Swiss German. The customer has been waiting and has spent a bit of time in front of the products, clearly inspecting portions of the fridge.

(5) (BS 01.29.07_CLI14)

```
1  SEL    grüezi:
          hello
   cus    >>enters the shop and moves forward along the counter->
   sel    >>busy with un/wrapping cheeses on counter->
2  CUS    grüezi:
          hello
3         (4.7)
4  SEL    was+ hätte si gärn?
          what would you like?
   cus     ->+stops and looks at products in front of her->
5         (1.3)
6  CUS    eh:: (0.3) gärn± e vieux #gru±yère,±
          eh:: (0.3) please an old Gruyère
                        ±points-------±,,,,,±
   fig                            #fig.5.1
7         (0.3) +   (6.1)
   cus        ->+looks at her belongings->
8  SEL    hum hum
```

Figure 5.1

```
9          (5.5) + (0.5) * (5)      * (0.8) +
   cus         ->+inspects counter----------+looks at knife->
   sel                 ->*fetches Gr*shows with knife->
10 SEL     wie vill öbbe?
           how much do you want?
11         (0.6)
12 CUS     dasch guet+ (so;jo).*
           that's fine
   cus             ->+inspects counter->
   sel                       ->*,,,cuts and wraps->
13         (0.2)
14 SEL     m`rci
           thanks
15         (13.7)*
   sel         ->*weights and prints price->
16 SEL     süsch no ±öbis?
           something else?
   cus              ±...->
17 CUS     denn:: vom: ±app#ezä±ller,± (0.6) séléction maison
           then an Appenzeller (0.6) house selection
                     ->±points±,,,,,,±
   fig                    #fig.5.2
```

Figure 5.2

```
18         (4.0) +       (20.0)          + (7.0)
   sel         ->+arranges previous cheese+fetches Appzll->>
```

When the customer enters the shop, the seller is busy with rearranging some cheese and this occasions some delay in the service (Harjunpää/Mondada/Svinhufvud 2018). Still busy, the seller invites the customer to utter her request (4) and the latter does so only after some time (5), looking at the cheeses on the counter. Her request begins with a *eh::* further delaying the choice (6). She finally points at a piece of cheese, and utters its name (*e vieux gruyere*, 6, Figure 5.1). This pointing gesture is the result of an intensive look at the counter.

Likewise, while the seller is fetching and wrapping the Gruyère, the customer has some time for further inspecting the counter: she then chooses an Appenzeller (17). In both cases, she points and tells the name (Figure 5.2). The way she names the cheese, using some specific appellation, in French (*vieux gruyère*, *appänzeller (0.6) sélection maison*) displays that she has read its label.

So, the action consisting in requesting by pointing supposes a preliminary visual inspection of the environment (Goodwin 2003), identifying and selecting the chosen item.

This action is also observable in the following example, from a French shop:

(6) (tho18_cli50_24.10 tamié)

```
1          (2.0) #     (3.8)                                  + (0.4)
   sel     >>busy with previous cheese->
   cus     >>stares at the refrig.showcase, bending his knees+at SEL->
   fig           #fig.6.1
2  SEL     et voi•l+à:,
           here we are
   sel           •looks at CLI->
   cus           ->+looks at showcase->
3          (0.5)
4  CUS     ±le •p'tit± bout# du+ tamié• +là?
           the little bit of Tamié there?
           ±.........±points---+finger touches glass+,,,->
   sel       ->•looks at TAM----------•
   fig                    #fig.6.2
5  SEL     le+ p'tit morceau d'tamié,
           the little piece of Tamié
   cus     ->+
```

Figure 6.1

Figure 6.2

```
6          (5) * (5)
   sel       ->>*fetches TAM->>
```

Waiting to be served for the next request, the customer clearly inspects the window case (Figure 6.1); when the seller turns to him (2), he looks again at the cheeses and points while asking for the Tamié (4, Figure 6.2). The seller sees him and his pointing (2-4). Interestingly, she confirms the request with a different turn format than the customer: the customer uses a precise identification of that piece of Tamié (with *du: le p'tit bout* du *tamié*, 4), further highlighted by the final là (there, 4), whereas the seller uses a more generic identification (with *de: le p'tit morceau* d'*tamié*, 5). Furthermore, the seller uses the more formal *morceau* vs. the customer the more familiar *bout*. In this way, the customer is treated as having identified the item to

buy by inspecting the fridge –rather than as having the project of buying/knowing that type of cheese.

While in the previous two excerpts the client had some time before producing his request, in which s/he looked, identified and selected at the product to ask for, in the next excerpts the customer displays his/her ongoing search for the product to buy *during* the request itself. This results in some delays in producing the name of the product, as here in Basel, in Swiss German:

(7) (FRO_CH_BS_110415_13.18)

```
1          (4.3)+ (0.7)
   cus          +walks in->
2  CUS     gu[ete tag
           good morning
3  SAL       [griezi
              hello
4          (0.4)*± (0.7) * (0.7) + (0.4) #
   sal          *........*walks along counter->
   cus           ±gazes at cheese-->
   cus                        ->+stops, standing at distance-->
   fig                                  #fig.7.1
```

Figure 7.1

```
5  SAL     was dörfs [sein?
           what can that be
6  CUS               [ich hä±tti *gärn (0.3) e±+hm          +
                     [I would like (0.3) ehm
   sal                        -->*stops at counter facing CUS->
   cus                    -->±gazes at SAL-----±gazes at cheese--->>
   cus                                    --->+1 step twd ctr+stands->>
7          (1.4) † (0.2) †acht:# so:: (0.7) boutons: ±†
           (1.6)           eight so (0.7) ((name 1st part))
   cus           †.......†points, tapping glass-------†
   cus                                                ->±at SEL->
   fig                        #fig.7.2
```

Figure 7.2

```
8           †<die hebe jo bed guet? (.) zwei drei wuche?
            they stay fine (.) two three weeks?
   cus      †holds pointing at the windowcase->
            (1.1)
9  SEL      bouton de culotte?
            ((complete name))
10 CUS      jä,
            yes
11          (0.3)
12 SEL      die † wärde nur riifer eifach.
            they just become more mature
   cus        ->†
13          (0.2)
14 CUS      >jo da`sch< gu[et ]
            fine that's good
15 SEL                    [kräf]tiger
                          [stronger
16 CUS      hm hm±
               ->±at cheese->>
17          (0.7)
18 CUS      hhh gärn acht stuck
            hhh please eight pieces
19          (0.6)
20 SEL      gä:rn
            with pleasure
```

The customer enters the shop (1) and approaches the counter (1-4). She begins to look at the window case before stopping in front of it, still at some distance and in silence (Figure 7.1). The invitation of the seller (5) probably orients to this slight delay in the request. The customer responds (6) in overlap, but her turn format further delays the name of the product. She continues to gaze at the cheese, steps closer to the window and finally begins to point (7), tapping the glass with her finger (Figure 7.2), before she utters, rather hesitantly, the incomplete name of the product (7). The pointing is held, as she inserts a question-answer sequence, concerning the maturation and conservation of the cheese (8-16).

Contrary to the previous cases, in which the request was uttered without any delays or hitches, in this case, the request is formatted in a hesitant way, and displayed as emerging during the scrutinization of the cheeses in the fridge.

A similar case is the following, recorded in Paris (France), in which the customer explicitly formulates his action as an ongoing search (1-2):

(8) (PA1007_cli18_2.03.48 soumaintrain)

```
1  CUS     alors, +j`vais vous pren:dre euh: -tendez parce que
           so,     I will take from you ehm: wait cos
                  +moves left looking at shelf->
2          j`re:+ga::rde,# tac tac >pardo.h:n<+
           I am looking tac tac >excuse me<
              ->+comes back to right----------+
   fig                  #fig.8.1
```

Figure 8.1

Figure 8.2

```
3          +(0.8)
           +inspects cheese----->
4  CUS     euh::
5          (1.5)
6  CUS     °qu'est ce que j`pourrais prendre? le soumain-# soumaintrain°
           °what could I take? the soumain- soumaintrain°
   fig                                                    #fig.8.2
7          (0.7)
8  SEL     .h soumaintrain c'est un: [froma°ge, ah d'accord°
           .h soumaintrain it's a:  [chee°se, oh alright°
9  CUS                              [oui oui ça j'en ai: j'en
                                    [yes yes of this I have I
10         ai +mangé, [ouais (.) c'est un peu comme] le:+: >oui oui<
           have eaten [yeah (.) it's a bit like] the:: >yes yes<
            ->+turns to SAL----------------------------+to cheese->>
11 SEL                [oké (.) >excusez moi.<     ]
                      [okay (.) >sorry<           ]
```

The customer begins his request (1), moving along the fridge, but does not finish his turn. Instead, he explicitly formulates what he does as searching, while embodying it in his walk along the fridge (Figure 8.1). While walking, his gaze is focused on the cheeses. The beginning of his request, as well as the *euh::* ('ehm', 4) project an imminent decision concerning the final choice, which is further delayed – and made recognizable as such – by the self-addressed (in lower voice) question °*qu'est-ce que je pourrais prendre…*° ('°what I should take…°', 6). The name of the cheese is produced with a lower voice too, in a hesitant way, and in a way that is not clearly recognizable neither as the object projected by the verb of the request (1) nor as the response to the self-addressed question (6). It is also not clear whether the name is discovered by reading the label on the cheese or by recognizing that cheese (Figure 8.2). The seller interprets it as a local discovery and offers an incipient explanation (8), which attributes an absence of knowledge to the customer. The latter vividly responds to and rejects this attribution, by claiming to know that cheese (9-10). Consequently, the seller apologizes (11).

This segment shows firstly how a search for the adequate product to choose and to buy can be accountably made as the request unfolds. Secondly, the excerpt also shows how this search can be interpreted, as displayed by the seller and resisted to by the customer: either as an ongoing discovery of new products – displaying a K- stance, or as an inspection recognizing known products, displaying a K+ stance (Heritage 2012). The vivid reaction of the customer shows that this is indeed an issue for the participants, who might not treat these interpretations as equivalent.

In sum, the requests to a product co-occurring with pointing show two different formats, implementing two distinct actions. In the first, the customer points without

delays and produces a turn without any discontinuities. In this case, pointing supposes a preliminary visual inspection of the fridge, possibly including the reading of the labels on the pieces, which is typically occasioned and facilitated when the customer is waiting. In the second format, the customer points in a slower, less decided, way, and the requesting turn is characterized by hitches, hesitations, self-repairs and suspensions. In this case, the visual inspection is made during the request, and displays an ongoing search. This might warrant the attribution of a K-stance to the customer.

These two multimodal Gestalts show the importance not only of the verbal format and of the trajectory of the pointing gesture, but also of visual practices such as looking, inspecting, exploring, and seeing, which are essential for the public display of one or another Gestalt and for the adoption of contrasted embodied orientations towards the object.

4.2. Requesting with deictic expressions and pointing

Very differently than when they name a product, customers can request it by just using a demonstrative and point at it. In this case, a recurrent sequence is observable, as shown by 3 occurrences from a shop in Madrid (Spain):

(9) (MDR_0401-sel1-2.09.18-cli10)

```
1  CUS    y: también:: +de+ este medio# por fa[vor
          and also from this in the middle plea[se
                        +..+points->
   fig                                    #fig.9.1
2  SEL                                            [del:
                                                  [from
3          del +afuega'l pi[tu? muy bien
           from afuega'l pi[tu? perfect
   cus       ->+
4  CUS                       [°°si'°°
                             [°°yes°°
```

Figure 9.1

(10) (MDR_0401-sel2-1.43.00-cli6)

```
1          +(1.0)
   cus     +points->
2  CUS     cien grami#llos de este
           100 grams of this one
   fig               #fig.10.1
3  SEL     quieres un+ poquito de comté?
           do you want a bit of comté?
   cus             ->+
4  CUS     sí
           yes
```

Figure 10.1

(11) MDR_0401-sel1 (sel2 pour son)-3.10.20-cli19 este

```
1  CUS     mira +y este trozo me pones# a+ mí
           look and give me this piece
                +points-----------------+
   fig                                  #fig.11.1
2  SEL     también te pongo este tro[zo de: de de de la chivita?
           I give you this piece too    of of of of chivita?
3  CUS                                [sí
                                      [yes
4  CUS     sí.
           yes
```

Figure 11.1

In these sequences, the customer requests a cheese by pointing at it, while uttering a demonstrative (*este*, this one, 2) (Figures 9.1, 10.1, 11.1). There are no delays, no hitches, and the request is smoothly produced. The customer does not mention the name of the cheese. In second position, in response, the seller regularly produces a request for confirmation, producing the name of the cheese. This format constitutes

a skilled manner a) to introduce the name, b) to produce a turn that projects a possible confirmation by the customer. In this way, the customer, who was displaying a lower epistemic stance by using the demonstrative, is now treated as the one who responds to the interrogative turn, thereby as having a higher epistemic stance. In these sequences the reference to and choice of the cheese are unproblematic; what is negotiated is rather the epistemic authority of the customer.

5. Requesting by grabbing, touching and smelling the product

In the previous sections, I dealt with requests of products that either rely on pre-existing knowledge and expectations concerning its availability (requests without any gaze nor pointing at the product) or that make spatio-visual access to the requested item relevant (requests with a body orientation or a pointing towards the object).

In the next sections, I deal with another type of request, in which the customer is not only claiming the right to *see* the product before deciding to buy it, but also the right to engage in other forms of *sensorial* access, namely touching and tasting. Material objects as cheese are not abstract and standardized products; rather, they are unique items that can be assessed on the basis of all the senses (mainly sight, touch, smell, and taste). In this sense, cheese represents a perspicuous setting to examine how not only *reference* is at stake, not only *visual resources* might be exploited, but also other *sensorial aspects* – as a crucial basis for accessing and evaluating the product (Mondada 2018c).

Sensorial access to cheese is recognized and valued as fundamental by professionals and amateurs; nonetheless, it is normatively regulated, restricted and policed in shops as far as customers are concerned – for obvious reasons of hygiene and preservation of the product. This asymmetry between forms of sensorial access to the object between customer and seller normatively excludes customers' direct self-initiated sensorial engagements other than visual, and also makes requests to taste and to touch relatively seldom in the data. By contrast, offers to taste, touch and smell are clearly more frequent. This shows that sensorial access to object are hierarchically ordered, normatively constrained and socially orchestrated by the seller rather than by the customer, within an unequal distribution of right to sense among the participants.

In what follows, I focus on one (rare) instance of touching and smelling initiated by the client self-fetching a cheese in a refrigerated shelf, and then on some instances of requests to taste. We join the next extract in a shop in London (UK), after the customer has been offered a first choice, which she has rejected. The seller offers a second option (1-2), but the customer focuses her gaze on another cheese (1, Figure 12.1), which she grabs from the fridge (4, Figure 12.2):

(12) (FRO_UK_LDN_04_1-13-28 CLI35)

```
1  SEL     and:, that's that that could be another o+ption.
   cus     >>looks at SEL-------------------------+looks at cheese->
2          a little bit +stronger,# but still+ in the
   cus                ->+approaches cheese--+advances H->
   fig                          #fig.12.1
```

Figure 12.1

```
3          (0.3)
4  CUS →   I +like the way this# looks
           ->+grasps a piece of cheese->
   fig                         #fig.12.2
```

Figure 12.2

```
5  SEL     ok+ay, [alright+
6  CUS            [#((laughter))#
           ->+palpates it-+smells it-->
   fig             #fig.12.3    #fig.12.4
```

Figure 12.3

Figure 12.4

Figure 12.5

```
7          (0.6) *          (0.6) + *
   sel           *comes closer to her*
   cus                          ->+palpates it-->
8  CUS     [that's [that's it's [not [too
9  SEL     [i-     [i-          [if  [if you don't# mind I take
   fig                                          #fig.12.5
10         the cheese+ myself
   cus             ->+gives cheese to SEL->
```

```
11 CUS     sorry+ ye[ah (.) sorry °sorry °°I x[x°°
12 SEL               [uhm and
              ->+
13 SEL                                        [I *can give you a* taste
                                                  *pts chabichou*
14         of the chabichou so you can also uh:[::
15 CUS                                           [I can`t
16         eat cheese [haha
17 SEL                [you don’t eat cheese? alright
```

By saying *I like the way this looks* (4) the customer displays herself relying on her *sight* to unilaterally select the cheese, indifferent to seller's offers. She not only turns away from him and disregards his offer, but she grabs one piece of cheese from the fridge (4, Figure 12.2). Furthermore, she engages in a tactile examination, palpating it (6, 7, Figures 12.3-12.5) as well an olfactory one, smelling it (6, Figure 12.4). The outcome of this sensorial examination is an emergent assessment (*that's that's it's not too* 8), which is left unfinished, since the seller, progressively coming closer to her, brings her examination to an end.

The format used by the seller (9-10) is not – as in other cases – focused on directly forbidding the customer's action (Mondada in press a), but rather focused on claiming his right to manage the products. Moreover, the seller offers an alternative course of action, in which he is the one proposing something to taste (that is, an alternative type of sensorial access to the product). This occasions a rejection from the customer (15-16), which retrospectively accounts for her privileged focus on touching and smelling (given that she does not eat cheese, and thus does not taste nor know it by its taste).

In this case, the identification, selection and assessment of the product to buy is based on a *direct sensorial access* to that product – facilitated by the design of the shop, in which refrigerated shelves are openly accessible, although normatively restricted by the seller.

6. Requesting to taste

Another form of sensorial access to the object is tasting, initiated by customers' requests to taste – much less frequent than sellers' offers to taste (systematically explored in Mondada in press b). The customer requests to taste in the same sequential environment as the one in which s/he generally requests for a product or asks a question about the product.

We join the first instance of tasting in Thonon (France). The request for tasting is uttered as the seller is still processing the previous purchase. The request (*est-ce qu’on peut goûter le bleu de bonneval ou::?*, 3), with an interrogative format, the modal verb "pouvoir" ('can'), and the final particle *ou* ('or') projecting a possible negative alternative) as well as the following jokes initiated by the seller, show that this action is not straightforward and lies beyond the rights of the customer/obligations of the seller. Before uttering her request turn, customer1 looks at the targeted product and begins to point at it (1), displaying that she had spotted it beforehand (see section 3).

(13) (FRO_F_THO_180415 CLI48 15-36 bonneval)

```
1          ‡(0.6) ± (0.4)
   cus1    ‡looks at the BdB->
   cus1           ±...->
2  CUS1    est-ce qu'on peut± goûter le bleu d'bonneval± ou::?±
           can we taste the Bleu de Bonneval or?
                          ->±points-------------------±,,,,,,±
3  SEL1    oh (.) ça j'sais pas.
           oh (.) I don't know
4  CUS1    j'sais pas hein, (.) c'est une idée comme ça qui me
           I don't know uh (.) it's an idea like that which
5          traverse l'[esprit euh: à onze heures du matin
           crosses my [mind ehm: at eleven o'clock in the morning
6  SEL1                [c'est *vrai, (.) vous avez du pain au moins?
                       [it's true, (.) you have some bread at least?
                              *walks along the counter->
7  CUS1    (  ) voilà
           (  ) here we are
8  SEL     vous* avez pas de pain? (.) comment voulez-vous goûter
           you don't have any bread? (.) how do you want to taste
             ->*
9          sans pain:? (.) hein:? *aya ya yaya::
           without any bread? (.) uh? aya ya yaya
                                    *fetches and unwraps the BdB->
10 CUS1    moi l'fromage sans pain, c'est pas un problème donc euh
           for me cheese without bread, it's not a problem so ehm
11 SEL     ((laughs))
12 CUS1    °c'est bien ça l'problème°
           °that's exactly the problem°
13         (0.5) * (2.8)
               ->*fetches a knife->
14 SEL     alors, (.) bleu de bonneval.
           so, (.) Bleu de Bonneval
15         (16) * (2.1)
   sel        ->*hands over the cheese->
16 CUS1    j'vous*+ remercie +#
           I thank you
   sel        ->*
   cus1           +takes sample+puts in mouth->
   fig                        #fig.13.1
17         (0.3) ± (0.4) ±+    #(0.8) + (0.6)# * + (0.7) *
   cus1                ->+sucks index+sucks thumb+
   cus1          ±looks finger±looks into distance->
   sel                                      *gives CUS2*
   fig                        #fig.13.2     #fig.13.3
```

Figure 13.1

Figure 13.2

Figure 13.3

```
18 CUS2    $me£rci$#
           thanks
           $takes-$puts in mouth->
              £turns to CUS1->
   fig              #fig.13.4
```

Figure 13.4

Figure 13.5

```
19         (0.6)$ €  (0.4)     € (3.2) ± (0.3)#(0.3) £(0.4)±
   cus2       ->$
   cus2           €looks finger€rubs fingers---->
   cus2                                          ->£looks into dist->
   cus1                                 ->±looks at CUS2------±into dist->
   fig                                          #fig.13.5
20 SEL     (    )
21         (1.1)
22 SEL     v' *voulez goûter le bleu de bon*neval?
           do you want to taste the Bleu de Bonneval?
              *.........................*gives a sample to CUS3->
23         (0.9)
24 SEL     connaissez pas le fromage savoyard hein?
           you don't know the savoyard cheese right?
25         (0.5) *%(0.3)
   sel         ->*
   cus3           %takes and puts in mouth->>
26 CUS3    [ab±sol£ument   p$as .hh]
           [absolutely not .hh]
27 CUS1    [( ±  )£ (autre mor$±ceau)] +mais il+ est pas mauvais$ hein
           [(    )  (other piece) but it's not bad right
            ->±looks around----±at BdB--->
   cus1                                +points+
   cus2                        $points at BdB--------------------$
   cus2         ->£at BdB---->
28 CUS2    il est bon hein
           it is good uh
29 CUS1    $ouais$ (.) on prend un morceau ±comme ça?
           yeah (.) do we take a piece like this?
   cus2    $nods$
   cus1                                   ->±looks at cus2->
30 CUS2    $ouais$
           yeah
           $looks at CUS1$
31 CUS1    ou±ais
           yeah
   cus1    ->±
32 SEL     un p'tit morceau de bleu de bonnev[al?
           a little piece of Bleu de Bonnev[al?
33 CUS1                                        [ouais
                                              [yeah
```

Although the seller responds by jokingly resisting the request, she walks towards the requested cheese (6), projecting its granting. She moves towards serious tasting on line 14, after having fetched a knife; she prepares some samples and hands over

the first bit to Customer1 (15, Figure 13.1), who puts it in her mouth while thanking (16 – notice the elaborate and rather formal format of the thanking, retrospectively orienting to the non-straightforward granting of the request).

The way Customer1 embodies it reveals how tasting is not just a matter of eating a piece of food: she puts the entire sample in her mouth, looks at her finger where some remaining cheese is sticking and leaks and sucks her fingers (Figures 13.2-13.3), while adopting a distant and unfocused gaze. This posture enables her to fully concentrate on the sensorial experience (see Mondada 2018c for a systematic analysis, see Mortensen/Wagner this issue making the same observation).

In the meanwhile, the seller has prepared a sample for Customer2 (17), who puts it in his mouth too. He immediately turns to Customer1 (18, Figure 13.4), who at that moment has already progressed in her tasting, and turns to him (Figure 13.5), before both look into distance, continuing to chew (19). Customer2 also looks at his finger after having put the sample into his mouth; he does not suck it but rubs the fingers for a while (this is visible in Figure 13.5). So, after a brief exchange of mutual gaze, the customers continue their tasting individually and in silence.

During this time, the seller offers a sample to taste to another customer, unrelated to the previous couple (22), who seems to be a regular customer and with whom she initiates another joke, to which he aligns (24-26).

The couple initiates a collective evaluation of the cheese (27): their visual attention is refocused on the location of the tasted cheese in the fridge and they produce some convergent assessments (27, 28). This leads to the decision to buy, taken with mutual gaze and agreement (29-30). The seller overhears their conversation and merely requests a confirmation of their decision (32) before proceeding to the final cut.

In sum, tasting leads to deciding to buy in case of a positive assessment. Requesting to taste constitutes a specific way to access the peculiarities of the cheese, to assess them, and to take a decision. This sensorial access to the object is organized in a methodic way, characterized by a special attention to the sensorial experience and a withdrawal from other activities (Mondada 2018c). It also enables both customers to coordinate their judgment: the fact that they taste together gives them an access to the same sample, and constitutes the basis on which to elaborate a common assessment –as visible in the mutual gaze and in the collaborative production of the evaluation. Tasting thus constitutes an elaborate way to access the object, and to decide whether to buy it or not.

Another instance of requesting to taste, by an individual customer, is observable in the next fragment, which presents some similarities with the previous. We join the action in Madrid (Spain) at the completion of the previous request sequence by the same customer:

(14) (FRO_E_MDR_3012_cam2_3.08.00 CLI21 req to taste mahon)

```
1  SEL     alguna *cosita más querí‡as?
           you wanted some more thing?
   sel            *walks away from till, twd next cheese->
   cus                           ‡looks on her L/Mahón->
2          (0.7)
```

```
3  CUS    ‡y:: podría probar ±este?
          and could I try this one?
          ‡two steps to the L-->
                              ±points->
4          (0.5) ‡ (0.3) ± (0.3)
   cus        ->‡
   cus                ->±
5  SEL    cuál?
          which one?
6          (0.3)
7  CUS    ±este:±
          this one
          ±points±
8          (0.3)
9  SEL    ah *el: el mahón ahu[mado?
          oh the the smoked Mahon?
10 CUS                          [sí
                                [yes
   sel     ->*...->
11 SEL    este de* aquí* tam‡bién
          that from here too
               ->*takes*puts on the counter->
   cus                       ‡two steps twd counter->
12         (0.8)
13 SEL    ya veo que te gustan los quesos: ‡cu*rados
          I already see that you like the mature cheeses
                                              ->*cuts->
   cus                                  --->‡
14 CUS    sí[:
          yes
15 SEL      [este tiene también doce ‡meses
            [this one is twelve months old
   cus                                ‡leans over the cheese->
16         (0.6)
17 CUS    vale
          right
18         (0.2)
19 SEL    este es un queso que se elabora en: en menorca,
          this is a cheese that is produced in in Menorca
20         (0.3)
21 CUS    a‡há‡
          ->‡,,,‡
22         (0.3)
23 SEL    .h:: y bueno tiene la corteza lavada
          .h:: and right it has a washed rind
24         (0.3)
25 SEL    con aceite y pimento
          with oil and chilli
26         ±(0.3)±
   cus     ±nods±
27 CUS    ah vale
          oh right
28 SEL    entonces le da un saborcillo muy agradable
          so that it gives it a very nice flavor
29         ya *verás te va a gustar
          you'll see that you'll like it
           ->*hands over the sample->
30 CUS    muchas gracias (sí)+*
          many thanks (yes)
   cus                      +takes->
   sel                     ->*
31         (0.6) + (3.1)
   cli        ->+puts in mouth and chews->line 42
```

```
32 CLI     mh ±hm±
              ±nod±
33         (0.2)
34 CUS     ±hum:,± se puede comprar solo la mitad?
           hum     can one buy only the half?
           ±H on mouth±'cutting' gesture->
35         (0.5)
36 CUS     ( [ )
37 SEL       [sí: ±sí claro
             [yes yes sure
   cus          ->±
38         (1.3)
39 SEL     por ahí, por ejemplo?
           like this for example?
40 CUS     sí[:
           ye[s
41 SEL       [vale muy bien
             [right very good
42         (1.4)+
   cus        ->+
43 CUS     hum pensé que estaba más fuerte hum
           hum I thought it was stronger hum
```

The format of Customer's turn *y:: podría probar este?* (3) shows low entitlement (use of the conditional, modal verb, interrogative format) is a request for permission to taste rather than a more entitled request to taste, displaying that this action goes beyond the rights of the customer and obligations of the seller. The customer's turn is preceded by a gaze towards the targeted cheese, and co-occurs with some steps towards it – manifesting that she had spotted it before (very similar to the cases examined in section 2 supra). After a repair concerning the identification of the cheese (5-7), the seller asks for confirmation, naming the cheese and the customer confirms (10) (cf. section 3.2 supra).

The seller grasps the cheese and puts it on the counter to cut it (13-29) – closely observed by the customer (15). During this operation, which is suspended various times, he produces a series of descriptions of the Mahon. First, he does not only categorize it as a *queso curado* ('matured cheese') (13) but attributes the taste for this category to the customer (13). The information concerning the age of the cheese (15) is also formulated by reference to a previous bought product. So, the description builds a relation between the coherent series of purchases by the customer, her taste and the properties of various cheeses. Second, the seller gives some more information about the product (19, 23-25). Third, he concludes by associating again the flavor generated by the specific preparation of the cheese with the taste of the customer (28-29), thereby projecting her positive evaluation. This conclusion is uttered as he hands over the cheese to taste and the customer grabs it for putting it in her mouth (31).

The tasting proper happens during a few seconds of silence (31) (for a more systematic description of these silent moments, see Mondada 2018c). The outcome of tasting is manifested in a first *mh hm* and a nod (32), followed by a question concerning the buyable quantity, projecting a decision to buy. This question is uttered as the client is still chewing (see the hand on her mouth while saying *hum*, 34) and displays a rather quick decision, and therefore the straightforwardness of the choice.

After the completion of the sequence dedicated to the buyable quantity, the customer adds an assessment of the cheese: interestingly, this refers to a contrast with

what she had expected, reflecting upon the way in which the seller had framed the tasting and projected a possible outcome, as opposed to what has been revealed by a direct sensorial access.

Tasting is here treated as a condition for knowing and evaluating the product, and deciding to buy it, beyond the mere visual access to it. Tasting is implemented by the seller giving a sample and by the customer taking it and putting in her mouth, chewing and swallowing it in silence. But tasting is also achieved by the seller uttering descriptions and categorizations of the tasted object while preparing it –in a way that inhabits the temporal slot used for cutting, but also prolongs cutting in order to develop the description. These descriptions reflexively shape and guide tasting, working as instructions for tasting. They do not just build the sensorial profile of the cheese, but also the identity of the taster. The access to the object is both multimodally and multisensorially designed.

7. Discussion and conclusion

This paper has examined the relation between object's qualities and action through various formats of requests that suppose and establish very different relations with the requested object, thereby highlighting different aspects under which it is not only talked about but also seen and sensed. It has demonstrated that objects have a potential infinite diversity of features, which are locally and praxeologically made relevant by the orientations of the participants and the specific actions in which they are manifested and implemented.

The request formats can treat the requested object in purely abstract, symbolic, verbal terms, by using its name – sometimes reading it from a list – without orienting to its materiality (that is, without looking or pointing at it, section 2). In this case, the request is mainly built with verbal resources and the object is a discursive referent, which is materialized only within the responsive action of the seller fetching it.

Other multimodal formats, however, show that the request can also embed a strong orientation towards the object considered in its materiality, either as located within the local spatial environment of the shop (section 3) or within a domain of scrutiny in which it is visibly accessible (section 4). In these cases, the customer displays the relevance of the visual features of the product as a warrant for its identification and selection.

These embodied orientations of the customer show that sight and sighting are constitutive of the request – either for just identifying the product, or for searching for it. The visual aspect of the object is even more important for requests made with demonstratives and pointing. In this sense, the analysis of these requests cannot be limited to the verbal turn and the pointing gesture, but has to integrate within the multimodal Gestalt, also visual practices of looking, staring, glancing, exploring, searching, etc. As we have observed, these practices account for the format of the turn (produced with/without hitches, delays and self-repairs), and are consequential for the local understanding of the situation by the seller (categorizing the customer as knowledgeable, regular, novice, occasional, etc.). Moreover, these visual practices do not merely locate and identify objects: they assess their visual features as they are made visibly accessible and accessed. In the case of cheese products, these

visual features are considered as part of the criteria for evaluating its maturity, texture, and composition.

Although the relevance of visual features is *embodied* in the cases studied here –within visual practices that often *precedes* the turns at talk verbally implementing the request–, it can also be *formulated* in so many words, as in the following requests (some of them without any verb), all from the Madrid shop:

(15a) MDR_0104_cam2_CLI20_3.12.27

CUS **pues:: seguro el moluengo este que tiene buena pinta**
PRT *for sure the Moluengo this that has a nice appearance*

(15b) MDR_0104_cam1_CLI9.2_2.42.46

CUS **este tiene una pinta no sé por qué me atrae muchísimo esa pieza que está ahí**
this one has an appearance I don't know why that attracts me a lot this piece that is here

(15c) MDR_0104_cam1_CLI11.1_3.03.45

CUS **un poco de: parmesano igual sí que tiene una pinta::**
a bit of parmesan right yes which has an appearance

In these cases, the visual appearance of the cheese (*buena pinta*) is explicitly mentioned as a reason for selecting and requesting it.

Visual appearances and their visible accessibility are not the only perceptive and sensorial aspects that ground the requests. Requests asking to taste (section 6), as well as customers directly proceeding to touch and smell the targeted object (section 5), not only use vision, but also claim the right to rely on additional forms of sensorial access, characterized by a direct contact between the object and the body of the customer.

These last cases show the importance of considering sensoriality when analyzing objects and materiality. The praxeological relation to objects –embedded in the Gestalts defining the holistic format of actions– cannot be reduced either to reference or to usage/mobilization of these objects. Although mobilization is achieved most often as a *manipulation* (a word which refers to the hand, which implies a tactile contact between the hand and the object, Streeck 2009:47), this constitutes a rather implicit form of sensoriality. Requests to taste, touch, smell and practices of tasting, smelling and touching that occur when the request is granted, unfold in a more aware, publicly accountable and focused way. Sensorial moments are methodically organized by the participants (as demonstrated by their practices of palpating, smelling, tasting and looking at their hands, sucking their fingers, etc.), silently focusing on them in an exclusive way, withdrawing from talk with the seller, although unfolding in visible and public ways, accessible for the co-participant (the seller) continuing to observe them (Mondada 2018c).

These methodic practices of tasting, smelling and touching show the interest of integrating within the study of the multimodal formatting of actions in interaction, the relevance of *sensorial practices* –which are organized, made accountable, intelligible and intersubjective thanks to their multimodal displays (Mondada 2016,

2018b, 2018c, 2019a, 2019b). Multisensoriality is thus a dimension that expands current multimodal analyses and that invites to take into consideration aspects of the body that are not only related to the meaningfulness and intelligibility of actions in social interaction, but also to the perceptive and sensorial dimensions of human life.

8. Conventions

Talk is transcribed with the conventions developed by Gail Jefferson (2004).
Embodied actions are transcribed according to the following conventions developed by Lorenza Mondada (see 2018a) (for a full version and a tutorial see https://www.lorenzamondada.net/multimodal-transcription).

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Revealing Objects and Aspects in Scientific Practice

Michael Sean Smith / Charles Goodwin

Abstract
In this paper, we investigate how objects emerge as a focus for participants in interaction in their situated work (here, being geo-scientists working in either a laboratory or wilderness setting). We investigate the practices that participants use for directing others' attention towards the multi-sensorial qualities of co-present features, in order to discursively reveal those features as categorical and work-relevant objects. These practices are systematic and take aspects that are otherwise ineffable and transform those into public resources in order to build both current and subsequent action. Conversely, the practices that participants have for disclosing the experience of an object are part of the same means through which the object itself emerges via interaction.

Keywords: Objects in Interaction – Conversation Analysis – Ethnomethodology – Scientific Practice – Aspectual-seeing – Multimodality – Multisensoriality.

German Abstract
In diesem Artikel untersuchen wir, wie im Kontext der situierten Arbeit Objekte als Gegenstand geteilter Aufmerksamkeit in der Interaktion entstehen. In unserem Fall geht es um Geowissenschaftler, die im Labor oder in der Wildnis arbeiten. Wir untersuchen Praktiken, die Teilnehmer anwenden, um die Aufmerksamkeit auf multi-sensorische Eigenschaften der Merkmale der Objekte zu lenken, damit diese Merkmale als kategorisch und arbeitsrelevant präsentiert werden. Diese Praktiken sind systematisch und verwandeln ansonsten unsichtbare Aspekte eines Phänomens zu öffentlichen Ressourcen, damit Gesprächspartner laufende und nachfolgende Handlungen ausführen können. Als Fazit ergibt sich, dass Praktiken, die Teilnehmer zur Offenlegung ihrer Erfahrung eines Objekts benutzen, Teil derselben Mittel sind, durch die das Objekt selbst in der Interaktion entsteht.

Keywords: Objekte in der Interaktion – Konversationsanalyse – Ethnomethodologie – Wissenschaftliche Praxis – Sehen eines Aspekts – Multimodalität – Multisensorialität.

1. Introduction

In mundane day-to-day life, we tend to think of objects in relatively simple terms, in how they appear to us, how we physically interact with them, their relation to other objects, within categories, etc. We perceive them as intact, whole, and separate from their material surroundings: a coffee cup, for example, is separate from the table it sits on. The wall, while a part of the room, is nevertheless treated as conceptually distinct from the floor below or ceiling above. Objects are, moreover, routinely recognized, tacitly and publicly, as self-evident instances of a categories – and as instances of those categories, they are operated on as being comprised of features, attributes, or properties. These in turn can be seen as either incidental or necessary for the object's membership to a category: A soccer ball, for example, may be white, but its color is not a necessary property for using the ball. "Round" on the other hand is a necessary property. It is relatively uncommon outside of manufacturing or arts & crafts for persons to find themselves deliberating on the properties of a given object and whether they align with or deviate from what is otherwise anticipated given its categorical description or practical use – rather, the object is used as prescribed or rejected as defective. In most mundane contexts then, the category is first and foremost *the perceived thing* that shapes how a given instance is analyzed and operated on in any circumstance.

1.1. Objects in Scientific Practice

In many settings, especially like the laboratory and field settings investigated here, objects rarely manifest themselves simply. Instead, they emerge as products of collaborative work, where practitioners co-operate on objects and/or materials for their emergent potential as members of a given category, and do so by identifying and assessing various features, attributes, properties made available to them via different sensory modalities. The objects handled by the practitioners investigated here, particularly in field geology, are, moreover, embedded in a physical landscape and not so easily distinguishable from their material surroundings – at least not without the perceptual, discursive, or embodied work needed in extracting them. As a result, how the object emerges in these settings, how it is apprehended by participants, can often be distributed across a number of modalities. What appears to be oriented to in perceiving an object is rather a constellation of different features, including location, object(s), properties, and perceptible qualities – all of which are mutually elaborated through the interaction.

A growing body of work in interactional research has turned its attention towards investigating how participants use objects to facilitate their courses of action, and how co-present objects in turn are recruited by and transformed via those interactional processes. Nevile/Haddington/Heinemann/Rauniomaa (2014) distinguish two trajectories for how objects are used in interaction: We either see participants interacting with objects or in turn using objects in mediating interactions with others. Here, objects act as "situated resources" and are recruited by persons in facilitating whatever course of action they are pursuing. Conversely, we see objects being shaped and operated on by participants as emerging in and through social interaction. Here, objects emerge as "practical accomplishments" as the outcome of the

interaction or participants' situated work (Nevile/Haddington/Heinemann/ Rauniomaa 2014; Neville 2018). Work on such object-centered interactions demonstrate the range of interactive work accomplished through the handling, manipulation, and/or orientation toward co-present objects, whether that be in a) transforming the organization of social interaction through activity shifts (Brassac/Fixmer/Mondada/ Vinck 2008; Fasulo/Monzoni 2009), b) facilitating participants' situated work (Fox/ Heinemann 2015; Gåfvels 2016a, 2016b; Goodwin 2010; Lindström/Norrby/ Wide/Nilsson 2017; Mikkola/Lehtinen 2014; Jakonen 2015), to the construction of basic action (Mondada in press), and the management of social relationships in video-mediated interaction (Licoppe et al. 2017).

The objects analyzed in this paper are, moreover, continuously revealed via the practices that practitioners have for experiencing objects, specifically, as multi-sensorial phenomena and reformulating that experience for one another in interaction. In the context of geological field- and laboratory-work, the objects are operated on as multi-sensorial objects, leading participants to use touch, sound, and smell in revealing and recognizing the object as well as transform it in collaboration with others. Recent work has demonstrated the numerous ways in which interactants operate on objects primarily for how they are experienced sensorially, whether that be tactility in object-mediated interactions with blind participants (Kreplak/Mondémé 2014) or touch, taste, and smell (Keisanen/Rauniomaa this issue*;* Mondada 2018a, 2019, this issue). Here, we see the sensorial (re)constitution of objects come to the forefront of the interaction and the participants' mutual orientation, as they attempt to articulate for one another the sensory experience of what smelling, tasing, or touching a particular object is like. Such is central to the data analyzed here where the interactants use numerous senses in deliberating on the classification of the objects they are scrutinizing in their collaborative work Accordingly, we do not analyze a particular type of practice (e.g., assessments, directives, etc.) accomplished via the handling of a given object, so much as we are analyzing the emergence and fluidity of objects and the multiplicity of multi-sensorial forms they take as interactants operate on them in the course of their situated work.

1.2. Transforming Objects via Aspectual Change

Participants accomplish this work through what Wittgenstein referred to as "aspectual seeing," or how a person notices an aspect of something they see, hear, feel, etc. Malcolm Budd clarifies this in the open of his essay on Wittgenstein's aspect-seeing (1987:1):

> When we are looking at an object we sometimes see that it has not changed while we have been looking at it and yet the way in which we see it has changed: we see it differently, although we see that it is no different from how it was.

Wittgenstein was primarily interested how aspects change for an observer and the consequences this had for how an object was perceived: In noticing an aspect of something already seen, heard, felt, etc., the observer changes from seeing something as an instance of one kind of thing to seeing it as an instance of another. This can be occasioned by changes in figure and ground in the composition of the thing being perceived, or it could be occasioned by the sudden shift in seeing something via its likeness to something else. Though these shifts may focus on different facets

of the object(s) being considered, all aspectual seeing is at its core an issue of "...what, if anything, ceases and what, if anything, takes its place" in noticing something that one had not before (ibid:2). For the analysis presented here, however, various aspects are operated on as meaningful primarily for their relation vis-a-vis one another, and more importantly, the aspectual changes we observe throughout the data are occasioned by the participants' embodied and discursive actions.

In the analysis below, we examine five excerpts where participants attend to a co-present object for the purpose of guiding their recipient's attention toward some perceptible quality given off by the object (Excerpts 1 and 2) or manipulate the object in some physical manner (e.g., hammering the outcrop in Excerpt 3 or prodding at the rock in Excerpts 4 and 5) so as to occasion an aspect for their recipients to experience and recognize as salient for their ongoing work. Both means disclose aspects of the object that in turn inform co-participants about its relevant properties of the object: e.g., how coherent it is, whether its "coarse" enough to be described as such, how far along its reaction is, or one should experience a given category of rock.

2. Data & Methods

This corpus is drawn from four separate video-documented, multi-day, ethnographic trips to field-based projects with field geologists. The study participants involved included late- to early-career geologists, graduate students, advanced undergraduate researchers, and undergraduate students in a geology capstone fieldcourse. In the latter two field studies, the participants also included computer, information, and social scientists in addition to geoscientists as part of a multi-disciplinary collaboration. Each of these visits were video-recorded while the researcher(s) accompany the participants in the field documenting how they move through the landscape, find locales of interest, locate and investigate geological objects, make drawings, measurements, or collect samples of geologically relevant phenomena. After the data were collected and brought back from the field, the videos were transcribed and analyzed with a focus on the participants' use of talk and embodied practices. This relies on the careful transcription of recordings, developed for talk (Jefferson 2004) and for multimodality (Goodwin 2007, 2010; Mondada 2016, 2018b).

3. Analysis

Professional communities, such as with geo-scientists, scrutinize phenomena in the environment according to the categories and courses of action that facilitate their collaborative projects. Practitioners use a range of sensory experiences, including sight, hearing, smell, and touch, and embodied practice, to locate, extract, and/or construct the distinctive artifacts that animate their work. Moreover, they must be able trust other members of their respective community to also be able to experience relevant structure in the complex visual field provided by the emerging structures in the co-present landscape in roughly analogous ways. Indeed a crucial component of what it means to validly assume the identity of a geologist is mastery in such professional vision and a bulk of the work that takes place in professional settings

is the socialization of novice members into this mastery (Goodwin 1997; Mogk/ Goodwin 2012).

In Excerpt 1a below, a student working with others on a geology field project in the Yellowstone wilderness closely scrutinizes the rock fragment she holds with a loupe.

Ex. 1a - Muscovite

```
01      Nina:  and plag::
02   Darrell:  yeah
03      Nina:  nn:::::: and a little bit of °biotite
04             Is there muscovite in this too.
05               (0.3)#
          fig:          #fig-1.1
```

Figure 1.1

```
06     Sarah:  Yea:h. I don't know what #that-,
          fig:                          #fig-1.2
```

Figure 1.2

```
07               (0.2)
08      Nina:  I think there i:s.
09   Darrell:  Yea^:h.
10              (1.2)
11   Darrell:  °now
```

```
12   Darrell:  Remember muscovite was one of those things
13             we're lookin for.
14      Nina:  [Yuh.
15     Sarah:  [Yuh.
16      Kate:  [Yeah.
17      Nina:  So we should take a station here?
               ((continued…))
```

As Nina inspects the rock, she lists the features that she sees (e.g., *biotite*, a mineral) before asking about there being *muscovite* present. This differs from her unproblematic (and uncontested) recognition of biotite just a moment earlier.

Nina's openly inquiring about the presence of muscovite (line 4) provides space for input from others. Sarah, standing next to Nina, leans and points towards the rock suggesting that she also sees muscovite. Darrell, the senior geologist, confirms Nina's suspicion with *Yea:h,* muscovite is indeed visibly present, and then reminds the group that *Muscovite was one of those things we're looking for*. Nina follows Darrell's utterance with a question/proposal, *So we should take a station here* showing her recognition of muscovite as not only being a valid classification, but something that organizes the group's subsequent work.

The participants handle and manipulate the rock fragment according to the projects they are pursuing. One is in determining whether the outcrop from which the sample is taken is appropriate for taking a station. The other is alternatively, the enskillment of novices, specifically in the sensory competencies necessary for their work. We see the latter in the continuation of the sequence below, where the rock fragment progressively emerges as an instructionally relevant object, which in this instance is about being competent in identifying and recognizing muscovite, in the "wild".

Ex. 1a - Muscovite

```
17      Nina:  So we should ∆take a station here?
          s:                ∆
18               (1.0)
19   Darrell:  n' then,
20     Sarah:  #Is it that.#
         fig:  #fig-1.3    #fig-1.4
```

Figure 1.3

Figure 1.4

```
21               (0.6)
```

```
22   Darrell:  Yeah. Stuff's really silvery th[ere.
24     Sarah:                                  [that's m(i)-
25     Sarah:  >that's, muscovite
27   Darrell:  #Yeah. That's muscovite.
         fig:  #fig-1.5
```

Figure 1.5

```
28     Sarah:  [Okay
29   Darrell:  [Stuff that looks rea:lly silvery
30               (0.6)
31     Sarah:  Oka[y.
32   Darrell:     [Flashes at you kinda of a silvery color
```

From line 17 to 20, Sarah takes the fragment from Nina, inspects it, points to a place on its surface, before moving it toward Darrell and asking him, *is it tha:t?* In line 21, Darrell leans in to inspect the fragment in the subsequent 0.6 gap, before confirming Sarah's question in line 22, also pointing to the fragment: *Yeah. Stuff's really si:lvery there?*. Sarah subsequently seeks re-confirmation, which Darrell provides, again describing it as *(th')stuff that looks rea::lly sil:very::*, while both participants continue to gaze at and point at the place on the rock

Rather than just operating on the muscovite as a taken-for-granted classification for a mineral seen in the rock, both participants persevere through multiple sequences in checking its description alongside the criteria for determining its presence, that is, its perceived "silvery" luster (something Darrell reiterates at numerous points in the talk: lines 22, 29, and 32) to be the relevant criteria. The manner in which both participants operate on the fragment is guided by the instructional demands of the situation. Having already determined the presence of muscovite, Sarah uses this occasion to check her perception of the mineral using Darrell's expertise as a resource. The group expends "... extra time and effort to consolidate their embodied experience of what actually constitutes an exemplar of the category muscovite in the dense, complex rocks actually encountered in the field" (Goodwin 2018:353). In doing so, we see the participants carefully inspect what has now been identified as muscovite, learning how to align a given appearance, the "really silvery flecks" with the classification which in turns gives substance to that classification.

In this relatively brief sequence, while the participants are handling a distinct object, i.e, the rock fragment they are inspecting, they operate on it more so for its internal composition and relation to the exposed outcrop from which it was extracted. The discursive significance given to the fragment is derived from its aspectual consideration. In coordinating their collaborative work towards the "muscovite," they do so, moreover, via its experiential underpinning: e.g., *really silvery stuff* or *flecks* as Darrell and Jim put it, respectively. Altogether, we see that the participants' ability to collaboratively identify this fragment as having a distinct make-up and character and in turn use that to coordinate action demands a fluidity through which they move between referring to a given type, its substantive criteria, and their manual handling of the fragment itself.

In order to be usable, the features and/or materials relevant to participants' work require differentiation, extraction, and/or their manufacture by the participants – either from other prior materials or from the co-present surround itself. As a result, the objects being investigated by our participants rarely exist in their final form; rather, they emerge through time and through practice in the co-present setting in the participants' perception. We suggest in our analysis that where practitioners manipulate objects, they do so to make relevant experiences accessible. Even where no object is being actively manipulated by the participants (such as our case below where the co-participants are monitoring a chemical reaction), practitioners nonetheless direct one another's attention toward the developing chemical reaction.

In this excerpt, from a geo-chemistry laboratory, the lead investigator, Bill, is stirring a chemical reaction in a vat, while a student researcher, Robin, sorts fibers on the floor. Of interest here are the discursive and embodied practices the participants use for direction attention towards the smell emanating from the vat and the significance attributed to that sensory experience.

Ex. 2 - Ammonia

```
01    Bill:  So are'ya getting some of that(.) (0.4)
02           kind of ammonia smell: from it?
03              (1.8)
04    Bill:  #Smell a little bit of ammonia?
       fig:  #fig-2.1
```

Figure 2.1

```
05              (.)
06   Robin:  From what. that?=
```

07 Bill: #From thi:s?
fig: #fig-2.2

Figure 2.2

08 (1.6)
09 Bill: See if you can recognize tha:t.
10 (4.2)#(1.8)
fig: #fig-2.3

Figure 2.3

11 Robin: KKhhuh #KKhhuh KKhh [h
fig: #fig-2.4

Figure 2.4

12 Bill: ([heh)
13 Robin: There's somethin. I c'd- I'd [(yih know)
14 Bill: [°yeah
15 Robin: I wouldn' know what [it was
16 Bill: [That's the C:: :H [:N:
17 Robin: [khhh
18 (1.2)
19 Bill: So in the oxidation:,

```
20          some of the thuh- (0.4) nitrogen, (0.5)
21          goes to ammonia.=apparently
22   Robin: (it's something)
23             (0.8)
24   Robin: .nhhhh It's awfully stro::ng.
25    Bill: Mm hm
26   Robin: Distinctive.
27          If I ever sm(h)elled th(h)at again
28          I'd know what it i(h) [s:
29    Bill:                       [°Yea(h)h
```

The talk opens with Bill making multiple inquiries in lines 1-4 as to whether Robin recognizes a smell coming from the vat. Both of his inquiries presuppose the presence of the smell and its accessibility for Robin to recognize and assess, even offering a candidate identification for the smell as 'ammonia like.'

While Bill invokes this smell as a being relevant here in this moment, Robin shows little to no immediate uptake. Her first opportunity to do so passes after a rather lengthy 1.8 second gap in line 2, and after a slight delay, she responds in line 3 with a repair initiator, *from what?*, and a candidate *that?* gesturing towards the vat, which Bill confirms. Bill then directs Robin to the vat with *see if you can recognize tha:t.* She walks to the vat, leans in to smell before standing up and coughing in line 9, providing a visceral reaction to the fumes (appropriate if one is breathing in ammonia). She nevertheless resists equating that smell with ammonia, instead, only acknowledging that *°yeah, there's somethin. I c'd- I'd- (yih know). I wouldn' know what it was.* After Bill gives some explanation as to what causes the smell, Robin continues describing the smell as *awfully strong* and *distinctive* before finally stating that *if i ever smelled that again, I'd know what it is.*

Throughout this sequence, we see an emerging smell is brought to Robin's attention by the instructor, and she in turn shows her recognizing its presence – even if she does not align with its description as *ammonia-like.* In confirming there being a distinctive smell in that moment she aligns with its significance for the progress of the reaction, an experience she can recall and use at later points in their collaborative work. Accordingly, Robin displays a greater competency in handling the materials necessary for their work in the laboratory and as a result expands her competency as a member of both the lab and larger community of practice. The percept invoked in this excerpt further contributes to the objectivisation of the reaction as something that can be recognized and mutually monitored by the participants.

While in the prior excerpt the smell emerges independently of the participants' immediate actions, in other instances, revealing aspects of objects often requires the participants to actively manipulate the object. This can be seen in the next excerpt. Here, geologists are breaking apart an exposed outcrop to take samples. The interaction begins when Darrell asks for a hammer to tap against the exposed rock in order to determine where the rock is weakest (that is, ‘looser' or ‘less coherent') and thus easiest to break apart. As he taps against the rock with the hammer at different points, he and the students comment on the changes in sound, specifically in how those reveal the rock's structure.

Ex. 3 - Hammer[1]

```
01  Darrell:    ^TO::M:;
02               Why don't you take your hammer over here.
03               I'm just curious how loose this is,
04  Darrell:    I just want to tap it a few times to see
05                  (.)
06  Darrell:    how coherent it is (so::)
07               (1.0)*#(.)*(.)*(.)*(0.5)*
          d:          *    *   *   *     *
        fig:           #fig-3.1
```

Figure 3.1

```
08                  (.)@
          d:           @
09  Darrell:    oo:@:h::@#: °this thing@ mi:ght go°
          d:          @    @             @
        fig:             #fig-3.2
```

Figure 3.2

```
10               @(0.3)@(0.3)@(0.3)@(0.3)@(0.4)
          d:     @     @     @     @     @
```

[1] The symbols used in the transcript (e.g., *, @, Δ, +) mark hammer strikes separated by intervals of time. Changes from symbol to symbol mark changes in the sound made by the hammer as Darrell taps against the rock.

```
11      Tom:    sounds pr∆#etty hol∆low
          d:              ∆         ∆
        fig:               #fig-3.3
```

Figure 3.3

```
12                 (0.2)
13  Darrell:    r+ight +#there::
          d:     +     +
        fig:              #fig-3.4
```

Figure 3.4

```
14                 (0.1)+(0.5)+(0.5)+
          d:            +     +     +
15  Darrell:    hear that?=
16      Tom:    =:yea+h::
          d:            +
17     Matt:    :uh-uh
18                 +(0.3)+(0.2)
          d:       +     +
19  Darrell:    that +might break off
          d:            +
20                 (0.3)+(0.3)
          d:            +
21  Darrell:    let's *see if: dave is
          d:             *
22                 =a[ble to get a good sample=
23     Matt:         [what *abou:::t,
          d:                *
```

```
24  Darrell:    =<that's h*#ard::,
                          *
        fig:                #fig-3.5
```

Figure 3.5

```
25                (0.1)*(0.1)
          d:            *
26  Darrell:    that's* not going anywhere,
          d:             *
27                   (.)
28  Darrell:    but +right here+
          d:        +          +
29                 (0.3)+#(.)
          d:             +
        fig:              #fig-3.6
```

Figure 3.6

```
30  Darrell:    yeah:; that whole thing's shaking
31                   (0.2)
32     Matt:    :yeah:
```

Darrell probes the outcrop across several points on the rock commenting on the changes in sound his hammer makes. His initial taps against the rock occur in line 7. In that same gap, he moves to an adjacent location. Just as he begins tapping there, the sound changes to a more hollow sound. Darrell's response cry marks the significance of this change, while his subsequent °*this thing might go*° frames the change in sound at this point in terms of how it reveals an unfolding, locally-relevant and contingent future coordinated on breaking apart the rock. Tom goes even further in describing the sound in line 11 as sounding *pretty hollow.*

As Tom provides his comment in line 11, however, Darrell is already moving across the rock before remarking in line 13, *right there::*, while tapping against the rock, marking another change in the sound as particularly salient at this point on

the rock. The significance of this point on the rock is further emphasized in Darrell's subsequent question, *hear that?*, inquiring whether Tom and Matt also recognize the difference in sound at this point, and his final, *that might break off* in line 19. Darrell's utterances are deictically tied to the place on the rock where they are produced, the time in which they are produced, and finally the distinct quality of the sounds as they change through the sequence.

Just as Darrell proposes in line 21 to wait and see whether Dave is able to get a good sample, he begins tapping over the same locations on the rock again. In doing so, he frames both the tapping and talk as reconfirming the points on the rock that were least likely to break (i.e., lines 24 and 26: *that's hard* and *that's not going anywhere*) in juxtaposition to the point that was most likely to break (line 28: *but right here*).

Synthesizing the last two examples, we can see that in both, participants collaboratively provide for and engage in "aspect-seeing," where various aspects of an object are made accessible via sight, smell, or sound, and thus made actionable for others and finally reveal that object as something slightly different than it was before. Additionally, we see the objects both provide a medium through which practitioners conduct their collaborative work, while also being revealed via that work: A smell emerges from the ongoing chemical reaction which reveals its progress, and different sounds made by Darrell's hammer are due to the differences of the hidden composition of the rock which in turn informs the geologists of where they may subsequently break the rock. Directing attention to the perceptibility of these aspects provide for opportunities for mentors and novices to calibrate their shared experience of the objects and phenomena they are investigating, it also provides opportunities for novices to develop their own competence as members of their respective communities of practice. Aspects of objects in the previous examples were further revealed as actionable particularly in their temporal organization and informed the practitioners what was currently happening, what might happen, and what range of possibilities were open or closed to the practitioner next. Objects become knowable and actionable through the temporal horizons that co-participants project through their use.

In the excerpt below, we see an array of actions deployed through different modalities toward revealing a co-present structure, transforming it into a categorically relevant object. Just prior to the excerpt, a group of senior and novice geologists stop by the side of the road to examine the exposed rock at a road-cut off the side of a highway. The talk opens as the lead geologist, Dave, approaches Matt and Austin and asks in line 01 *so what are you guys seeing?* initiating what turns out to be an IRE (initiation, response, evaluation) sequence which gets extended several times by Dave throughout the excerpt (Zemel/Koschmann 2011). The focal talk belongs to Austin who reports that he and Matt *found one of the those boudinage structures*.

Excerpt 4a - "Coarse"

```
01    Dave:      so what are you guys seeing.
02                 (1.2)
03  Austin:      [(well)
04    Matt:      [a lot of mica. schist=
05  Austin:      =we- found one of those boud@inage structures
         a:                                  @..............>
```

```
06                  @#right here
          a:        @traces--->
        fig:         #fig-4.1
07                   (1.0)#@ (0.4) @ (0.2) @
          a:        -------@,,,,,,,@.......>
        fig:              #fig-4.2
```

Figure 4.1

Figure 4.2

```
08     Dave:        [there you go]
09   Austin:        [ (       )  ]
          a:        .............>
10                  @pinched- pinched off at the@ top@
          a:        @point----------------------@,,,,@
11     Dave:        @yeah=
          a:        @....>
12   Austin:        =and then @we've got@ this piece@ of uh@:::m@
          a:        .........>@point----@,,,,,,,,,,,@......@palm@
13     Dave:        @see@ that big ol' canoe:: in there:::.
          a:        @,,,@
14   Austin:        (looks like) granuli:::te
15                  what's that?
16     Matt:        [(canoe,)
17     Dave:        [yea::::h
18   Austin:        @and it's pi@nch:ing: o:ff:@ in this direction@
          a:        @...........@thrust-point--@push--------------@
19     Dave:        yeah
```

While Austin displays little doubt about his classification (referring to it as "one of those"), we see through the excerpt that its presence of the object is in fact not self-evident to Dave, and instead depends on the ways in which Austin describes and depicts it in his talk and embodied action, with each formulated aspect requiring its demonstration in the rock.

We see this first in Austin's use of gesture: As Austin reports on the structure in line 5, he reaches up to the rock face (just prior to his deictic, *right there*) and using a pincer-like gesture, traces the outline the structure (lines 6-7, figs. 4.1-2). It is only here (after the approximately 1.6 gap in talk in line 7) that Dave confirms his also seeing the boudinage in line 8: *there you go.* Austin continues elaborating on the structure in line 10 in incremental fashion, *pinched- pinched off at the top,* while pointing towards the rock, which Dave again confirms in line 11. This response-evaluation occurs in lines 18-19 again, where Austin points toward and animates the structure pinching off in the other direction. Throughout the sequence we see an alternation between categorizing and describing the structure and demonstrating that description through its visible depiction in the rock via gesture (similar to how

in Ex. 1, the participants alternated between labeling the muscovite and grounding that labeling in its sensorial experience: "really silvery stuff."). The depiction of the boudinage structure continues in the rest of the excerpt after a follow-up question from Dave: *so what's the rock type.*

Excerpt 4b - "Coarse"

```
30    Dave:      so what's the rock type.
31                 (2.0)
32  Austin:      well, we got some granulite right?
33               and (some) other @uh::m
         a:                        @....>
34               @a lot more #felsic stuff
         a:      @prodding-------------->
       fig:                  #fig-4.3
35                 (3.1) @
         a:      ------->@
36  Austin:      it's ve::ry coarse
         a:      @pinches---------->
37                 (0.8)
38    Dave:      #that@ o:ne i:s.
         a:      --->@pick-up...>
       fig:      #fig-4.4
39                 (0.2)
41    Dave:      @#yeah.
         a:      @gaze->
```

Figure 4.3

Figure 4.4

```
42               (1.6) @ (1.5) @
         a:      ----->@,,,,,,,@
43  Austin:      this is the one that
44               °I was curious about°
```

Austin responds to Dave's question using tactility. Just prior to line 34, he reaches up to the rock he describes *a lot more felsic stuff,* and with the flat of his hand, begins pressing on the rock (fig. 4.3). Over the subsequent 3.1 second gap in line 35, he reaches down toward the rock that he had earlier described as "pinching off" (line 18) and starts picking at the rock describing it as *it's ve::ry course* in line 36 (fig. 4.4). Just as he finishes his utterance, he starts breaking off pieces of rock and continues doing so through the subsequent 0.8 second gap in line 37. Dave's evaluation, *that one i:s. yeah.*, in line 38 confirms the just prior description. It does so conditionally, however, only confirming the 'coarseness' of the rock that Austin just probed.

Whereas in the earlier excerpt, where Austin's description is demonstrated via his tracing out the layout of the structure, the question being answered here is about formulating the composition of the rock. In picking at the rock and breaking off pieces, Austin provides an ostensive demonstration of 'coarse' as an aspect of the rock crucial to its description. Altogether, we see that the embodied and tactile actions that Austin uses in formulating various aspects of the the object in turn comprise a meaningful and thereby constitutive component of how it is perceived and emerges in this setting.

The way in which Austin depicts the structure in his talk and embodied action throughout the excerpt is well fitted not only for how it is perceived in the rock, but for how boudinage is defined as a geological object: Boudinage, adapted from the French "boudin" (a type of linked sausage), denotes a segmented or "pinched" layer or vein of rock enveloped within a different type of rock (Voight 1987). Visually it appears as having thicker sections periodically segmented by thinner sections, with each typically denoting more and less competent material, respectively. Accordingly, Austin's pincer-like gesture in lines 6 to 7 traces the thicker portion, while his point in lines 9 to 10 locates where the layer thins or "pinches off" as he put it (thereby marking the less competent material). Through his talk and embodied action, Austin projects a reasoning for what type of object this is – one that is more or less affirmed by Dave, the more senior member, especially in Excerpt 4a. Austin's subsequent tactile work in Excerpt 4b in dislodging debris from the rock is not incidental to this project; indeed, it is quite essential, as where the rock thins, it is presumed to be a less competent, and thus coarser (i.e., made up of less consolidated grains of rock) and easier to break apart with one's fingers. Ultimately, the meanings conveyed via Austin's tactile action are treated as essential for his attempt at describing the rock as coarse, and consequentially, Dave coordinates his later agreement on what Austin does with the rock in his hands.

In the next excerpt, Jack, a geologist, and Adam, a computer scientist, are inspecting a large fault-line in a road-cut. Just prior to the excerpt, Jack refers to "fault-gouge", a loose aggregate rock often found in fault-lines. As we join the talk, Jack points out an example of fault-gouge on the rock-face for Adam. As is the case with the previous excerpt, Jack formulates the co-present object, gouge, through a number of different modalities, including the way he physically manipulates the gouge with his hands. In picking, scratching, and prodding at the rock, repeatedly knocking away and breaking pieces of unconsolidated rock ostensively depicting aspects of how gouge is defined. These depictions in turn provide for the object's emergence as a perceivable and knowable thing in the interaction.

Excerpt 5a - Fault-gouge

```
01     Jack:  *so this is*where the ^gou::ge is coming down.
          j:  *.........*traces--------------------------->
02            >so:,* *^th:i:s:.
          j:  ---->* *press--->
03              (1.0)
05     Jack:  #s:tu::ff:?
       fig:   #fig-5.1
06              (0.8)
07     Jack:  .hh is the* *^fault gou::ge:
          j:  --------->* *picks---------->
```

```
08                (0.8)
09      Adam:     #yeah*::,
10                @ (0.6) @
           j:     ---->*
           a:     @.......@
        fig:      #fig-5.2
```

Figure 5.1

Figure 5.2

Jack explains what *fault-gouge* is for Adam by pointing to an instance of it. He begins by locating it on the rock-face, tracing along the fault in a downward sloping motion, until arriving at the gouge just prior to his *this* in line 2, where he start prodding at the gouge with his hand. He manipulates the gouge in two ways: He first presses against it with the tips of his fingers budging finer grained debris from the rock (lines 2-8, fig. 5.1), before switching in the same turn-at-talk to picking and scratching at the gouge dislodging larger pieces of intact rock. He continues to do so throughout line 7 and into line 10 (fig. 5.2). His manipulations of the rock provide not only a demonstration of "gouge," but the multiple components of its description: gouge is defined as loose, unconsolidated, and brittle material made up of aggregate rock and consists of both fine particulate and larger pieces of intact rock. The composite nature of the object's definition comes up again in the continuation of the talk.

Excerpt 5b - Fault-gouge

```
09      Adam:     #yeah*::,
10                @ (0.6) @
           j:     ---->*
           a:     @.......@
11      Adam:     it's just clay
12                @ #(1.4) @
           a:     @press---@
        fig:        #fig-5.3
13      Adam:     at this point.
14                   (.)
15      Jack:     *>yup< with::
           j:     *.............
16                *^ch#:unks* o:f::
           j:     *pulls----*picks-->
        fig:          #fig-5.4
```

Figure 5.3

Figure 5.4

```
17                (.)
18      Jack:   you know more intact rock.
           j:   ------------------------>>
```

In lines 9-14, Adam confirms Jack's description with *yeah::, (.6) it's just clay (1.4) at this point*. He concurrently reaches up and presses against the gouge in a manner similar to how Jack first manipulated the rock (line 5, fig. 5.1). Adam's manipulation complements his utterance as it provides ostensively a demonstration of how one might experience clay: While the picking made with a thumb and forefinger differentiates 'chunks' from their surrounding matrix, the pressing that Adam does here (and Jack did earlier) makes no such differentiation; it treats the material it presses against as largely undifferentiated in texture as one might except "clay" to be or other fine, particulate material. Each component – the talk, manipulation, and the gouge itself – mutually inform one another, and thus incrementally reveal the object through the interaction.

While Adam's manipulation mirrors Jack's earlier, it only depicts one part of how gouge is defined, something that Jack's subsequent talk and embodied action seemingly orient to in lines 15-18. Jack's talk here enacts two relevancies for Adam's prior. It begins with an agreement token while elaborating on it. In doing so, it both adds to and re-completes Adam's prior description, displaying that gouge is not only made up of finer, clay-like material but also larger intact chunks. Jack manipulates the gouge animates this aspect of the rock: Whereas earlier in the transcript, Jack both 'pressed' and 'picked' at the gouge, depicting both aspects of its definition, in lines 15-18, he only picks at the gouge breaking off piece of intact rock. The cumulative effect of his embodied and discursive conduct simultaneously recognizes the prior description of gouge as "clay", while also manual explicating part of the gouge made up of smaller embedded 'chunks of intact rock.'

As with Excerpt 4 the interactants demonstrably operate on aspects of the object that are revealed not just through the talk or sight, but through the speaker's engagement with the materiality of the object. This in turn provides the means by which that object emerges to the participants as a categorically meaningful object. Altogether, the fault-gouge emerges from the successive coordination of talk, manipulations, and the structure of the gouge itself, with each co-operating on and mutually elaborating one another. Moreover, these co-operations do not privilege the talk; rather, Jack's picking, scratching, and pinching at the gouge makes visible its physical structure and thus takes up brunt of the categorical work in revealing how gouge is defined. Lastly, the visible differences in how Jack manipulates the rock are not incidental to how they alternatively formulate the gouge. As such, pinching larger chunks of intact rock remediates Adam's prior incomplete formulation, because it provides a greater specificity for the object being considered.

4. Discussion

A generic property of the interactions we observe is that the descriptions we see participants apply to co-present objects, materials, and their aspects, are oriented to as meaningful vis-a-vis their relation to one another as they are successively revealed through sequences of action. Consequently, objects in these settings most generally emerge in a complex, non-linear fashion, in a complex interplay between objects, co-present phenomena, and the discursive and/or embodied practices co-participants use for revealing them as publicly-attested to instances of a given analytical category. Moreover, given the tentative relation we tend to observe in how participants formulate object versus how they formulate its categorically-relevant properties, participants repeatedly check their proposed categories and properties against their perception of the co-present feature, materials, and its expected versus perceptible properties. In doing so, we see the participants closely scrutinize the properties they consider criterial for the object according to how those properties should be experienced.

The objects are revealed through the practices participants use for making those sensorially accessible to one another. While we cannot analyze how participants experience different qualities, we can, however, analyze the practices participants use, particularly within a given community of practice, for publicly revealing the experience of that to others. Through the excerpts we see this accomplished in one of two ways. In both Muscovite (Ex. 1) and Ammonia (Ex. 2) participants accomplish this by repositioning themselves vis-a-vis the object for the purpose of perceiving a particular aspect of it, either bringing the object closer under their and others' field of vision or by bringing themselves closer to the object. In each instance, the (re)positioning we observe is performed with regard to making it accessible – precisely within a given modality of sensory experience – so the interactants can either see muscovite or its silvery luster or smell an 'ammonia-like' smell emerging from the vat containing a chemical reaction. In "Hammer" (Ex. 3), "Coarse" (Ex. 4), and "Fault-gouge" (Ex. 5), the interactants instead act on the object physically manipulating it so as to occasion others' recognition of various aspects and doing so allow for its transformation. In Ex. 3, Darrell uses the hammer to produce the sounds that make its composition accessible to the participants, and in Ex. 4 and 5, the speaker physically manipulates with the co-present material making accessible those aspects of the object that reveal as it as coarse or as fault-gouge. The excerpts examined in the study show objects in these settings to emerge through time and through the interaction. The manner in which participants operate on the objects aspectually. The attention and action directed towards these multi-sensorial aspects in turn allows for the transformation of the objects in the participants' perception of them.

5. Conclusion

How are the objects and phenomena jointly recognized and agreed upon by members of a given community of practice actually constituted within their respective work? This is both a question of the actual practices used to (re)constitute the objects in the first instance and a question of how actors themselves become compe-

tent practitioners within those communities. In the settings investigated in this paper, the intelligibility of objects emerge via their placement within a range of material, sensory, and linguistic signs, specifically those used within the work of a given community. This emergence is made meaningful through a layering of spatial, temporal, and social spaces, in routinely operable ways, wherein the object is revealed temporally through the endogenous practices that organize the work and activity. Phenomenally, what the practitioners inspect is not just the object (or aspects thereof), but the relevant properties that participants consider criterial for the object's inclusion within a member-relevant category. Such action relevant perception of the object is lodged, not within the individual but within the historically shaped practices of his or her predecessors. An interactional account of a temporarily unfolding perception of objects thus necessitates an analysis situated within both activities and historically-sedimented structures that define the community. The totality of the material and sensorial objects that become meaningful do so in their position within different material assemblages and projected courses of activity. This is particularly a challenge when this question is applied to context where the practitioners encounter, not "objects" per se in the first instance, but rather a dense material world from which those objects are fashioned and/or extracted, according to the categories and types that animate discourse within the geo-sciences both as a community of practice and scientific discipline.

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Classifying finds in foraging on the basis of (guided) sensory inspection

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Abstract
This study considers object-centered sequences by examining the sharing of finds in foraging activities, specifically in mushroom picking. The focus is on the ways in which participants engage in inspecting mushrooms and guiding others to inspect them in the process of classifying and assessing the finds. Participants typically draw on a range of sensorial cues, such as how mushrooms smell or feel to the touch, to pursue shared understandings of what characterizes – and thereby what might best be used as a basis for classifying and assessing – a particular species or specimen of mushroom. The data consist of video recordings of families with children or participants on instructed excursions engaged in foraging. The data are in Finnish and English.

Keywords: classification – conversation analysis – foraging – multimodality – objects in interaction – sensoriality.

German Abstract
Die vorliegende Studie untersucht objektorientierte Sequenzen beim gemeinsamen Sammeln von Lebensmitteln, insbesondere von Pilzen. Hierbei liegt der Schwerpunkt auf der Art und Weise, wie die Teilnehmer im Bewertungs- und Klassifizierungsprozess die gefundenen Pilze inspizieren und die Anderen bei ihrer Untersuchung anleiten. Typischerweise stützen sich die Teilnehmer auf diverse sensorische Reize wie den Geruch der Pilze und das Gefühl beim Anfassen. So erlangen sie ein gemeinsames Verständnis der Eigenschaften einer bestimmten Pilzart und verstehen, was sich am besten als Grundlage zur Klassifizierung und Bewertung eignet. Die Daten umfassen Videoaufzeichnungen von Familien mit Kindern und von anderen Teilnehmern angeleiteter Exkursionen zum Sammeln von Lebensmitteln. Die Aufzeichnungen liegen in finnischer und englischer Sprache vor.

Keywords: Klassifizierung – Konversationsanalyse – Lebensmittelsammeln – Multimodalität – Objekte in der Interaktion – Sensorialität.

1. Introduction

This article examines object-centered sequences in foraging activities, in which participants search and pick mushrooms in nature. Mushroom picking is characterized by a particular future-oriented aspect in that the wild produce is typically stowed and stored for later, rather than for immediate, use and consumption. Nevertheless, it is relevant for foragers to determine whether a find is worth keeping while they are still engaged in the activity. This article focuses on such moments as they take place within sequences of sharing. By 'sharing', we refer in general terms to the kinds of object-centered sequences in which participants focus their attention on a find and engage in inspecting, classifying and assessing it together (see Tomasello 2008 on sharing emotions or attitudes as one key communicative motive). In the process, the participants may look at, touch, hold, manipulate and pass mushrooms as well as draw on various visual, tactile, olfactory, gustatory and perhaps even auditory cues.

The data for the study consist of approximately 14 hours of video recordings in which families with children or participants on instructed excursions carry out foraging activities. Some of the data are in Finnish and some in English. The participants have given their informed consent for the use of the recordings for research purposes. Pseudonyms of given names or institutional roles, such as *instructor*, are used as participant labels. The data have been transcribed according to the conventions described in Jefferson (2004) and Mondada (2014a). Ethnomethodological conversation analysis (e.g. Garfinkel 1967; Heritage 1984; Sacks 1992) provides the methodological framework for the study.

After situating the study within previous research on how objects are 'accomplished' in social interaction (Nevile et al. 2014:13), we discuss sequences of sharing in our data from two interrelated viewpoints. First, we examine how participants with varying amounts of foraging experience display their understandings of a find. We show two cases in which foragers who position themselves as less experienced request for confirmation on a preliminary classification of a find, making the classification visible, among other things, in how they handle the find. Furthermore, the two cases illustrate how foragers who are positioned as more experienced take a moment to examine the find before confirming or disconfirming the preliminary classification offered, thus also orienting to the relevance of inspection for classification. Second, we investigate practices employed by participants to gain sensory experiences of the find and to guide others to gain such experiences. We discuss three cases in which the participants in this way extract particular features of the find (e.g. visual, tactile or olfactory) for the purposes of classifying and assessing it. Finally, in the third analytic section, we examine one more case to highlight the inevitably ineffable nature of sensory experiences and, consequently, the negotiable nature of classifications that are based on such sensory experiences. A brief summary and reflection are provided in the conclusion.

2. Classifying objects and displaying expertise

To carry out social actions, participants draw on their present material environment and build on their assumed, emergent or already achieved shared understandings of it: participants recognize and accomplish objects as this or that, treating objects as

malleable in terms of their meaning, purpose and potential. In professional contexts, the categorization or classification of objects may have profound consequences because it often forms an essential part of expert activities and is based on both common understanding and discipline-specific knowledge. For instance, to reach an agreement about the color of a sample of dirt (i.e. how it will be documented in written records), archaelogists draw on a complex array of resources, from semantic categories of color names to specific tools and practices for using the tools (Goodwin 2000b). Nevertheless, the classification of objects as scientific findings, for example, is a matter of negotiation, the establishment of a shared interpretation of what the participants have at hand (see, e.g. Goodwin 1997, 2000b; Sean Smith/Goodwin this issue; Koschmann/Zemel 2014; Tuncer/Haddington this issue). Roth (2005) shows that this may involve the participants being able to draw, on the one hand, on prior classifications (i.e. whether there are categories into which an item can be placed), and, on the other hand, on relevant perceptual distinctions (i.e. whether there are items from different categories that can be compared). In any case, "[o]ne has to have done classification, physically handling the objects, manipulating, scanning, and so on, to make knowledgeable classifications" (Roth 2005: 609).

The kind of classification that participants do and the kinds of classifications that they make are inextricably tied to the ways in which they deal with the objects involved. Participants display their knowledge, experience and expertise with regard to relevant objects and relevant characteristics of those objects in how they talk about and handle them. For instance, examining service encounters at a shoe repair shop, Fox and Heinemann (2015) argue that the ways in which customers manipulate the objects that they bring in for repair or alteration, along with the design of their verbal requests, make visible their understanding of the problem and its possible solution. In another service context, at the optician, Due and Trærup (2018) show that although the passing of glasses is accomplished in collaboration, opticians can be seen to take more care than customers to secure successful, safe passes. The passing of glasses thus constitutes an important site for opticians to display their expertise and to take responsibility for their professional work (Due/Trærup 2018). Similarly, Mondada (2016) illustrates how sellers at cheese shops palpate pieces of cheese to produce understandings of the quality of the products and how, together with verbal and other bodily actions, the palpating serves as a display of the sellers' embodied knowledge and professional expertise. Moreover, in an investigation into the passing of implements and materials in the highly specialized setting of the operating theater, Heath et al. (2018) show how the accomplishment of a surgical procedure relies upon not only the surgeon's performance, but also the scrub nurse's being able to interpret the unfolding of the procedure and to pass relevant objects at appropriate moments and in appropriate ways.

Indeed, in becoming experts in a particular discipline or even simply in a particular activity, participants develop 'professional vision', that is, adopt and employ "socially organized ways of seeing and understanding events that are answerable to the distinctive interests of a particular social group" (Goodwin 1994:606; see also, e.g. Gåfvels 2016; Lymer 2009). For example, Ekström and Lindwall (2014) and Mondada (2014b) have investigated how what can better be understood as materials or ingredients are transformed into craft products or culinary preparations through one participant's instructing another in the process. In both settings, the participants

need to establish a shared understanding of the process of transformation in order to identify key moments in which action is to be taken as well as relevant features of the materials or ingredients which are to be manipulated. For instance, trainees on a cooking course learn to orient to the irreversibility of such preparations as trimming, peeling and cutting and, accordingly, to the relevance of preserving and possibly highlighting some features of the ingredients (Mondada 2014b). A part of the process, then, is learning to extract or isolate from a mass of possibly relevant features those that are in effect relevant for the ongoing activity.

The extraction of relevant features is also essential when participants strive for a shared experience of some kind and may guide one another into positions in which this is possible. Kreplak and Mondémé (2014), for instance, explore art-museum tours for visually impaired persons, who are guided both verbally and manually to achieve tactile aesthetic experiences of particular artworks (see also Heath et al. 2012). At the cheese shop, sellers may smell a piece of cheese and then let customers do the same, or they may prepare to cut a piece of cheese as they produce a verbal offer for customers to have a taste, guiding customers to focus on the olfactory or gustatory features of the cheese, respectively (Mondada 2019; see also Licoppe/Tuncer this issue; Mondada this issue). In many ways, then, participants orient to ensuring and displaying that they all have access to the object of their actions and that they all experience it in similar ways in this moment (see Fasulo/Monzoni 2009; see also Oshima/Streeck 2015). A challenge that participants face, however, is that sensory experiences are essentially ineffable, that is, they escape verbal description (see Levinson/Majid 2014; see also Sean Smith/ Goodwin this issue). As shown by Liberman (2013) in studies on coffee tasting, completely objective descriptors are in effect impossible to produce because the sensory experience of tasting guides the description of a taste as much as the description guides the experience. That is, participants learn to associate particular descriptors with particular kinds of sensory experiences, so that 'bitter', for instance, becomes to be used in an attempt to capture a kind of gustatory experience that is different for every participant. What happens in most interaction, then, is that participants work to achieve a good enough shared understanding, sufficient for all practical purposes, of what a sensory experience may be like.

In what follows, we explore how participants achieve good enough shared understandings of their finds in foraging, or reach workable classifications of mushrooms, on the basis of having gained relevant sensory experience of them.

3. Orienting to the relevance of inspection for classification

In this first analytic section, we examine two cases in which participants position themselves as less experienced foragers and bring a mushroom to the attention of others. In both cases, the less experienced foragers also provide a preliminary classification of the mushroom, but they do so at very different levels of detail. Indeed, the two cases illustrate some ways in which participants display, through their verbal and embodied conduct, their varying degrees of knowledge and experience of the mushrooms at hand. Moreover, the two cases highlight similarities in how the participants whose expertise has been called upon become momentarily absorbed in "inspecting" the mushroom (Mortensen/Wagner this issue), before confirming or disconfirming the preliminary classification.

In Example 1, the classification is based on the possible function or use of the mushroom, that is, whether it is edible. The example comes from a recording in which a family of five is foraging mainly for berries but also for mushrooms. One camera stands on a tripod, and the father of the family wears another, head-mounted camera. The transcript has been prepared on the basis of both recordings. A few minutes before the excerpt, the father has picked some funnel chanterelles, which the participants have deemed as valuable finds. Immediately before the excerpt, one of the children, Enni, has made a 'noticing' (see Sacks 1992; Goodwin/Goodwin 2012) by calling out "mushroom" and pointing at a spot on the ground. In this way, Enni has drawn the participants' attention to a mushroom and invited the father to inspect it (Figure 1a).[1]

(1) 26 HANS Mustikassa VI (00:06:34 / 00:16:38)

```
01        ¤(0.4)#(2.4)
   dad    ¤walks towards children-->
   fig           #1a
```

Fig 1a. Enni points at the mushroom,
and the father walks towards the children.

```
02 ANN:   onko toi se s- syötävä ¤sieni.
          is that the    edible mushroom
   dad                         -->¤LF makes a circle,
                                  pushing vegetation aside-->
03 DAD:   #s::e ei ¤oo s::•#yötävä• sieni.¤
           it is not an edible mushroom
                -->¤bends down-----------¤
                           •RH grips and bends mushroom•
   fig    #1b                  #1c
```

Fig 1b. The father pushes vegetation aside with his foot.

[1] In the transcripts, the following symbols are used to mark various embodied actions by different participants: • , ¤ , + , ± and *.

Fig 1c. The father bends down and bends the mushroom with his hand.

```
04 DAD:  ¤ei oo.
          {no it} isn't
         ¤straightens up-->>
```

As the father walks towards her, Enni continues to hold her right hand in a pointing gesture (Figure 1a), without moving closer to or reaching for the mushroom. That is, Enni refrains from any closer inspection of the mushroom and positions the father as competent and licensed – in the sense of having the rights of an adult – to handle it. Enni's older sister, Anni, also position herself as a novice and the father as an expert by leaning in to look at the mushroom and by requesting for confirmation from the father about the edibility of the mushroom, *onko toi se s- syötävä sieni* ('is that the edible mushroom', l.2). The demonstrative pronoun *toi* 'that' points out a referent, the mushroom, and treats it as being outside the speaker's current sphere and more accessible to the recipient (see Laury 1997). The definite article *se* (Laury 1997), in turn, marks identifiability and suggests that the mushroom be considered as another possible specimen of the same class of mushrooms that have been found earlier. On the basis of the father's earlier finds, then, Anni offers a preliminary classification of this mushroom as another edible one.

During Anni's request for confirmation, the father reaches the spot that Enni has been pointing at and stretches out his left foot to push aside vegetation from around the mushroom (l.2; Figure 1b). The fact that the father uses his shoe-clad foot to uncover the mushroom already suggests that he does not treat this mushroom an equally valuable find as the ones that he has gingerly uncovered and picked with his bare hands some minutes earlier. As he makes a small circle with his foot, pushing aside vegetation and gradually revealing the mushroom, the father begins to produce a response (*se ei oo syötävä sieni* 'it is not an edible mushroom', l.3). The father lengthens the initial sound of *se* 'it' until his foot has come a full circle and, on *ei* 'not', slides his foot on the grass and brings it back on the ground. The lengthening of the sound thus delays the unfolding of a disconfirmation to a moment in which the father has evidently gained visual access to the mushroom. As soon as the father has brought his foot back on the ground, he bends down. The father now lengthens the initial sound of *syötävä* ('edible') until he has gripped the mushroom with his right hand and bent it slightly to reveal the stem and the underside of the cap (Figure 1c). Again, the lengthening of the sound marks the duration of the inspection and delays the completion of the disconfirmation.

The father's turn in line 3 is identifiable as a response only on the basis of its sequential position, that is, after Anni's request for confirmation: the turn comprises a full declarative sentence with an explicit subject (*se* 'it') and unmarked subject–

verb word order (see Hakulinen 2001). The syntactic format of the turn highlights the negation that the turn entails as well as the father's independent access to the referent that the negation is based on. The father can thus be seen to take up the position of a competent and licensed mushroom picker that the children have offered him. Immediately after bringing the inspection and classification of the mushroom to completion (l. 3), the father begins to straighten up and produces a disconfirmation that is more responsive by its grammatical design, a negated verb repeat: *ei oo* ('{no it} isn't', l. 4). This marks the confirmation sequence as complete.

In short, throughout the brief fragment, the children and the father adopt the positions of less experienced and more experienced foragers, respectively, and design their relevant verbal and bodily actions accordingly. Furthermore, the father delays the verbal disconfirmation until a point when he has evidently inspected the mushroom to a sufficient degree, that is, once he has gained visual, and possibly also tactile, access to the mushroom to base the classification on. In this case, the classification of the mushroom as 'not edible' is eventually enough and no further classification is pursued.

In Example 2, by contrast, two possible bases for the classification of a mushroom are presented: the name and function of the mushroom. Otherwise the setting is similar in that a less experienced forager seeks confirmation for a classification of a mushroom and a more experienced forager engages in inspection before providing a response. The example comes from an organized mushroom-picking excursion. At the beginning of the excerpt, one of the excursion participants, Riitta, approaches one of the two instructors. The participants have established a 'state of mutual gaze' (Goodwin 1980) a moment earlier.

(2) 08 HANS Sieniretki (00:06:17)

(N.B. The cameraperson walks closer to the participants and the instructor's bodily actions are therefore not entirely visible in lines 5-9.)

```
01      (0.3)#(0.3)
   rii  >>walks towards ins-->
        >>holds mushroom up (RH finger pinch, palm out)-->
   ins  >>walks towards rii-->
   fig       #2a
```

Figure 2a. Riitta and the instructor walk towards each other, and Riitta holds the mushroom in her hand.

02 RII: eiks ookki kaneli#seitikki.
isn't {this} a cinnamon webcap
fig #2b

Figure 2b. Riitta and the instructor walk towards each other, and Riitta holds the mushroom in full view for the instructor.

03 (0.4)
04 RII: v±ärj•äys¤+sieni.±
a mushroom for dyeing
-->•holds mushroom up (RH finger pinch, palm up)-->
-->¤
ins ±stretches out LH±
-->+
05 ±(1.0)#±•(0.8)±
ins ±grasps±takes±holds mushroom (LH finger pinch, palm in)-->
rii -->•RH to waist-->
fig #2c

Figure 2c. The instructor grasps the mushroom and takes it from Riitta.

06 RII: °(onkos se värjäyssieni)°
(is it a mushroom for dyeing)
07 (0.3)
08 INS: ööm,
uhm
09 (0.3)

```
10 INS: mää luulen että tämä *kuuluu nuihin keltasei#tik[kien
        I think that this belongs to those yellow webcaps
                          *feels mushroom with RH thumb-->
   fig                                      #2d
```

Figure 2d. The instructor looks at the mushroom and feels it with her thumb.

```
11 RII:                                                  [mutta
                                                          but
12      kumminki että se v- se vär•[jää-
        anyway that it d- it dyes-
                                   •RH from waist-->
13 INS:                             [kyllä±* v-
                                     yes d-
                                       -->±holds mushroom (LH
                                          finger pinch, palm up)-->
                                        -->*
14      [kyllä on vär•jäyssie•±niä• kyllä
         yes it is a mushroom for dyeing yes
                              -->±
   rii              -->•grasps•takes•holds mushroom-->>
```

As she walks towards the instructor, Riitta holds a mushroom up and waves it in the air (Figure 2a). In this way, Riitta offers the mushroom as a focus of the participants' joint attention and action. The fact that she waves the mushroom in the air, rather than carries it carefully in her hands, also implies that Riitta has made a preliminary classification of the mushroom as one that does not have to be handled with the same care as, for instance, a mushroom that has been picked for eating. A more precise classification follows in Riitta's verbal turn: the request for confirmation, *eiks ookki kaneliseitikki* ('isn't this a cinnamon webcap', l.2), includes a possible name for the mushroom. Although Riitta seeks the instructor's confirmation for the classification, she displays a fair amount of expertise in providing not only the genus ('webcap') but also the possible species ('cinnamon') of the mushroom. Indeed, this level of accuracy in naming mushrooms is what the instructors in our data from organized mushroom-picking excursions typically strive for in classifying mushrooms (see Examples 3 and 6).

During her request for confirmation (l.2), Riitta holds the mushroom up in her right hand, pinching its stem between her fingers so that the palm of her hand faces outwards and the mushroom is in full view for the instructor (Figure 2b). The instructor may not yet have maximal visual access to the mushroom, however, because both Riitta and the instructor continue their walking trajectories towards each other. They both bring their feet down into a stable standing position during Riitta's next utterance, which adds to the initial request for confirmation by suggesting that

the mushroom is 'a mushroom for dyeing' (*värjäyssieni*, l.4). It is worth noting that the participants in our data relatively seldom display knowledge about, or interest in, possible uses of mushrooms beyond consumption, and so even this classification by function implies that Riitta has some specialized knowledge of mushrooms. Before the instructor has gained access to the mushroom, Riitta has thus already offered two possible, overlapping classifications of it for the instructor to confirm or disconfirm: the name of a particular species and a potential function for the species.

On Riitta's uttering *värjäyssieni* ('a mushroom for dyeing', l.4), the instructor stretches out her left hand and Riitta changes the position of her hand from displaying the mushroom at its full length to pinching it by the stem from below, with her palm upwards, and preparing the mushroom for the instructor to take. The instructor indeed grasps the mushroom and takes it from Riitta (l.5; Figure 2c) to begin an inspection, and Riitta withdraws her hand to rest on the waist. During the inspection, the instructor holds the mushroom in her hands and feels it with her right thumb, and both participants have their gaze on the mushroom (Figure 2d). Riitta continues to seek confirmation for whether the mushroom can be used for dyeing (l.6), thus treating the possible function of the mushroom as the most relevant basis for classification.

The instructor's response is delayed by pauses, hesitation markers and, finally, the stance marker 'I think/believe' (l.7-10; see Rauniomaa 2007), which all indicate that the inspection is still in progress but also suggest that the projected response may not entirely align with the request for confirmation. Indeed, the instructor's response neither confirms nor disconfirms but provides a new take on the classification: the instructor names a particular genus that the mushroom may belong to. In other words, the instructor highlights the importance of classifying mushrooms as accurately as possible, starting from naming it before assigning any functions to it. In her following turn, however, Riitta continues to pursue confirmation for a classification based on function: *mutta kumminki että se värjää* ('but anyway that it dyes', l.11-12). The turn-initial 'but' signals return to a prior topic (see Sorjonen 1989), that is, whether the mushroom can be used for dyeing, whatever it is called. During her turn, Riitta lifts her right hand from the waist, and the instructor withdraws the thumb of her right hand from the mushroom and turns her left hand so that she now holds the mushroom by the stem with the palm of her hand upwards, preparing it for Riitta to take. While the instructor now confirms that the mushroom can be used for dyeing, Riitta grasps the mushroom and takes it from the instructor (l.14).

Examples 1 and 2 have shown how participants' emerging understandings are essentially intertwined with the ways in which they refer to and possibly handle the mushrooms that they have found. Naming a mushroom by its possible genus and species can be considered as a display of expertise, but making such crude preliminary classifications as 'edible' vs. 'inedible' may indicate not only that the participant is a less experienced forager but also that the participant does not deem further classification in this context relevant. Similarly, refraining from touching a mushroom with one's bare hands may indicate either that the participant is not able to judge whether it is safe to handle the mushroom or that the participant is able to make an adequate classification based on visual evidence alone. Moreover, the specific ways of holding and handling a mushroom, for instance, carefully or carelessly, bring forth the participant's understanding of what the mushroom may be

used for. In all cases, the participants orient to the relevance of inspection as a basis for any classification that may be done.

4. Extracting relevant features of a find via guided inspection

Because our data involve both expert and novice foragers, the processes of classification may be more visible than in data that involve experienced foragers alone. Very frequently, then, participants in our data encounter situated 'learnables' (Majlesi/Broth 2012) relating to the classification of particular mushrooms found in the forest. In this analytic section, we explore how different features of mushrooms, such as texture, color and smell, are oriented to during inspection and classification. In the examples in this section, more experienced foragers guide others to focus on different features of a mushroom via their bodily and verbal actions, performed in relation to the sensory qualities of the mushrooms (e.g. through smelling, touching or tasting). By allowing the less experienced foragers then to carry out these same actions themselves, the more experienced foragers engage them in developing their 'sensorial practices' (Mondada 2019) and, thus, their expert perception or 'professional vision' (Goodwin 1994) regarding mushrooms that are handled together. As such, the actions amount to guided inspection sequences.

Example 3 is from the same mushroom-picking excursion as Example 2. Prior to the excerpt, Kaisa and another excursion participant have walked towards the instructor, with Kaisa holding a mushroom in her hand. The instructor has identified the mushroom as cortinarius based on visual evidence available to her, that is, seeing the mushroom in Kaisa's hand. The participants have also established that mushrooms that belong to the genus of cortinarius are generally not edible. The mushroom is passed from Kaisa to the instructor, after which the participants continue to examine it together. During this, the instructor engages in a sensory inspection of the mushroom and, in so doing, sets an example to Kaisa and the other excursion participant. After this, the instructor guides the others also to inspect the mushroom in different ways and to pay attention to certain features of it.

(3) 08 HANS Sieniretki (00:09:04)

```
   ins  >>looks twd mushroom, manipulates it with both hands-->
01 INS: [tää on nyt t#ämmönen vähän
         this is now this kind of a bit
   fig               #3a
```

Fig 3a. The instructor looks at and manipulates the mushroom.

```
02 KAI: [joo.
         yeah
03 INS: •tämmönen• (.) ¤vanhaksikin mennyt että¤ hh
         kind of       overaged also that
        •strokes underneath the cap with both thumbs•
                    -->¤lifts cap up----------¤lays mushroom
                                               flat on hands-->
04 KAI: joo.¤ se on sen ¤näkönenki että se ei oo syötävä mutta,
        yeah. it does look like it is not edible but
   ins   -->¤           ¤LH breaks off a portion of the cap,
                         the rest of the mushroom remain in RH-->
05      (0.4)¤(0.5)#(0.3)¤
   ins    -->¤smells mushroom, holding it in RH¤
   fig             #3b
```

Fig 3b. The instructor smells the mushroom.

```
06 KAI: se oli niin mielenkiinto[nen.
        it was so interesting.
07 INS:                         [täs ¤on,¤
                                 here is
                                     ¤LH throws away piece¤
08      ¤(0.4)¤
   ins  ¤moves mushroom to LH¤
09 INS: ¤tämmönen
         this kind of
        ¤LH holds mushroom close to Kaisa-->
10 KAI: mm,
11 INS: tää on tuo#ta vanha-
        this is well an old
   fig           #3c
```

Fig 3c. The instructor holds the mushroom while Kaisa smells it.

```
12      (0.3)
13 KAI: jo[o¤:
        yeah
   ins   -->¤
14 INS:   [haisuseitikki,
           stinking cortinarius
```

At the beginning of the excerpt, the instructor identifies a further feature which indicates that this particular specimen has gone bad: *tää on nyt tämmönen vähän tämmönen vanhaksikin mennyt että* ('this is now kind of overaged also that', l.1,3). The instructor's turn ends in the conjunction *että* ('that', l.3), which marks the turn as an explanation to a prior action, legitimizing the instructor's claim that the mushroom is unusable (see Koivisto 2011). Kaisa produces an agreement token and a formulation that equates the appearance of the mushroom with inedibility: *se on sen näkönenki että se ei oo syötävä mutta* ('it does look like it is not edible but', l.4). Kaisa's turn ends in the conjunction *mutta* ('but', l.4), which here indicates concession (see Koivisto 2011), suggesting that, based on the appearance of the mushroom, Kaisa can deduct herself that it is not edible. However, the description 'overaged', used by the instructor, can be used to characterize any fresh produce that has gone past its due date but that may nevertheless be consumable. As such, then, the participants' verbal turns show how Kaisa relies on a generalization, rather than any specialized mushroom-related knowledge, to assess the find, whereas the instructor draws on her knowledge of the species and on sensory evidence gained here and now of this particular specimen.

The instructor can be seen to gather sensory evidence for the classification of the mushroom through a tactile and visual inspection (Figure 3a), which takes place in conjunction with the verbal turns in lines 1-4. The instructor turns the mushroom around in her hands and feels the surface of the mushroom with her thumbs both underneath and around the cap. She then examines the texture of the mushroom by breaking off a piece of the cap (l.4). These sensorial practices provide an example for the others on how to examine and handle a mushroom in order to enable its classification. Kaisa and the other excursion participant follow the instructor's actions closely, their gazes directed towards the instructor as she handles the mushroom. The inspection continues with the instructor smelling the mushroom: she lifts it under her nose and leans in slightly (Figure 3b). Again, even though the instructor focuses on inspecting the mushroom herself, she does so while the other two participants follow her actions, thereby providing a further demonstration of how the others should handle the mushroom when attempting to classify it. While the instructor continues to inspect the mushroom, Kaisa completes her explanation of why she picked the mushroom although it looked inedible (i.e. 'it was so interesting', l.6). Kaisa's explanation serves as another example of a layperson's reasoning, or how less experienced foragers draw on their everyday experiences in attempting to classify mushrooms or even to make crude distinctions between their possible functions.

After the instructor has completed her visual, tactile and olfactory inspection of the mushroom, which apparently has confirmed her classification of the species, she initiates the naming proper with *täs on* ('here is', l.7). In conjunction with this, the instructor first throws away the piece of the mushroom that she broke off, moves the mushroom from her right to her left hand, and then stretches out the mushroom

towards Kaisa (Figure 3c). The instructor does not give nor does Kaisa take the mushroom, but, instead, the instructor holds out the mushroom, pinched in her fingers with the palm of her hand upwards, and Kaisa leans in to smell it. The instructor's ongoing verbal turn includes hitches and pertubations that deal with the simultaneous stream of embodied action (see Schegloff 2000 on two streams of overlapping talk); in other words, the instructor allows for Kaisa's embodied action of smelling to be embedded within her verbal naming of the mushroom (l.7-11). Once Kaisa straightens up and acknowledges having smelled the mushroom with a lenghtened *joo* ('yeah', l.13), the instructor completes the naming, *haisuseitikki* ('stinking cortinarius', l.14). The name not only characterizes the smell, which is presumably unpleasant, but also indicates that a distinct smell is one of the identifying characteristics of this particular mushroom species.

Both by displaying first through her own actions how one can handle and inspect a mushroom and by giving then a chance for Kaisa to experience the smell firsthand, the instructor's actions provide evidence of the importance of various sensorial practices in the mushroom-picking activity. The sensorial practices of looking at a mushroom from different angles, touching it in particular ways, extracting pieces of it, and smelling it have here all worked towards revealing the relevant 'semiotic fields' (Goodwin 2000a) of attention and action for the less experienced foragers in a stepwise fashion. It is only at the end of the guided inspection sequence that the name of the species is given, as a sign of successful classification.

Example 4 is similar to Example 3 in that here, too, the instructor first provides a demonstration of how to handle a mushroom in order to distinguish some of its identifying characteristics and then guides an excursion participant to gain sensory experience of those characteristics. Here, the focus on is how the mushroom feels to the touch. The guided inspection sequence also involves a correction concerning appropriate ways of examining the texture of a mushroom. Some minutes before the beginning of the excerpt, the participants have inspected boletes together and noted that the bovine bolete under inspection is relatively old and not very firm. The participants have then spread out and the instructor has found another, younger bovine bolete. In Example 4, the instructor shares his find with an excursion participant, Kaisa.

(4) 08 HANS Sieniretki (00:59:28)

01 INS: **tämmönen #nummitatti +on,+**
this kind of a bovine bolete is
>>holds mushroom between RH fingers
+moves RH thumb on top+

fig #4a


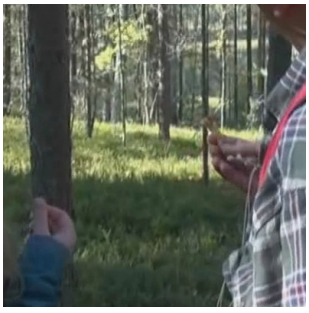

Fig 4a. The instructor holds the mushroom.

02 **+(1.0)#**
ins +RH thumb taps mushroom-->
fig #4b

Fig 4b. The instructor taps the mushroom with his thumb.

03 INS: **±se on,±**
it is
±stretches RH out towards Kaisa±
04 **¤(0.7)**
kai ¤RH reaches for mushroom-->
05 INS: **ko se ei oo menny +vielä pe¤hmeeksi.#**
'cause it hasn't gone soft yet
-->+lifts RH thumb up-->
kai -->¤RH forefinger
strokes mushroom¤
fig #4c

Fig 4c. The instructor lifts his thumb, and Kaisa strokes the mushroom.

06 **(0.6)**

```
07 INS:  .hh ko se on [tuo +nahkapin±¤ta mutta se on:,¤#
             'cause it is that leather surface but it is
08 KAI:              [mmm,
   ins                 -->+holds mushroom between RH fingers-->
                                ±withdraws RH-->
   kai                        -->¤withdraws RH----¤
   fig                                             #4d
```

Fig 4d. The instructor and Kaisa withdraw their hands.

```
09 INS:  kuitenki n±apakka.
         nonetheless firm
                  ±lifts RH up-->
10       ni ±tää on ihan syötävä.
         so this is edible alright
            ±lowers RH-->
11 KAI:  joo?
         yeah
12       (0.8)±+
           -->±
            -->+
13 INS:  +syötävän hyvä.+
          edibly good
         +places mushroom in basket+
```

The participants stand facing each other, and the instructor has the mushroom in his right hand, holding it by the stem between his fingers so that they both have visual access to it (Figure 4a). While the verbal reference to the mushroom as *tämmönen nummitatti on* ('this kind of a bovine bolete is', l.1) provides a classification of the mushroom, it also entails an assumption that the recipient has some knowledge of the species already. Indeed, the main import of the utterance is not to name the mushroom but, rather, to initiate a more general characterization of the species with the help of this particular specimen. This essentially involves a sensory inspection of the mushroom. As he produces the copula *on* ('is', l.1), the instructor adjusts his grasp of the mushroom by moving his thumb on top of its cap. He then begins to tap the cap lightly with his thumb and, in this way, provides a possible embodied completion to his turn (see Keevallik 2013, 2014). It also directs Kaisa's attention to the physical characteristics of the mushroom (Figure 4b).

Continuing to tap the mushroom, the instructor brings it closer Kaisa, who, in turn, stretches out her right hand towards it. Similarly to Example 3, the mushroom remains in the instructor's hand, thus incorporating the novice forager's experiencing of the mushroom into guided inspection. Holding the mushroom in his own hand also enables the instructor here to monitor closely the way in which Kaisa

touches the mushroom. When the mushroom is well within Kaisa's reach, the instructor lifts his thumb up so that Kaisa is able to touch the cap of the mushroom. However, instead of tapping the mushroom like the instructor, Kaisa strokes it with her forefinger (Figure 4c). At the same time, the instructor provides a verbal description of how the mushroom feels to the touch, *se on, ko se ei oo menny vielä pehmeeksi* ('it is, 'cause it hasn't gone soft yet' l.3,5). Both the instructor's bodily actions and his verbal turn guide Kaisa to experience the mushroom in a particular way and to focus on particular characteristics of it. That is, here the instructor guides Kaisa to consider the feel of the mushroom rather than some visual characteristics of it, such as color, shape or size. After having stroked the cap of the mushroom, Kaisa acknowledges the instructor's characterization of it with an aligning *mmm* (l.8) and withdraws her hand (Figure 4d).

In the meantime, the instructor begins a turn in which he refers to the leathery surface of the cap, which seems to be evoked by Kaisa's stroking, rather than tapping, the cap of the mushroom. Stroking and tapping enable quite different types of access to the mushroom: stroking is a gentle way of feeling the surface of the mushroom, whereas tapping gives better access to the texture of the mushroom beneath the surface (e.g. softness or firmness). As the instructor's earlier demonstration was done via tapping, his verbal characterization of the leathery surface of the mushroom (l.7) can be seen to indicate that Kaisa is not touching the mushroom in the way intended, and so the instructor's turn performs a subtle correction (see Jefferson 1987 on 'embedded correction'; Keevallik 2010 on 'embodied correction'). In other words, the fine distinction between the two sensorial practices, tapping and stroking, is here treated as relevant and consequential for the classification work involved in mushroom picking. This is most clearly visible in the instructor's assessment *se on kuitenki napakka* ('it is nonetheless firm' l.7,9), which verbalizes the outcome of the participants' shared sensory inspection of the mushroom. Two more assessments close the sequence (l.10,13).

Examples 3 and 4 have shown how participants may engage in inspecting mushrooms together and, more specifically, how participants aim to achieve shared understandings of the classification of mushrooms by experiencing and guiding others to experience particular features of mushrooms in sensory ways, for example, by touching or smelling them. The final example in this section further highlights the negotiable – and essentially learnable – nature of such experiences. As the handling of mushrooms takes place progressively and is visually available to other co-present participants, it allows for the online monitoring of the sensorial practices that others employ and of the understandings that they thus display (see Mondada 2011, 2016, 2019). The focus of guided inspection in Example 5 is on how to assess and appreciate individual specimens (see Wiggins/Potter 2010 on assessments of 'items' vs. 'categories').

In Example 5, a family of three is picking morel mushrooms. The child is a little over a year old, and the parents support and help her throughout the recording. The father holds the camera and does not appear on the video. At the beginning of the excerpt, the child and the mother cut a mushroom by its stem, with the child holding a knife and the mother having a hold of the child's knife-holding hand with her right hand and having a grip on the mushroom with her left hand. The mother is standing behind the child and reaching over the child for the mushroom (Figure 5b).

(5) 02 HANS Picking mushrooms (00:01:15)

```
01 DAD:  #Hh::h[ehe
   mom    >>cuts mushroom-->
   chi    >>RH holds knife-->
   fig   #5a
02 MOM:        [they'•re so thic•k.
                  -->•LH lifts mushroom•LH holds mushroom-->
```

Fig 5a. The mother cuts the mushroom by its stem.

```
03       ¤(1.0)
   mom   ¤RH removes litter from mushroom-->
04 MOM:  th[ick.
05 CHI:    [(henh?)
06       (0.5)¤(0.2)
   mom     -->¤RH grasps and pulls knife from child's hand-->
07 MOM:  feel th•is. #h[ere, (I want) you to hold it.]
08 DAD:                [look at the size of that] thi¤+:ng.+
   mom       -->•LH brings mushroom closer to child-->
   fig              #5b
   mom                                              -->¤
   chi                                               -->+RH lets go
                                                        of knife+
```

Fig 5b. The mother guides the child to hold the mushroom.

```
09 MOM:  h+old this mushroom.
   chi    +grasps mushroom with both hands-->
```

```
10        #(0.2)•(0.2)•
   mom       -->•LH lets go of mushroom•
   fig    #5c
```

Fig 5c. The child holds the mushroom.

```
11 DAD:   awesome.
12 MOM:   isn't it bi+::g?#
   chi              -->+lifts mushroom up to nose & mouth-->
   fig                     #5d
```

Fig 5d. The child smells the mushroom.

```
13 DAD:   wh[oah,
14 CHI:     [(--)
15 MOM:   mmm[::::::,]
16 DAD:      [does it sm]+ell [good?]
   chi                  -->+lowers mushroom-->
17 CHI:                         [ooh::]+::::,
                                    -->+
```

The mother and the father treat the mushrooms that they are currently picking as already known to them; that is, they have completed the necessary classification prior to the excerpt. As an indication of this, the father has assessed the mushrooms that they are currently picking as big ones and the mother has aligned with the assessment. The participants have in this way already established a positive evaluation of their find. As the mother and the child now cut together one mushroom from a cluster and begin to lift it off the ground (Figure 5a), the mother produces another assessment, *they're so thick* (l.2). Although the assessment may be based on visual evidence that all the participants have access to, it may also imply the mother's tactile experience of the mushroom, which she has gained by both cutting the stem and holding the mushroom in her hand. After the mother has removed some litter from the mushroom, she grasps the knife again and begins to pull it slowly from the child's hand. She also brings the mushroom closer to the child. Verbally, the mother

directs the child to *feel this* and *hold it* (l.7; Figure 5b). The mother is thus offering the child tactile access to the mushroom and an opportunity to experience for herself its thickness, or its size more generally. In other words, the child is given the opportunity to engage in guided inspection of the mushroom, whereby she is directed to focus her attention on its tactile features.

Once the child has let go of the knife, the mother directs her to *hold this mushroom* (l.9) and the child grasps the mushroom with both hands. This is different from Examples 3 and 4 in which the instructors continued to hold the mushroom themselves. Because the focus here is on the size and weight of the mushroom, in contrast with the smell or feel of it, it becomes relevant for the child to be able to hold the mushroom herself. The child first holds the mushroom in front of her, looking at it, and then lifts the mushroom up to her nose and mouth (Figures 5c-5d). Holding the mushroom under her nose, the child lets out a vocalization of some kind (l.14). The parents continue to provide appreciative vocalizations (l.13,15), building the one by the child into joint positive assessment. The father then offers an interpretation of the child's conduct in asking *does it smell good* (l.16). In doing so, the father ratifies the child's smelling the mushroom as appropriate conduct in the mushroom-picking context and also strengthens the positive, appreciative frame of interpretation in which the parents have guided the child to experience the find.

In Examples 3 and 4, which include only adult participants, the less experienced foragers are guided to inspect the mushroom with the more experienced ones first engaging in the inspection themselves and then giving others the possibility to experience specific features of the mushroom. In these cases, the inspection is done for the purposes of classification and extraction of relevant features of the find. In Example 5, guided inspection relates to the assessment of a specimen of a mushroom species that has already been classified, and the parents can be seen to use this as a way of socializing the child into appreciating their finds and, thus, their family activity of picking mushrooms. A certain future orientation is present in all the examples in this section: being able to identify a distinctive smell, or a certain texture, here and now provides the potential for being able to do so also in the future. That is, the sensorial practices that participants have now demonstrated and tested can be employed on other occasions, too.

5. Challenges in extracting relevant characterics during inspection

Information gained through the senses is difficult to share because language escapes descriptions of what a "bad" or a "good" smell, for example, is really like (see Levinson/Majid 2014). This is why expertise and skills in the extraction of relevant features and subsequent classification of mushrooms is necessarily best gained in and through touching, smelling, and looking at mushrooms together. Furthermore, as with classification work in general (see Roth 2005), participants may become aware of the relevance and restrictions of sharing sensory experiences only when some trouble or uncertainty is encountered. Example 7 presents one such case. The instructor on a mushroom-picking excursion has problems in extracting a relevant olfactory feature of a mushroom. At this point on the excursion, the participants are sitting at a picnic table by a creek and going through the mushrooms that they have

picked so far. An excursion participant, Anna, has a moment earlier located a specific mushroom near the instructor on the table and asked what kind of a mushroom it is.

(6) 07 HANS Sieniretki (00:44:00)

```
01        +(0.6)+(0.8)
   ins    +locates and picks mushroom up with RH+
   ins           +looks at mushroom, cap up-->
02 ANN:   mikä hapero se on.
          what kind of a russula is it
03        (0.4)+ (0.7) # (0.9) +(1.2)+
   ins      -->+smells mushroom+looks at mushroom, mushroom
                                                  sideways+
   fig                  #6a
```

Fig 6a. The instructor smells the mushroom.

```
04 INS:   +tämän kuuluis haista     +sillille.+
          this is supposed to smell like herring
   ins    +looks at mushroom, cap up+turns mushroom sideways+
05        +(1.2)
   ins    +smells mushroom-->
06 ANN:   hä.
          what
07        (0.6)+(0.1)
   ins      -->+breaths on mushroom-->
08 MAR:   niin, se on se silli#°hapero.°
          right it is the herring russula ((Russula xerampelina))
   fig                        #6b
```

Fig 6b. The instructor breaths on the mushroom.

```
09        (2.2)+
   ins      -->+looks at mushroom, mushroom sideways-->
```

```
10 INS:  mä lämmitän tätä+ vähän josko se
         I warm this up a little to see whether it
                      -->+lifts mushroom up to nose-->
11       rupeais (.) tekemään mitä sen täytyy tehdä.+
         would start doing what it is supposed to do
                                                  -->+
12       +(1.0)
   ins   +smells mushroom-->
13 MAI:  [( ) se oli vähän- (  ) [(  ) [aivan silli se-
              it was a bit             just like herring tha-
14 INS:  [mulla puuttuu-+       [+mä-  [mää,
          I'm missing-            I-     I
   ins                 -->+wipes nose with RH+
15 X:    oli.
         it was
16 MAI:  [(   )
17 INS:  [+mää tarviin tähän nyt]+ apua koska, (.)
          I need help here now because
          +waves mushroom in the air+turns cap downwards-->
18       kattokaa haistakaa te saatteko tästä sillin
         you look you smell {it} whether you get a herring
19       hajun +¤koska mun nenästä o- ¤vähän ¤pahasesti puuttuu¤
         smell because my nose          unfortunately lacks
            -->+
   mar          ¤reaches-------------¤takes-¤holds mushroom---¤
20       ¤#reseptoreita (0.4)¤ silli[n hajun tunnistamisessa,
         some receptors for identifying the herring smell
   mar   ¤smells mushroom----¤
   fig    #6c
```

Fig 6c. Marja (bottom right) smells the mushroom.

```
21 MAR:                                [¤haisee,
                                        it does smell,
                                        ¤passes mushroom left-->>
```

At the beginning of the excerpt, Anna speficies her earlier question by adding a potential species, 'russula' (l.2), thereby displaying some ability to identify the mushroom. However, the instructor avoids answering immediately. Instead, she picks up the mushroom from the table and begins to smell it (l.3,5; Figure 6a). In so doing, the instructor displays that the smell is a central characteristic to consider before a further classification can be made.

The instructor continues to guide the participants to attend to the smell of the mushroom by using a descriptor, *silli* 'herring', to indicate that this is the smell she

would expect the mushroom to emit (l.4). During her turn, the instructor also inspects the mushroom briefly from a distance before raising it up again to smell it. Apparently, the instructor is not able to sense the desired smell as she next moves on to breath on the mushroom, explaining that warming up the mushroom might help in making the smell detectable (l.10-11; Figure 6b). In the meantime, Anna's open-class repair initiator *hä* ('what', l.6) and Marja's more knowledgeable turn in which she is able to name the mushroom, *niin, se on se sillihapero* ('right, it is the herring russula' l.8), display the different positions that the two excursion participants take towards describing the smell. For Anna the appropriateness of the descriptor is evidently contestable, while for Marja the connection of the descriptor 'herring' to a specific type of mushroom is clear. Yet another participant, Maija, joins the conversation at this point, relating her own past experiences about the herring smell (l.13).

Thus far, the instructor has demonstrated and explained how to induce the smell from the mushroom, but she has not been able to sense the smell herself. Finally, she asks the excursion participants to help her in detecting the smell (l.17-20). As her explanation shows, and following events further confirm, people's sense of smell varies from one person to the next. For some of the excursion participants, the herring smell is very strong: the first excursion participant to smell the mushroom, Marja, can detect the smell immediately (l.21; Figure 6c). After the excerpt, the mushroom is handed over from one participant to the next, everyone taking turns to smell it.

Example 6 has illustrated how a distinct smell is one of the strongest identifying features of this and many other mushrooms (see Example 4). Direct access to the wild produce is therefore necessary to be able to develop one's sense of what, for example, a 'good smell' (Example 5) or 'a herring smell' (Example 6) may in effect be like. Sensory experiences are ineffable, but participants learn, through repeated exposure and practice, to use descriptors that are shared to a sufficient degree. For instance, upon being exposed to a particular smell that others simultaneously describe in appreciative terms, a participant may learn to perceive the smell as pleasant, or someone who is not able to detect a particular smell themselves may learn to identify the relevant context, so to speak, where a certain descriptor is typically used.

6. Conclusion

Just like many other human activities, foraging – and mushroom picking, in particular – essentially involves classification: before they carry their finds into their homes and possibly onto their plates, participants need to determine whether particular species or specimens are poisonous but possibly edible; edible and perhaps even palatable; inedible but usable for other purposes; inedible and also otherwise unusable, and so on. In our data, the less experienced foragers often settle for classifying their finds on the basis of such functions alone, whereas for the more experienced foragers, possible functions typically go together with the names of the genus and species. In either case, the participants orient to the relevance of having access to a find and experiencing it first-hand. That is, in order to classify and assess their finds, participants have to take into account the sensory qualities relating to the appearance, feel and smell of the mushrooms. In the examples that we have

examined, the participants engage in sensory inspection of the mushrooms and also guide others in such inspection to extract relevant, characteristic features. By employing particular sensorial practices and guiding others in doing the same, the more experienced foragers demonstrate how exactly this can be done. Furthermore, in talking about and handling the mushrooms in specific ways, the participants display their various levels of expertise on mushrooms and mushroom picking. Indeed, the handling of wild produce in sharing finds provides one interesting context in which to examine participants' practices for organizing sensoriality as a shared experience. Sequences of sharing also provide the basis for examining how mushrooms as living, evolving objects serve the collaborative construction of shared understandings of what foraging is, depending on who the participants are, and what kind of a mushroom is at stake.

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The initiation of showing sequences in video-mediated communication

Christian Licoppe / Sylvaine Tuncer

Abstract
This article focuses on a particular type of object-centered sequence in video-mediated conversations, in which one participant shows a co-participant some object or feature of her environment. First, we study the way and sequential position in which showings are initiated as recognizable sequences: in a position in which a new topic is relevant, as an occasioned side sequence, or as a "touched off" showing, following talk about a potential "viewable". Second we show how showings are initiated with distinctive prefaces which do different types of work: a) they offer a sequential slot for the recipient to align with or disalign from the projected course of action; b) they suspend the form of looking which is relevant to 'talking heads' talk, and enact and make relevant a distinctive way of looking at and seeing a given showable, which is assembled for the purposes of this particular occasion; c) they make further talk conditional to the viewing of the object, thus opening a slot for the manipulating the latter into a 'show position'; and d) they frame the showable as an object "for us" to see together, so that showing sequences can be described as a kind of relational bid: if the participants display that they jointly "see" the showable in an adequate way, this vindicates the kind of relational "us" which made relevant the showing in the first place.

Keywords: video-mediated communication – multimodal interactions – objects in interaction – showing objects – occasioned showings – touched-off showings – showing prefaces – relational work.

German Abstract
Dieser Artikel untersucht objektzentrierte Sequenzen in videovermittelten Gesprächen, bei der ein/eine GesprächsteilnehmerIn einer/einem anderen ein Objekt oder ein spezifisches Merkmal seiner Umgebung zeigt. Zunächst werden drei Formen und sequenzielle Positionen der Initiierung von Zeigesequenzen dargestellt: wenn ein neues Thema eröffnet wird, als Nebensequenz oder als "Touched off-Showing", nachdem über etwas potenziell "Zeigbares" gesprochen wurde.

Anschließend zeigen wir, wie Zeigesequenzen angekündigt werden. Ankündigungen dienen verschiedenen Aufgaben: a) Sie bieten dem/der EmpfängerIn ein sequenzielles Zeitfenster, in dem er/sie sich nach dem projizierten Handlungsablauf richten oder sich von ihm entfernen kann; b) sie unterbrechen die für das "Sprechende Köpfe"-Gespräch relevante Weise des Sehens und aktivieren eine andere Sichtweise auf das "Zeigbare"; c) sie machen das Weitersprechen von der Betrachtung des Objekts abhängig und öffnen somit ein Zeitfenster, in dem das Objekt in eine "Zeigeposition" gebracht wird; d) sie machen das "Zeigbare" zu einem Objekt "für uns", zu einem gemeinsam Ansehbaren. Zeige-Sequenzen sind also eine Art Beziehungsangebot: Wenn die GesprächsteilnehmerInnen zeigen, dass sie gemeinsam das Gezeigte in angemessener Weise "sehen", bestätigt dies die Wir-Beziehung, die das Zeigen erst relevant gemacht hat.

Keywords: Video-vermittelte Kommunikatin – multimodale Interaktion – Objekte in der Interaktion – Objekte zeigen – situative Vorführungen – showing prefaces – Beziehungsarbeit.

1. Introduction

The object of this paper is to analyze a particular type of object-centered sequence, i.e. showing sequences in video-mediated communication. The original language in the video recordings is French. This practice can be glossed as the mention of a previously not visible object or material feature of the environment, and its bringing into view for the other participant to see and appreciate. Defined as such, "showings" are a commonplace phenomenon, occurring in many different settings. They are also an important part of the larger class of what we might call "ostensive practices", in which something is brought somehow to the visual consideration of the recipient. However, they are understudied compared to other ostensive practices also involving "environmentally coupled gestures" (Goodwin 2007), such as pointing. Previous research in the ethnomethodological and conversation analytic tradition (EM/CA) has paid a lot of attention to pointing as a dynamically evolving 'gestalt contexture' (Goodwin 2013; Mondada 2016), interweaving embodied conduct and talk-in interaction in sequentially implicative ways (Goodwin 2000, 2007; Hindmarsh/Heath 2000a; Mondada 2007). And while pointing presupposes some kind of mutual visual access (Hindmarsh/Heath 2000b), showings in VMC are oriented to the contrary pre-supposition: that there is an asymmetry of (mostly visual) access, and the need to make the object visible in some way to a co-participant so that it can be talked about. In the following picture, the co-participant – visible in the left corner of the image – had no visual access to the shoe before it was brought in the visual frame.

Figure 1: Showing a shoe.

This asymmetry has several implications. First, the initiation of showings is sensitive to sequential concerns and often involves some specific prefatory work to make the potential 'showable' relevant (Lerner/Zimmerman 2003; Kidwell/Zimmerman 2007). Second, showings enact a joint focus on the visual event, and the way in which a "showable" becomes perceptible. Third, this sudden visibility projects specific responses in talk and embodied conduct, in relation to the way the recipient suddenly "sees" the relevant "showable", such as assessments (Fasulo/Monzoni 2009; Oshima/Streeck 2014; Raclaw et al. 2016). Showings therefore unfold as distinctive sequences; they also reveal specific interactional concerns. Sacks suggested that human interaction involves a very general "orientation towards the co-participant" which he construed as a maxim: "design your talk with an orientation to what they know you know" (Sacks 1992:564). We will argue here that showing sequences make visible a particular multimodal version of this general orientation which could be captured by the Sacks-like maxim: "design your talk with an orientation to what they (your co-participants) can see (or cannot see) that you see".

Showing sequences are inseparable from "evidential boundaries", sorts of barriers to perception which are direct and unavoidable consequences of being situated in the world (Goffman 1974:215-216), and of the way our environments are cluttered (Gibson 1986). Such "evidential boundaries" ceaselessly shift according to participants' embodied conduct, and may be exploited as interactional resources, for instance to create a "concealment track" to perform hidden activities (Goffman 1974). Goffman describes how co-participants are somehow attentive to such "evidential boundaries", and therefore attend to what co-participants can or cannot see, when they use them as resources to produce meaningful interactional moves. Evidential boundaries are integral to the intelligibility of showing sequences as such. Instead of exploiting them as a "concealment track", co-participants strive to unveil to the other what the evidential boundary might have been occluding. Reconsidering earlier studies in co-present settings which involved showing sequences (even if they were not analyzed as such), such an orientation to evidential boundaries is obvious. The manipulation of objects by children may be distant from adult's eyes (Kidwell/Zimmerman 2007); a haircut may be hidden behind one's head (Oshima/Streeck 2014); a cloth may fall over our whole body, much of which is occluded from sight (Fasulo/Monzoni 2009), or what happens on the mobile phone's small screen may be perceptually unavailable to co-participants even when mentioned (Raclaw et al. 2016). Video-mediated communication involves a particular perceptual twist with respect to co-present settings for it introduces a new and highly salient type of evidential boundary, i.e. the visual boundaries of the video shot in the Skype window. This frame significantly and prominently reduces the domain of mutual visibility for co-participants. Because at any moment, they only see a little part of each other's ecology, video-mediated communication (VMC) offers many opportunities to show things and occasions to demonstrably display the sensitivity of the ongoing interaction to what the co-participant can or cannot see.

The particular organization of VMC around the "talking heads" configuration as a default expectation (Licoppe/Morel 2012) reinforces the deep affinity between VMC and showing sequences. Producing an image that strays from the talking head configuration is something noticeable and accountable, and problematic images are

often treated as possible showing (see Licoppe 2017 for an example). In such contexts, turns-at-talk such as "Are you showing me something?", or "What are you showing me?" work as a kind of visual repair initiation, displaying a lack of understanding of what is made visible on screen.

Showing practices in VMC are also specific when compared to what happens in co-present settings. First, showings can be initiated not only by manipulating an object in a "show position" but also through camera motions (Licoppe/Morel 2014). Second, in a co-present setting bringing an object into the domain of mutual attention may allow the showing to "pivot" (Raymond/Lerner 2014) into another action, i.e. object transfer, as observed in kindergarten sequences (Kidwell/Zimmerman 2007); gift-giving (Good/Beach 2005; Robles 2012), and collaborative scientific or technological activities (Day/Wagner 2014; Tuncer/Haddington this issue). With VMC, on the other hand, any possibility for object transfer is inhibited, and showing sequences remain focused on joint "seeing and talking".

In the analytic section below, we first discuss when and how showing sequences may be initiated at a topical boundary, or through stepwise moves from topical talk (Section 3). Though showing sequences are different from topical talk, they bear a certain similarity with it from a sequential perspective, and they can even be treated as alternatives to the introduction of a new topic at recognizable topical boundaries. But they are also inherently multimodal and coupled to the environment. This reflects on the way showing sequences may be specifically achieved as "occasioned showings" or "touched off showings", which we discuss in Sections 4 and 5.

Section 6 is concerned with the design of prefatory work involved in the initiation of showing sequences. The prefaces to showing sequences enact an object of reference as an "object for 'us' to see together". They thus do a) moral and relational work (by making relevant the type of "us" for which the object may here and now constitute a 'showable'; b) perceptual work, by framing through the subtle uses of the directive *regarde* ('look') and the verb *voir* ('to see'), the kind of "seeing-together" which is relevant for this showing; and c) sequential work, by rearticulating visuality and talk so that further talk by the recipient becomes conditional to her "seeing" what is shown (and displaying that she does), in a way that is adequate enough.

It is this distinctive and typical organization of showing sequences (preface sequence, showing/appreciating), and its orientation towards sequentially rearticulating the manipulation of an object and the talk about it, which make showing sequences a clear instance of an "object-centered sequence", while also bearing some formal similarity with storytelling sequences.

2. Data collection and corpus

We have video-recorded a corpus of naturally occurring interpersonal video-mediated conversations between family and friends, involving computer-based Skype interactions. Fourteen primary participants were recruited, and the consent of about 30 of their Skype correspondents to use their Skype-based conversations with the primary participant was obtained. The whole corpus involves a little over 40 Skype conversationalists (about 1/3 male and 2/3 female), 80 hours of recorded video conversations, consisting in 180 conversations the conversationalists made available for the study. The main configurations of active Skype conversationalists in this

corpus involved geographically distant couples or partners (4 cases), parents and adult children (5 cases), siblings (3 cases), and close friends (7 cases). After carefully parsing the corpus, we isolated 90 instances in which objects were brought and held to the camera. With once in every other conversation on average, it appears to be a recurrent practice.

The items which were made visible in these video-mediated communications were mostly clothes (worn or not), furniture and items related to interior design, multimedia devices and especially smartphones, cuddly toys, and objects related to current activities (e.g. documents in progress, objects related to domestic chores), pets, etc. A common feature of these items is that they are recognizable as relevant to familiar and mostly domestic personal territories or 'territories of the self' (Goffman 1971), i.e. domains over which the show-er is understood to have special claims and rights. An exception to that are the cases where mobile users on the move in public places were showing one another features of their current location.

3. Initiating the showing of an object as a new sequence

Showing sequences constitute a recognizable accomplishment with a distinctive form of organization. Accordingly, there are ways in which their initiation is methodically and accountably accomplished. Their placement and design bear similarities with those of topics of conversation: showing sequences can for instance be initiated as a new sequence, at a potential topic boundary, in the kind of sequential placement where "topic changes regularly appear, as a solution to the problem of producing continuous talk" (Maynard 1980:265). Extract 1 involving two close female friends is a case in point.

Extract 1

```
01  ANN     ¤°bon° bref
             °well° so
              ¤Image 1.1
02           (0.4)
03  ANN     en c'moment ça va? (.) alors eu:h
             at the moment it's all right? (.) so u:h
04  ANN     *tiens ¤(.) regarde.
              here (.) look.
05  Ann     * swift left arm movement raising index, turns body left-->
                   ¤Image 1.2
```

Image 1.1

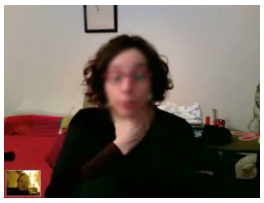
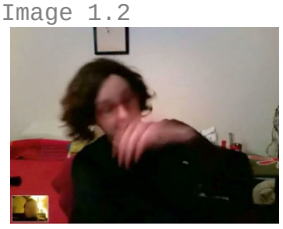


Image 1.2



The discourse marker *bon* (Line 1) indicates the speaker's orientation towards the possible exhaustion of a prior topic. In line with such an orientation, the speaker then produces a generic initial topic elicitor (Button/Casey 1984) on line 3. The placement of this item is slightly unusual with respect to the overall organization of the conversation, for it is done after some considerable amount of topical talk, after

a possible pre-closing (Line 1), rather than in the opening phase. It could be heard as marking a difficulty to initiate a relevant topic at a sequential placement in which it may be relevant.[1] Indeed, the speaker does not wait for an answer but goes on as if she were to introduce some topic herself (*alors eu:h*, 'so u:h', end of line 3). Like "so" in English, the discourse marker *alors* in initial position may preface a sequence-initiating action, and "indicate the status of the upcoming action as 'emerging from incipiency' rather than being contingent on the immediately preceding talk" (Bolden 2009:978). However, the speaker cuts short the emerging turn construction unit, and she self-repairs it into the instruction to look, line 5.

This instruction is intelligible as the initiation of a showing sequence for a) there is nothing visually noticeable on screen where she has been appearing for some time as a talking head; b) when she utters the turn on line 4 she has turned away, displaying an orientation to features of her settings which are visually unavailable to her co-participant; c) through *tiens* ('here', line 4) in initial position, followed by the directive *regarde* ('look', line 4), she frames what she is doing as occasioned by what is going on right now, thus linking her instruction to look to her turning away. These mutually elaborative features project that she will make something visible which is to be looked at by her co-participant, i.e. the initiation of a showing sequence. In sequential terms, the instruction is done as a self-repair of a cut-off topic initiation by self, which itself appeared to repair her initial topic elicitation turn (repairing the initiation of a topic by other by means of a topic initiation by self). Thus, not only is the initiation of a showing sequence relevant when topic initiation becomes a sequential concern, but showing sequences may also be produced and treated as alternatives to topical talk in such a sequential environment.

EM/CA research on topical talk and topicality has also underlined the importance of "stepwise moves" connecting what participants were talking about just before with what they are talking about right now without sharp recognizable boundaries (Sacks 1992). Showing sequences may be initiated at topical boundaries, in a way that makes them appear to latch on previous talk. Such partially "stepwise" initiations at topical boundaries appear to be particularly relevant when the previous talk involved visual concerns, as in Extract 2 below, involving Ben and Ava as brother and sister.

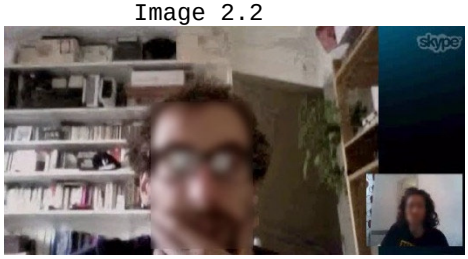
[1] As Sacks notes: In a good conversation, "what you would find is that new topics are never 'introduced', they just happen along. Though at any given point we're talking to something more or less markedly different than what we were talking about a minute or five minutes ago, it didn't happen by virtue of people saying, characteristically after a pause, "So what have you been doing?" or varieties of things that say "Let's start a new topic"" (Sacks 1992:355).

Extract 2

```
01 AVA     sur les réglages euh à faire euh (.) parfait
           on the adjustments er to make er (.) perfect
02           ^¤(1.5)^¤
   Ben       ^-----^moves camera up to adjust his 'talking head' shot
              ¤Im 2.1 ¤Im 2.2
```

Image 2.1

Image 2.2



```
03 AVA       je conseille.
             I recommend.
04           (0.4)
05 AVA       ça n'a pas changé derrière toi.
             it hasn't changed behind you.
06 AVA       je ne vois pas tes bouteilles de vin à ta gauche mai::s
             I can't see your wine bottles on your left bu::t
07           (1.5)
08 BEN       ah mais elles sont pas là
             ah but they are not there
09 BEN       elles sont derrière l'ordi [maintenant °en fait°
             they are behind the computer   now      actually
10 AVA                                  [ah mais oui
                                         ah yes of course
11 AVA       ça a bougé
             it has moved
12 BEN       ouais ouais (.) mais ça tu sais ça
             yeah yeah   (.) but this you already know
13 AVA       *¤moi regarde j'ai acheté un abat-jour
              me look I have bought a lampshade
   Ava       *moves camera to her right-->
              ¤Im 2.3
14           (2.0)*¤
   Ava       ---->*
                  ¤Im 2.4
```

Image 2.3

Image 2.4

```
15 AVA       tu [vois?
             can you see?
16 BEN          [le truc vert là?
                 the green thing there?
```

After Ben's slight camera adjustment during the silence on line 2 (Image 2.1 and 2.2), Ava expands briefly on her previous turn (line 3), and notices an absence about her co-participant's surroundings as she can now see them in the VMC frame: *ça n'a pas changé derrière toi.* ('it hasn't changed behind you', line 3). This noticing appears occasioned by the camera adjustment. In other words, participants attend to camera motions in a way that enhances the local sensitivity of their conversation

to visual considerations. A discussion of what she can or cannot see follows (lines 6 to 12), the details of which need not concern us here. After line 12 anyway, some "wine bottles-not-being-there" topic has reached a potential completion point, and a sequential opportunity opens up for the initiation of a new topic.

Indeed Ava orients to that opportunity by launching a recognizable showing sequence preface: *moi regarde j'ai acheté un abat-jour* ('me look I have bought a lampshade', line 13). It is designed with an instruction to look, and an announcement which frames the referent as new and unknown to the recipient. The referent (the new lampshade she has bought) is not only made relevant as a newsworthy 'talkable about', but also as a 'showable': the mention of it follows the instruction to look, and while the lampshade was not initially visible, she turns the camera at the start of the utterance, which projects the visual appearance of it. The camera motion is achieved during the utterance (line 13) and the subsequent 2-second pause (his not speaking then displays his alignment with her showing project), and finishes with the object visible at exactly the moment she launches her visual check *tu vois?* ('can you see?', line 15) In this case the showing of the lampshade latches on the previous talk through different tying devices. First the 'me' (line 13) in initial position frames the showing sequence as a kind of reciprocal move: whatever we were doing with 'you' before, we are now doing with 'me'. Moreover, Sacks noted that topical coherence and stepwise moves could be produced and recognized through co-class identification of relevant items in the conversation (Sacks 1992). Before line 13, the co-participants were talking about the visual disappearance of items of interior design which used to be visible or on display. In both cases, the foci of interaction are 'talkable-abouts', which, though different, are both on display in the immediate visual environments of the co-participants, the mention of which puts into play concerns with visual accessibility and noticing. With the lampshade (an item of interior design) being framed as new and there in her home, and as a showable (therefore as something on display near her) there is a strong degree of continuity between the previous topical talk and the showing sequence. By starting to move the camera at exactly the same time she initiates her showing preface, she displays her orientation to the readiness-at-hand of the lamp shade with respect to the action of showing it.

The interactional issues regarding the sequential placement of showing sequences are therefore similar to those regarding the initiation of topical talk. Topic boundaries provide a slot for the initiation of a showing sequence, as a new and different line of talk and embodied conduct is relevant. Showing sequences may even be treated as an alternative to topical talk, as shown in Extract 1. Moreover, showing sequences are often framed as occasioned by the embodied orientation of the potential show-er to her current ecology. In this respect, showing sequences bear a more specific family resemblance with a particular form of topical talk, i.e. "setting talk", in which the occasioned consideration of their shared environments constitutes a crucial resource for the co-participants to produce topical talk (Maynard/Zimmermann 1984). The occurrence of such setting talk displays the more general principle of the "local sensitivity of conversation", that is "the tendency built into every topic talk to focus on elements of the encounter's context which are situated or occur in the participants' field of perception but have not been topicalized so far" (Bergmann 1990). Sacks (1992:93, our emphasis) described such materials for conversations as "local resources":

> We can see that a vast amount of conversation is devoted to those makings that everybody *brings with them*, and that even though people don't make an altogether only topic out of these makings, they nevertheless show, again and again, that they're attending those things, awaiting their possible use, so that when something happens, then they can use it.

In the case of VMC, part of the environment is shared on screen, but great parts of what each participant brings with them are also not perceptually available to the co-participant. So, while VMC may support forms of occasioned setting talk initiated by visual noticings of things on screen (Velkovska/Zouinar 2017), in many cases a 'just discovered' local resource is not visible to the co-participant(s). It may have to be shared to realize its potential as a 'talkable-about', i.e. it has to be shown. To paraphrase Sacks on the need to turn a local resource into an "object for us" to initiate topical talk, showing sequences constitute a powerful resource to transform a discoverable, non-shared item from an "object to me" (the potential show-er") into an "object for us" (the Skype conversationalists). In VMC environments, the local sensitivity of conversation takes the distinctive form of a sensitivity to local "viewables", which is conducive to the initiation of showing sequences.

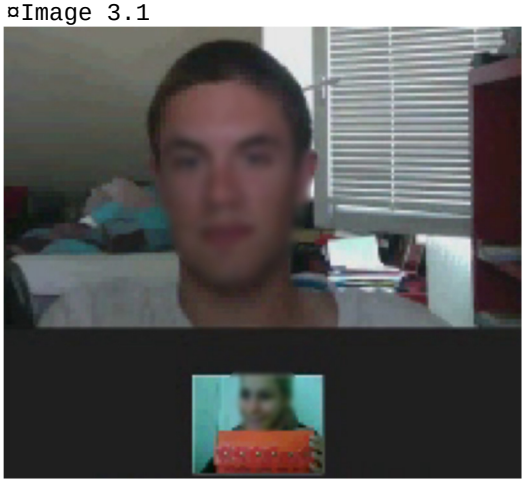
Showing sequences also differ from topical talk, because they are inherently multimodal, in the sense that engaging into such a sequence involves simultaneously attending to the talk-in-interaction *and* to the material environment. This has important implications regarding the way showing sequences might flow from topical talk without it having reached a recognizable boundary. Two configurations for this may be observed in our corpus: "occasioned showings" and "touched off showings". In the former, the showing sequence is initiated while topical talk is still relevant, but at a moment when the speaker has somehow distanced herself from it through her embodied conduct. It is then designed as a side sequence, embedded into topical talk (section 3 below). In the latter, it flows from a very particular kind of topical talk, in which some recognizable direct or oblique reference has been made to a recognizable "viewable", the showing of which can be seen as a minimal stepwise move (section 4 below). Both cases reflect on the fact that showing sequences are constitutively coupled to the environment.

4. "Occasioned showings": Initiating showings as side sequences, embedded into topical talk

In this configuration, the potential show-er displays through her embodied conduct her relative disengagement from the ongoing topical talk, though the prior turn was not closing-implicative. This relative disengagement provides her with a practical opportunity to attend to her environment and to discover there some "showable"; and with a sequential slot where she can initiate a showing as an occasioned side sequence. The two participants in extract 3 below are a couple but do not live together.

Extract 3

```
01 AMY      attends j'vais chercher mes tickets tu quittes pas
            wait I'm going to fetch my tickets don't leave
02          (0.8)
03 BOB      (si) t'es millionnaire (ça va) être cool hein
            (if) you're a millionaire (it's going to be) cool huh
04          (20)
05 AMY      mon amour?
            my love?
06          (0.9)*(0.5)
07 Amy          *reduces web window, their images appear on Amy's screen
08 AMY      en plus t'as pas vu *mon nouveau portefeuille¤
            what's the more you haven't seen my new purse
   Amy                          *brings purse in frame, closer to cam
   Im             ¤Image 3.1
```



```
            *(0.8)*(0.6)
14 Amy      *puts Bob's image in full screen
                  *second hand goes to side of purse
```

While they are talking about lottery tickets which Amy bought, she suspends the ongoing talk-in-interaction with the initial instruction *attends* ("wait", line 1), followed by an account for the break (she announces her going to fetch the tickets), and eventually an instruction for him to stay online. This suspension projects her quick coming back and the possible resumption of the topic in progress. Conversely, Bob's comment on line 3 displays his current orientation to the topic and activity in progress, and projects further talk about it. When Amy comes back, after a lapse of about 20 seconds, she produces an attention-getting summons, in the form of an endearment term, thus signaling her return and the resumption of the interaction: *mon amour?* ('my love?', line 5). Shortly after his image appears on her screen (line 6), and she gets visual cues that he is attentive.

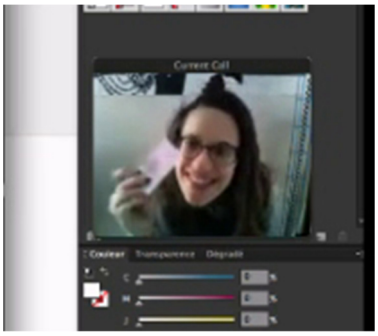
Her next turn, rather than referring back to the lottery tickets, is introduced with *en plus* ('what's the more', line 8) which may be heard here as a misplacement marker, projecting more talk not related to what precedes. It also frames what follows as somewhat occasioned, the unstated occasion providing a kind of tacit warrant for not returning immediately to the topic of the lottery tickets. She follows up with a turn-at-talk designed as an assertion: *t'as pas vu mon nouveau portefeuille* ('you haven't seen my new purse', line 8), turning the object of reference (the purse) into a newsworthy 'showable'. This turn-at-talk also does relational work: that the purse be something Bob could and should see makes him a category person with

whom showing a new purchase is a relevant activity, most probably a close friend. The way she brings it to the webcam as she speaks (Image 3.1) makes her whole move understandable as initiating a showing of the purse, in which the purse is made relevant through its being made emergent from visual incipiency, and through its appearance being designed as remedial (to the fact that he has not seen it yet, it being new, though it is relevant to him, considering their relationship). By not taking the floor at the first opportunity, and later by referring to the purse later, Bob visibly treats her actions as heralding a showing. From a sequential perspective, her embodied disengagement from the topical talk (framed as temporary) provides both an occasion for her to notice a potential showable, and a sequential opportunity to initiate the showing as an occasioned side sequence.

Extract 4, where Amy and Lucy are two sisters, involves the production of a showing as a side sequence in a related way. At the start of the extract, Amy is talking about the thesis she is currently writing

Extract 4

```
01 AMY      mon mémoire il est en arial c'est pas du arial ça.*
            my thesis is in arial font this is not arial.
   Amy                                                    *bends
   backward,
                                                           looks down
02          (0.7)*(1.0)*(0.2)*(0.3)
03 Amy           *takes hand away from face
04 Amy                *directs same hand to object on the table
05 Amy                      *noise of hand hitting table to grab object
06 AMY      *Lucy regarde
             Lucy look
   Amy      *moves upper body, face and object closer to screen-->
07          (0.4)* ¤(0.1)*(0.3)*(2.4)
08 Amy        -->*smiling face and object side by side
   Im             ¤Image 4.1
09 Amy                  *-----*brings object closer to cam
```



While at the end of line 1 the topic is not recognizably exhausted (and they will pick it up again, data not reproduced), Amy bends backward, which is an embodied way of marking a possible disengagement within the regime of visual accountability characterizing VMC, in which any move away from a talking heads configuration is potentially interpretable as a form of distancing from the current joint focus of attention (Licoppe/Morel 2012). Thus, she potentially creates a recognizable sequential opportunity for something else, and her co-participant seems to align with this by not talking in the pause that follows. In her movement backwards, she also looks away from the screen, down on her desk, and takes the opportunity to pick up

an object on the desk. It is as if her relative withdrawal allowed her to 'discover' some object on her desk as a potential relevancy. Here as well the object-oriented sequence seems to emerge in an occasioned manner from visual incipiency. Amy then brings her found object to the screen while uttering an instruction for her sister to look: *Lucy regarde* ('Lucy look', line 6). The sister's name in first position works as an address term which summons the recipient's attention while selecting her as next speaker (Lerner 2003). The subsequent instruction to look makes further talk conditionally relevant to the visual grasp of the object. From a multimodal perspective, the unannounced visual appearance of the object is co-extensive and synchronized with the production of the whole utterance. This is an economic way to initiate a showing sequence in which the recipient is framed as able to recognize the object on the basis of some prior shared history, i.e. an "evocative showing" (Licoppe 2017).

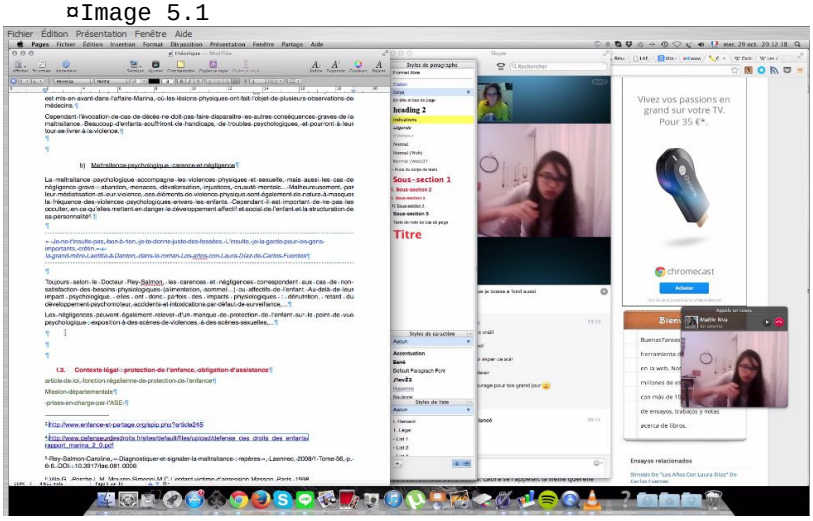
In summary, these two cases of "occasioned showings" are initiated as side sequences, when a relative embodied withdrawal provides an opportunity to look away, a visual occasion for a "showable" to be discovered, and a sequential slot to talk about this occasioned noticing. It shows the local sensitivity of the video conversation to the possible emergence of showing sequences through occasioned noticings. It also provides us with a sense of the way showing sequences are inherently multimodal and different from topical talk, even though they can be used as an alternative to it at topical boundaries.

5. "Touched-off showings": Making a showing relevant through the mention of a 'viewable' item

For the same reason, showing sequences do not generally flow from topical talk in a stepwise fashion, unless the talk makes salient visual concerns and potential "viewables". In the latter case, there seems to be a preference for showing the viewable which is talked about: this phenomenon we call "touched-off showings". Consider Extract 5 below, involving two female friends, Bess and Anna.

Extract 5

```
01              ¤(1.0)
   Im           ¤Image 5.1
```



02 BES beh moi j'pense que j'vais aller dîner
beh me I think I'm going to go for dinner
03 (1.0)
04 ANN okay (.) ba::h tu m'rappelles après?
okay (.) bah you'll call me back after?
05 BES ¤alors t'as mal?
so does it hurt?
Im ¤Image 5.2

06 *(2.0)*¤
Ann *-----*stops, looks up the screen and smiles
Im ¤Image 5.3

07 ANN *¤ça- no:n là j'ai pu mal *¤mais ça fait un peu ¤f-
it- no there I don't hurt any more but it feels a bit c-
08 Ann *arm to webcam *moves webcam towards foot
Im ¤Image 5.4 ¤Image 5.5 ¤Image 5.6

09 (.)
10 ANN *j'sais pas si t'arrives *à voir?
I don't know if you manage to see?
Ann *tries to hold foot visible and points

In this video call, Bess initiates pre-closings (Schegloff/Sacks 1973) with *beh moi j'pense que j'vais aller dîner* ('beh me I think I'm going to go for dinner, line 2), which provides sequential opportunities to come up with new topics of conversation. After Anna has agreed to the pre-closing (line 4), Bess takes the sequential opportunity by asking a new question: *alors t'as mal?* ('so does it hurt?', line 5), a yes/no question referring to something in the experiential domain of the recipient, and which therefore works as a "topic-proffering" (Schegloff 2007:169-171). The French *alors* in initial position functions like "so" in English, to mark the action initiated as relevant and pending (Bolden 2009). Through her question, Bess displays prior knowledge (that something might have happened to Anna which might still be hurting), entitlement to ask, a strong expectation of relevance and that the recipient will understand what this is about. The incipient character of such a topic initiation may find its origin both in the fact that the recipient has just undergone something, that this is common ground for them, and also in Anna's current activity,

since she visually appears to be busy away from screen (e.g. Image 5.2), and in the zone of her feet. Bess will indeed display an understanding that the question deals with the procedure itself – being tattooed – and more precisely the pain which might accompany its aftermath. She provides a type-conforming response, with an initial "no", an account, and last the beginning of an elaboration about another aspect of what she feels (line 7). The elaboration is made relevant by the fact that "topic proffering" enacts a preference for elaborate responses and expansions (Schegloff 2007: 171).

However, the response is not just verbal. As the recipient provides her on-topic response, she picks the camera and moves it towards her feet. At the moment her tattooed foot becomes visible, she is starting to describe her particular sensation, and she cuts this topical expansion, and the actual word, short. By ending the talking head arrangement with her camera motion, Bess makes visually accessible and relevant to the co-participant something which was not visible before. Since this does not appear to illustrate what she is talking about topically (her feelings) this can be treated as the initiation of a showing sequence. The cut-off of the topical talk at the moment she was going to come to her point (the feeling other than pain which she is experiencing) provides in itself a cue that such topical talk may not be relevant any more. In other words, her actions in the visual field (turning the camera from her towards her feet) and in the talk (cutting short her topical expansion), and the way they are temporally organized to fit with one another (the visual appearance of her tattooed foot coincides exactly with the cut-off in her topical utterance in progress) are mutually elaborative: they provide for a kind of "multimodal contexture" (Mondada 2016) from which a showing sequence recognizably emerges. The following inquiry on line 10, purporting to determine if Anna "can see", retrospectively confirms that the focus of the interaction is not the topical talk any more but the action of seeing something, and the subsequent talking about it dependent on what the recipient has been able to see in it, i.e. to manage a showing sequence.

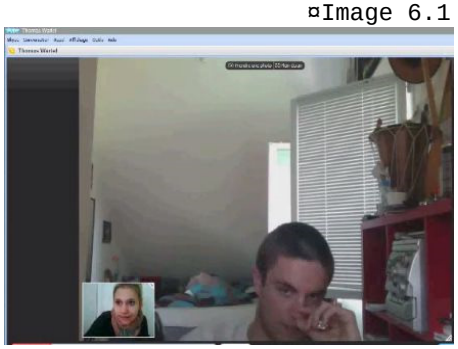
The potential 'showable' has not been mentioned in any way yet. However, the showing sequence is initiated in a fluid way, without any explicit cues and as a kind of incipient action. Whatever the showable may be, it is something which can be made relevant from the previous topical talk with such a minimal stepwise move. Since the previous talk was about the implementation of a new tattoo, that a tattoo is bound to be visible and displayed, at least on certain occasions, the kind of potential showable which flows from such talk with minimal effort is the tattoo itself. Its 'showability' is furthermore enhanced by the fact that it is new, and that it is a joint topic of interest (it is the potential show-recipient who first inquired about the tattoo procedure). Conversely, the fact that it is indeed the tattoo which is made visually relevant here retrospectively confirms the initiation of the showing sequence as a minimal stepwise move. The way the showing sequence is achieved with respect to what was talked about before and the relevance of a particular item as the 'showable' being put in play here and now are also mutually emergent features of the activity in progress.

Making topically relevant something which can be understood as a potential 'showable' seems to provide an opportunity and a warrant to initiate such a showing in a minimal stepwise fashion. Part of what provides for this possibility of a showing sequence to flow swiftly and efficiently from this kind of topical talk, is that the relevant item is recognizable as ready-at-hand with respect to the action of showing

it (either by bringing it to the camera or by turning the camera). It suggests that the more or less direct 'ready-at-handedness-for-showing' of a talked about item enhances the local sensitivity of the video conversation to the initiation of a showing sequence. This also seems to be the case in the next extract, involving the same two participants as in Extract 3.

Extract 6

```
01 AMY      peut-être *tiens j'vais ¤r'garder s'il y est ¤sur e-bay
            maybe hey I'm going to look if it's on e-bay
   Amy                *turns head to her right
   Im                       ¤Image 6.1    ¤Image 6.2
```



```
02 AMY      [ça ça]
             it it
03 BOB      [eh j'suis] trop content d'la ceinture
             hey I'm so happy with the belt
04          (1.5)
05 AMY      tu l'as là?
            you have it here?
06          (0.7)
07 BOB      ouais
            yeah
08          (0.6)
09 AMY      attends vas-y montre
            wait come on show
10          (3.4)*(0.9)
11 Amy          *clicks on skype window
```

Amy's announcement of future action regarding their previous topic *j'vais regarder s'il est sur e-Bay* (I'm going to look if it's on e-Bay on eBay', line 1) can be heard as a cue that she will temporarily disengage from the conversation, and Bob takes it as a sequential opportunity to change topics. As Amy takes the floor again, so does he on overlap to display his enjoyment of a new piece of clothing: *eh j'suis trop content d'la ceinture* ('hey I'm so happy with the belt', line 3), which works as a "unilateral topic initiation" (Button 1991). However, with the indexical expression "the belt", he shows that he knows that she knows about this belt. The initial position "eh" works as an attention-getting device and misplacement marker and makes his following subject-side assessment of the belt as occasioned, as if he had just thought about this relevant conversational item, thus accounting for it being volunteered as a topic at that particular junction. Finally, the design of the assessment emphasizes the strength of his feeling ('so happy'), and projects some further elaboration. Thus, a variety of devices and markers accountably introduce the belt as a relevant "talkable-about". They also frame the belt as relatively new and newsworthy, for it is for new purchases that one may display eagerness to express pleasure

in having them. In response, Amy initiates a pre-sequence, literally a pre-(showing) request sequence, thus displaying a shared orientation towards treating this object as a show-able indeed. She first checks that he has the belt with him right now, i.e. that it is ready-at-hand to be shown with *tu l'as là?* ('you have it here?, line 5), and once he has confirmed (line 7), with an instruction to show: *attends vas-y montre* ('wait come on show', line 9).

The latter instruction is made of three successive imperatives. The first one, 'wait', signals that her potential answer to his assessment is made conditional to her seeing the belt and is therefore to be delayed until the belt has been adequately shown. Imperatives project compliance and display maximal entitlement (Curl/ Drew 2008; Craven/Potter 2010). Choosing a directive over other requests formats enact the relevant action as part of an ongoing and jointly relevant project (Rossi 2012). Therefore, the last component 'show' retrospectively marks the showing of the belt as something which has been made relevant by the previous talk, even though it was not mentioned explicitly. Even more strikingly, the second component "go ahead" frames the showing as something which was already projected in his initial assessment of the belt, and to the achievement of which she collaborates, so that the showing sequence and the belt have become a project "for us". She thus retrospectively provides an understanding of his mention and assessment of "the belt" as making relevant a project to show it. A showable is thus an object a) that can be displayed and visually appreciated; b) that is not currently visible or visually available but can be viewed as 'ready-to-hand' with respect to manipulating it into visibility; and c) which can be understood and constituted so that sharing it visually may be a relevant joint project "for us". Through her actions, Amy display that mentioning a potentially recognizable 'showable' is enough to make the initiation of a showing sequence of the said object a relevant and expected course of interaction here and now. In other words, the mere (topical) mention of a 'viewable' (conditions a and b) in a way that it may be recognized as a potential 'showable' (condition c) enhances the local sensitivity of the video conversation to the initiation of a showing sequence, and turns such an achievement into an accountable and expected outcome.

Such a sensitivity to the visual implications of a talked about viewable displays in another way the local sensitivity of video conversations (and probably also face-to-face conversation though data are needed to substantiate this hypothesis) to showability, and which could be expressed as a Sacks-like maxim: "if some item is mentioned so that it can be understood as a 'showable', then it is relevant to show it here and now". To be understood as a 'showable', the item of reference has to be framed as a 'viewable', i.e. something known and experienced to be close to the speaker and to lie beyond the "evidential boundaries" which are enacted in the current interactional setting, but which is also ready-at-hand to be made visible in the current situation. Finally, for a 'viewable' to be understood as a 'showable' it has to be enacted as a joint concern for the participants, i.e. an object "for us", the joint visual consideration of which becomes then interactionally meaningful. "Touched-off showings" therefore point to a particular form of articulation between visuality and talk. The speaker who refers to an object which can be considered as a potential 'showable' in the sense defined above, may be held accountable for not showing it. Such an orientation about what the other can see of what 'we' are talking about may be a more general feature of co-present interaction, valid both for VMC and co-

present interaction, but more readily displayed in the former because of the constitutive asymmetries of visual access which characterize it.

6. Prefacing a showing

6.1. Prefatory work and 'ostensive epistemics'

Let us return now to the notion of showing sequences which we have used rather loosely until now. In what sense should they be construed as sequences, and more specifically, in line with the topic of this special issue, as 'object-centered sequences'? Looking back to the situation in which a showing is initiated in a sequential slot where the initiation of a new topic is relevant, we see that in most cases the initiation of a showing involves some preparatory work. Showings involve the display of an object and talk about it, but any kind of object can be recruited and described in a potentially infinite number of ways. In the course of an interaction in general (and in the particular case of showing sequences here), when objects are referred to, they are dynamically assembled for the occasion, to be apprehended under a certain relevant perspective (Hindmarsh/Heath 2000a). Initiating a showing sequence involves precisely the performing of such an assemblage in a recognizable, public fashion. This can be done very explicitly through an elaborate preface, as in Extract 8 below, involving Lin and Bea as girlfriends and a couple.

Extract 8

```
01 LIN       alors (.) (biche) je voulais te montre:r *mmppfff hh hh
             so    (.) (honey) I wanted to show you
   Lin                                                *straightens up
02           *(3.0)
03 Lin       *puts on her coat
04 LIN       *et te demander s- *s'il te plaît ou pas
              and ask you w- whether you like it or not
   Lin       *bends down, face appears in frame
   Lin                        *straightens up, face disappears
05           (0.9)
06 BEA       le manteau?
             the coat?
07           (0.7)*(0.7)
08 Lin            *moves down vertically to show coat
```

A preface like *alors (.) (biche) je voulais te montre:r* ('so (.) (honey) I wanted to show you', line 1) can be heard as doing four things. First, it provides a slot for the show-recipient to (dis)agree with the projected showing, or here an opportunity for the show recipient to request a clarification (line 6). Second, it projects some embodied conduct in which something will be made visible in a way that is made intelligible with respect to what is said, such as putting on a coat in line 6, and especially her embodied display of how she looks in the coat (line 8). The recipient's clarification question with the candidate answer *le manteau?* ('the coat?', line 6) provides evidence for the way Bea is inspecting the screen in search of meaningful congruences between what she can see there and the current talk. Showing prefaces are oriented towards such a member's concern with visual and aural congruence. This also puts into play the issue of 'ostensive epistemics': The less the recipient

may be expected to know about the showable, the more preparatory work may have to be done to introduce the showing. The preface design enacts a kind of "ostensive epistemic stance": it explicitly frames the recipient as unknowledgeable with respect to the showable. Third, the preface provides for a particular articulation of visuality and talk. It both projects talk as conditional to the viewing of the showable (and therefore postpones it until the manipulation of the latter in a show position) and provides some relevance constraint (the talk should be relevant in some way to the viewing itself). Here the preface projects a visual apprehension of the showable oriented towards its assessment, and an actual assessment: *te demander s- s'il te plait ou pas* ('ask you w- whether you like it or not', line 4). Fourth and finally, the preface turns the showable as an object relevant to both participants. It enacts a kind of 'relational contexture': the action of initiating the showing of this particular showable at this particular moment makes it relevant for "us", and correlatively the kind of "us" for which it may be relevant warrants the initiation of the showing. Here the showing of my (Lin's) new coat to determine whether "you" (Bea) like the way I (Lin) look in it is relevant for "us" as a couple. It is the kind of things that couples do, and conversely, since "us" as a couple is an omni-relevant categorization in such conversations, it is a resource which can be relied on to warrant the initiation of the showing of the coat in this particular way.

Another way to preface a showing is to combine directives (often "look", present in two thirds of the prefaces in our sample, more rarely "wait") with an utterance pointing to a relationship to the object. Consider the following, an extended version of Extract 1.

Extract 1 (expanded)

```
06  ANN     ¤°bon° bref
             °well° so
              ¤Image 1.1
07           (0.4)
08  ANN      en c'moment ça va? (.) alors eu:h
             at the moment it's all right? (.) so u:h
09  ANN      *tiens ¤(.) regarde.
              here (.) look.
10  Ann      * swift left arm movement raising index, turns body left-->
                    ¤Image 1.2
```

Image 1.1

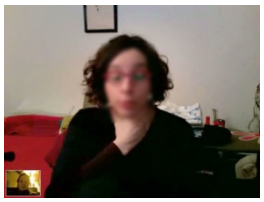
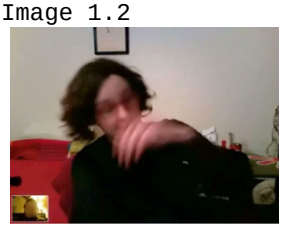
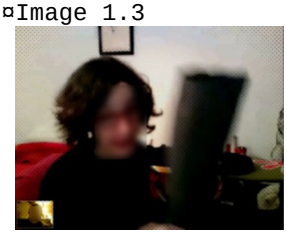


Image 1.2



```
             *(1.0)*
11  Ann      *-----*bends down, disappears from image
             (1.0)*(0.4)*
12  Ann           *back in image
13  Ann                *brings boot in image
```

14 ANN parlons d'truc de fille¤
let's talk about girl stuff
Im ¤Image 1.3



In this initiation of a showing, the prefatory work is achieved through the instruction *regarde* ('look', line 4), the embodied work (turning back and away from screen and reappearing with an object in hand), and then a proposal to talk (line 9). The proposal frames the talk related to the showing, and hence the showing itself, as a kind of joint project which would be beneficial for both participants (Couper-Kuhlen 2014; Clayman/Heritage 2014). It also does categorization work, since talking about what is made relevant here is stated as the kind of things girls (and more specifically female friends) do together. The proposal enacts a slightly less steep epistemic gradient than in Extract 9 (below), for the showable is not mentioned explicitly, and the recipient is framed as able to recognize it for what it is. Moreover, the fact that it is the kind of things girls talk about together operates as a resource to narrow down the field of possibilities. The verbal part of the prefatory work can also be reduced, as in Extract 4 above, where it is limited to 'Lucy look' while bringing the object to the fore. It can disappear altogether in some instances, in which something is just brought to the screen without any accompanying talk (for an example, see Licoppe 2017:78-79). Such a collapse of the verbal part of the prefatory work displays participants' orientation towards ostensive epistemics. It enacts an epistemic stance in which the recipient is framed as knowledgeable enough about the item in play both to recognize it, and to recognize it as a showable, and as being able to determine by herself how to apprehend it. So, the design of the verbal part of the prefatory work is highly sensitive to the epistemic statuses of the participants with respect to the potential showable.

6.2 The directive *regarde* ('look') and its implications in the initiation of showing sequences

Except in the case of a complete elision of its verbal component, the initiation of showing prefaces often involves the directive *regarde* ('look'). This is the case in about two thirds of the cases collected in our corpus. The directive itself may sometimes constitute the bulk of the preface as in Extract 3 above.

Participants usually make a difference when they initiate such showing sequences between *regarder* (to look) and *voir* (to see). The first verb is regularly used as in instruction in the initiation of the showing, while the second surfaces in a different way, for instance in cases of trouble. In Extract 5 above, when the participant brings her foot to the camera, and she expresses her uncertainty regarding the way her foot is visually displayed for the camera, she formulates it as 'I am not sure you can manage to ***see*** it'. Seeing is thus treated as an accomplishment, in a

way which resonates with Ryle's philosophical analysis of *to see* as a verb of success (Ryle 1954). One has to *look* in order to, and the use of *regarde* as a directive in the initiation of showing sequences aims at securing the recipient's compliance in striving to see what might be seen. Since the instruction to look is usually produced while the recipient is already looking at the screen, its point is not merely that the recipient looks, or goes on looking (for instance to keep on gathering sense impressions), but to look so as to *see*. And also to see something in a certain way, not only see but *see as*, for showing prefaces frame the way a potential show-able is to be seen and talked about. The kinds of *looking* and *seeing* (and also of showable) which are made relevant in the preface, and which are to constitute a public phenomenon are a local accomplishment, dynamically assembled for this particular occasion. The instruction to look, then, does two things. First, it suspends the kind of *looking* relevant when doing topical talk in the VMC settings; second, it makes relevant a different kind of looking oriented towards eventually seeing the showable in a certain way.

But why are such instructions sometimes produced and sometimes not? It is interesting to note here that they can be placed in two different positions in the initiation of the showing sequence. *Regarde* can be introduced as the first item pertaining to the preface itself, before anything has been said about the showable, as in Extract 1 above, or as a final one as in Extract 9 below, where Tom and Jay are two male friends.

Extract 9

```
01 TOM      *hhh* o::h j'ai rach'té ça va t'r-*
            ***hhh  o::h I bought again it will r-***
   Tom      *---*turns head behind          *turns to Jay
02 TOM      ça va t'rapp'ler des *souv'nirs
            ***it will remind you some memories***
   Tom                             *stands up, walks-->
03          (0.4)
04 TOM      j- ça m'manquait¤
            ***i- it was missing to me,***
   Im                           ¤Image 9.1
```

```
05          (0.8)*
06 Tom      ---->*bends to pick up pot
07          (1.0)
```

```
08 TOM       reg*ga:rde *c'que j'ai *ach'té: ¤
             llook at what I bou:ght
   Tom          *raises with pot
   Tom                *turns full body to screen
   Tom                              *brings plant in frame, walks back
                                     to computer
   Im                                        ¤Image 9.2
```

The showing is announced and the showable framed as something which indexes shared memories (lines 1-2). As Tom finishes this part of the preface, he rises and moves away from screen for a brief moment to go in the next room, while Jay remains silent and turned to the screen. As Tom is getting back he provides the directive to look (line 8). Two things are notable here. First the directive is not just to look, but to 'look at what [he has] bought', i.e. to look at a showable which has been framed and "made show-worthy" before. Second, the utterance is timed so that it ends when the actual "showable" (a plant) becomes visible to Jay. In this way, the design and placement of the visual directive target the precise moment where the show-recipient should be able to "see" the 'showable' in the way the preface has framed it, projecting the production of a relevant action at that very moment, to be done as much as possible as an "unwitting" response (Webb et al. 2013). This is characteristic of visual directives in final position.

This helps us understand what visual directives may do when produced in first position instead. First-positioned instructions often take the streamlined form "look", rather than "look at X" (see for instance Extracts 1 and 3), since the potential showable has not yet been mentioned or introduced as show-worthy. The instruction then projects that a proper "looking", different from the way participants were looking before, is relevant in the future. It instructs the recipient to keep scrutinizing the screen for the moment something relevant might be seen in an adequate way. It therefore introduces an obligation to look for the lapse of time the show-er will need to put the showable on display, and during which irrelevant images might be produced (in which there is nothing to be "seen" in a possibly relevant way, neither the co-participant as a talking head, nor a recognizable showable). The initial position directive anticipates potential trouble related to the irrelevance of what will be visible on screen while the showable is brought into a show position, while projecting the occurrence of something to "see" at some later point.

7. Conclusion: Showings as object-centered sequences

Sequences are defined rather generally as courses of action "that have some shape or trajectory to them" (Schegloff 2007). In a sequence, the accomplishment of some action projects some form of conditional relevance with respect to the actions which may follow as 'nexts'. Some sequences may be shaped and recognized through an ideal-typical structure which is both context-dependent and context-free. A sequence of storytelling typically involves, e.g., for a prefatory adjacent pair, a telling, and some appreciative turn from the recipient displaying how she has "heard" the telling. How can we characterize what we have called "showing sequences" so far?

Showing sequences may be initiated as a new 'thing' when a new topic is relevant, and when it is the case, the launching of the showing is done as a recognizable course of action which may work as an alternative to (and therefore somewhat distinct from) the introduction of a new topic. Such showing sequences are characterized by an ideal-typical structure which is context-dependent and context-free, and which bears some formal resemblance with the sequential organization of story-telling (see Sacks 1992). This set of features also makes them accountable as sequences in their own right: preface sequence, manipulation of the showable object into a show position, and appreciative talk displaying how the recipient has "seen" the showable. However, where story-telling can be accomplished and recognized through, and as, talk-in-interaction, showing sequences are multi-modal through and through. They are "environmentally-coupled" (Goodwin 2007) sequences which attend to, and operate on, the lived visual ecologies in relation to talk as a constitutive feature of their accomplishment as such.

There is a formal similarity between showing sequences and storytelling sequences. They both involve an organization of the type preface sequence, development, appreciative sequence. The comparison should not be pushed too far. These are distinctive sequences doing different things, and for instance, while stories make relevant "second stories" (Sacks, 1992), showings do not seem to make relevant "second showings", at least usually. It makes some sense at the sequential level though. Part of what prefaces to showing sequences achieve is similar to story prefaces: a) they offer a sequential opportunity for the recipient to align with or disalign from the projected course of action; and b) they frame the showable as an object "for us" and to be "seen" (together) in a certain way (for stories, they frame the telling itself and how to hear it).

But showing sequence prefaces operate in a distinctive way on the articulation of visuality and talk-in-interaction. They make further talk from the recipient conditionally relevant (both sequentially and topically) to the manipulation of the object in a "show position", and to her being able to "see" the showable in an adequate way (as framed in the preface). There is still some degree of analogy with story-telling here, for in both cases the preface postpones further talk from the recipient and makes it conditionally relevant to prior actions by the initiator (telling her story or showing something). But while the preface to a story-telling works to suspend the turn-taking organization while enacting a particular way of "listening" (different from the one embedded in the turn-taking system), the preface to a showing operates on the articulation of visuality and talk, suspends the form of "looking" which is relevant to conversational talk (in the case of VMC, the talking heads organization), and enacts and makes relevant a distinctive way of looking at and seeing a

given showable, which are assembled for the purposes of this particular occasion. It is in this sense, and to account for their environmentally-coupled character, that it may be meaningful to describe showing sequences as "object-centered sequences".

We rely on the work done in linguistic anthropology about storytelling (Ochs/ Capps 2001) to describe the way showing sequences unfold along five dimensions: show-ership, showability, linearity, embeddedness and morality/relationality. Based on our analysis of the sequential organization of showings, and on their relative parallelism to storytelling sequences we can construct a similar multi-dimensional space of relevance for showing sequences, along five dimensions.

'Show-ership': This dimension aims to distinguish instances in which one participant acts as the show-er to relatively passive recipients, from those in which the recipients get highly involved in the initiation and production of the showing, for instance by making requests to initiate the showing or change the way the object is shown. In the latter case, the status of show-er appears to be more evenly distributed with respect to cases where the potential show-er seems to do most of the work. Moreover, in multi-participant settings, shower-ship may even be more distributed with a different participant manipulating the object, and another the video frame (Licoppe et al. 2017).

'Showability': Some objects appear to be highly showable, and to require little or no prefatory work, while for others, the relevance of the object as a showable needs to be established through extensive prefatory work. There are also different ways to frame the relevance of the showable: because it can be associated to something new in the life of the show-er (which the recipient is not supposed to know about), or because it is something which indexes shared knowledge and experiences (which the recipient is supposed to know about). We have called the former 'informative showing sequences' and the latter 'evocative showing sequences', and shown that the design of showing prefaces is highly sensitive to such "ostensive epistemics".

Embeddedness: Showing sequences and their specific visual concerns can differ according to the way they latch on previous topical talk. At one extreme they can be initiated as separate from ongoing talk, as a new type of sequence in which the showing itself becomes the focus of the interaction (low embeddedness). At the other, they can be initiated through stepwise moves, so that they appear to latch on previous topical talk (often having a visual character) or as "touched off" sequences, after allusions to a potential showable (high embeddedness).

Linearity: Some showings are highly linear, with the show-er proposing a particular and single perspective on the showable, with the option for the recipient to align or disalign. In non-linear showing sequences, the perspective under which to view the showable (and sometimes the showable itself) is shifting in the course of a sequence. It is not defined initially but emergent, discoverable, and collaboratively discovered as the showing sequence unfolds (for examples, see Licoppe/Morel 2014).

Morality/Relationality. Through their very production, showing sequences involve recipient design. When turning an object initially available only to the show-er into an object "for us", the recipient is enacted as someone for whom it is relevant to show and talk about this object, the particulars of which index some relationship to the shower (what "us" may mean in this particular course of interaction). Through

the mediation of the showing sequence, some membership categorial pairing becomes salient. Since seeing is a verb of success, and since the purpose of sowing sequences is to "see together", showing sequences also operate as a kind of relational bid which may ratify, fail to ratify, or allow to renegotiate the "us" thus initially enacted.

This opens up the study of showing sequences in very different settings to systematic comparative analysis. The relationship of showing sequences with some foundational orientations in the articulation of visuality and talk makes this a particularly worthy enterprise. The organization of showing sequences in VMC, and in particular their initiation, with phenomena such as "touched-off showings" (where the mention of a "viewable" makes a showing salient and relevant), or the sensitivity of the design of prefaces to showing sequences to "ostensive epistemics" (what the recipient may know about the "showable" in relation to how it may be "seen"), suggest that a multimodal version of Sacks' general "orientation towards the co-participant" in human interaction might operate in the visual domain, in which talk should be designed with an orientation towards what co-participants can or cannot see. Since in VMC the domain of mutual visibility is constrained by technology, VMC offers many opportunities for showing things and occasions for the operation of that sensitivity to what the co-participant can or cannot see to become a demonstrable feature of the ongoing interaction. One can surmise that such a general orientation also operates in co-present interaction, but because the domain of expected mutual visibility is much greater, co-present situations offer less opportunities than VMC to display this visual version of the 'orientation towards the co-participant'.

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