The Intersubjective Objectivity of Learnables

Ali Reza Majlesi

Abstract This chapter delves into the theoretical underpinnings of praxeological and dialogical research on the emergence of opportunities for learning in teacher–student interactivities. First, I introduce the emergence of objects of learning as a social phenomenon; then I argue for the intersubjective–intercorporeal understanding of those objects as emergent learnables in classroom talk in their immediate contextual and interactional environments. Two sequences of classroom activities in a Swedish as a second language classroom are presented and analyzed from a phenomenological–sociological view on intersubjectivity. The analysis highlights the significance of a dialogical and praxeological approach to the study of learning/teaching activities, and underscores that attending to intersubjectivity includes paying attention to corporeal acts in the procedure of orienting to, and showing understanding about, learnables. The chapter concludes that, in order to understand teaching/learning behaviors, a detailed analysis of participants' actions in their interactivities is necessary. More specifically, in all talk-in-interaction (and particularly in classroom talk, with which this study is specifically concerned), the objective reality of linguistic expressions – their forms, and their functions – is accomplished, situated and embodied, and is thus reflexive and indexical in nature. This may suggest that researchers abstain from the dichotomy of the subjective–objective reality of a learnable in favor of the possibility of considering the intersubjective objectivity of a learnable as what is accomplished in real time in a social activity.

Keywords Intersubjectivity · Intercorporeality · Ethnomethodological conversation analysis · Multimodal interaction · Learnables

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1 Introduction

This chapter is about how linguistic objects (or any other objects for that matter) are understood as learnables and are studied as social phenomena from dialogical (Linell 2009) and praxeological (Garfinkel 1967) perspectives in the context of language teaching/learning in classroom interactions. I first lay out a socio–phenomenological approach to learnables, define an overarching dialogical perspective toward social interaction, and then argue that learnables be understood as *intersubjectively* constructed social phenomena. Based on these theoretical backgrounds, I discuss some principles of an analytic method in the studies of learnables drawing also on Ethnomethodological Conversation Analysis (EM/CA) (Garfinkel and Sacks 1970/1986) and underscore what has been argued for during the past 25 years or so (see e.g. Markee 1994; Firth and Wagner 1997). By anchoring my arguments in empirical data from a Swedish-as-a-second-language classroom, I also demonstrate how learnables can be studied from an EM/CA analytic approach. Based on empirical analyses of two examples, I show that learnables are emergent objects whose objectivities are worked out in the organization of social activities as behavior or actions that are intersubjectively shared *in situ and in vivo*. My aim is thus to argue both theoretically and practically that the objectivity of anything made relevant and treated as learnables depends on how they emerge and are used in social practices. As a consequence, the chapter highlights the significance of social context and social interaction for the sense-making of learnables, and *just how* the circumstances of their occurrences are socially constructed, and *how* these circumstances build grounds for the learnables' current intelligibility and possible future usage.

1.1 The Statement of the Problem

The nature of things (or 'objects') has been a popular topic in philosophy, wherein it is treated as a metaphysical question, meaning that the question of 'what a thing is' is at the core of philosophy (Heidegger 1967, p. 3). In sociology, the issue of social objects, as sociological 'things', has long been a topic of research as well (Durkheim 1915/1976). The questions in sociology have touched upon how social engagement affects and shapes the very essence of things, and their values, and also how human beings understand them (Durkheim 1897/1951[1]; cf. Garfinkel 2007). There are also studies in cognitive anthropology (e.g. Hutchins 1995) and social anthropology (e.g. Ingold 2007) that have taken an interest in the exploration of the perceptual, cognitive, communicative and practical engagement of humans in making sense of more concrete objects and things in social activities. And within EM/

[1] Durkheim in his seminal work *Suicide* (1897/1951, p. 37) states: "Sociological method as we practice it rests wholly on the basic principle that social facts must be studied as things, that is, as realities external to the individual."

CA, there is also considerable interest in the significance of artifacts and tools in the organization of human activity and the design of human actions (e.g. Koschmann et al. 2007; Ingold 2007; Lindwall and Lymer 2008; Hindmarsh et al. 2011; Koschmann et al. 2011).

In this chapter, however, we concentrate on things that we learn or apparently orient to as learnables that are pedagogical phenomena in the shape of "*new*" forms, actions and practices. As far as learning is concerned, if we agree that learning something entails some 'changes' in our action, or showing change in our behavior (Gross 2010), which will become manifest in our orientation and the use of that "thing" in our action, there seem to be different answers to the question "what is that *thing* we learn (or orient to learn)?". From a cognitive perspective, the "thing" seems to have a double existence. One form of existence is outside of the body and mind. Its existence is "*out there"* like a concrete object, something that we *can perceive and perform*. The other form of *that* "thing" is in our mind, something that we perceive and *can potentially use in our behavior* (Anderson 1995). So, "*things*" out there may influence the human mind, human cognitive development, conceptualization, and intelligence (cf. Vygotsky 1978), and we learn them and perform them as if they exist in two different spheres. We are exposed to them first as objective realities/behavior and then we realize them in our subjective meaning/understanding through learning procedures/behaviors/practices, etc. The point of departure is from this double locus of "things", how we recognize the simultaneity of subjective meaning and objective behavior through which we practice things as learnables, show them in our behavior, teach them, learn them, etc. In other words, the learnability of things (i.e. their thingness, their objectivity) is, on the one hand, part of the particulars of that object, inherent in it, which exists out there as an objective reality. On the other hand, such a learnability is only realized as part of our everyday experience of those particulars (our subjective understanding). The question is then: "how do we orient to learnables, i.e. recognize them, understand them and also learn them subjectively as well as objectively?". To answer this question, I intend to argue, not only for the simultaneity of subjective–objective realities of learnables, but also for the non-existence of such a dual process in reality in social practices. As a solution, I argue then for the significance of studying how learnables and their sense and functions come about in real time as participants in any learning activities orient to them in practice. To this end, I make use of the concept of intersubjectivity (Schutz 1932/1967, 1975; cf. Husserl 1913/1983, 1913/1989) and argue for the intersubjective objectivity of learnables. I then draw on a dialogical approach (Bakhtin 1981, 1986; Linell 2009) to language learning situations and lay out some principles for the analysis of learnables in classroom interaction.

2 Intersubjectivity and the Emergence of Learnables

In what follows, I draw on socio-phenomenological and dialogical approaches to frame my discussion of how learnables may be perceived, understood and analyzed as social phenomena. These approaches that seemingly come from two different traditions nonetheless converge substantially and build up a common ground for a social–interactional approach to learnables.

2.1 A Socio-phenomenological Approach to Learnables

Everything is always part of something, in the middle of something, or part of a 'field' (see Merleau-Ponty 1945/1962, p. 4). So, the first exposed layer or facet of an object is its appearance against a background, noticeably different from its context, as we perceive it differently, i.e. how the object is in its surrounding, in relation to other things, arranged and contextualized as part of a larger whole with certain potentialities (on affordances, see Gibson 1979; on figure-ground, see Hanks 1990, *passim*; and Goodwin and Duranti 1992: 9).

The emergence of an object, and how it becomes a learnable, may therefore be examined in two ways: first, it is the way that it is lodged in its context, in its network of perceived (physical, social and verbal) relations. Second, it is the point of view of the users/members/participants of/in a setting toward *that* object in *that* context, i.e. how an object is seen, heard, received or responded to, and thus accounted for in a certain way (see Wittgenstein 1953/2009, p. 207 on the phenomenon of seeing something *as*).

In other words, learnables may be defined as the result of a sense–experience of participants in social activities in which they form a natural interpersonal reciprocation of experiences to apprehend what a learnable is in the presence of self, and others on that particular occasion (cf. Husserl 1989, pp. 219–222, §53; Schutz 1975, p. 50). The meanings and functions of learnables, thus, if commonly understood as what they are in a community of knowledge and practice (see Schutz 1975; see also Wenger 1998), should not be based merely on the single stream of individual consciousness. This requires some transcendental constitution which in phenomenology is considered as 'a unity of a higher order', as shared and also recognized *intersubjectively* among 'persons who are in agreement' (see Schutz 1975, p. 51; cf. Husserl 1983, pp. 363–364, § 151).

Like any other phenomena, what learnables are corresponds to how they are apprehended and agreed upon as intersubjectively determining their meanings and validity (cf. Heidegger 1967, pp. 35–36). That is, their objectivity (their commonsense meaning, their use, their understanding, i.e. their learnability) is understood only socially in a natural correspondence of things, and people in their relations as a *sine qua non* for the learnables' existence. This social relation is based on the exchange of social actions. Thus, one could say that the existence of learnables

(their emergence and development) is dependent on social activities of humans in relation to each other, and/or with and within their surrounding world (something that is dialogical in nature, see next section).

Therefore, when objects are visually, hearably and sensorially present, their presence makes no contribution to the sense–experience of the beholder, unless they are operated on, i.e. attended to, oriented to, talked about, pointed at, manipulated, etc. This means that *objects*, though potentially meaningful, would not be learnables unless they are *somehow* seen, heard and understood *as* learnables[2] and made sense of in that way for the participants in that activity (or the members of that community of practice).

This sense-making process is a social event with its own particular organization, which takes place in social situations within the physical world within our reach, that is the material world including human agency in here-and-now situations (Schutz 1973, p. 328). The sense-making is actually a process that is sequentially, temporally, tangibly, physically and socially organized by seeing, hearing, manipulating, handling, verbalizing, talking, etc. This organized way of sense-making plays a normative rather than a descriptive role, through which the object of scrutiny is understood in a particular way within the scope of a particular context. In other words, what a learnable *turns out to be* is an outcome of shared and understood ways of how it is used and understood in practice, something that is intersubjectively achieved in social situations.

2.2 A Dialogical Approach to Learnables, Converging on Sense-Making Procedures

If one attends to the reality of how humans engage with the world, one cannot ignore that this engagement is organized through the coupling of the human body, mind and the material world in our surroundings (cf. Vygotsky 1978; Varela et al. 1991; Hutchins 1995; Clark and Chalmers 1998; Linell 2009, 2014; cf. 'bodily intersubjectivity' in Husserl's terms, 1989, p. 311). It is within our intersubjective world where we bodily engage with others and in the material world that learnables are brought into being. This network of relations has order, dialogical principles, and dialectic methods. In this orderly relation with the surrounding world,

[2] This falls within the discussion of *representational modifications* of objects in Husserl's account of *perception* (Husserl 1983, pp. 90–91; cf. Duranti 2009, p. 206, who explains it as aspects of *attention* in the process of learning and socialization). Husserl (1983, p. 91) explains that the sense of anything that *appears* to us or *presented* in the world would rely on our *standpoint* and *orientation* to it because "[it] can 'appear' only in a certain 'orientation', which necessarily predelineates a system of possible new orientations each of which, in turn, corresponds to a certain 'mode of appearance' which we can express, say, givenness from such and such a 'side', and so forth." (emphasis in original).

other-orientation, context, interaction, and *semiotic mediation* are key concepts (cf. Linell 2009. pp. 13–14).

More specifically, order in the organization of the intersubjective world is actualized in the engagement of persons in and with the real world. In this engagement, the objective world is no longer the product of individualistic Cartesian meditation, but is rather the outcome of a dialogical relation between self, others and things (Husserl 1989, pp. 302–310, §63). Cognition, in this view, is no longer considered as confined to the inside of the skull of individuals, but is instead embodied (Streeck and Jordan 2009), distributed (Hutchins 1995), extended (Clark and Chalmers 1998) and situated (Lave 1988) across individuals, artifacts, and contexts (see also Eskildsen and Markee 2018; Goodwin and Salomon 2019). That is, objective reality does not correspond merely to the mental life of a psychological 'I', but rather a social 'I', belonging not only to 'me', but also to a 'community of knowledge' (Schutz 1975, p. 72) in which the reciprocal understanding of the world and its objective meaning is established, revised and co-determined over and over.

The basis for the establishment of such a community of knowledge is 'other-orientedness', a socio-dialogical relation with others. It is, in part, a natural attitude of humans to establish a sort of dialogical congruence and attuning with others (Enfield and Levinson 2006). This is noticeable even in young infants' behavior, for example, when they attend to other human beings early in their engagement with other bodies. Newly born babies seek out contact as they go through various stages e.g. a mimetic stage, resonating with what they receive from their environment, especially other humans, or the stage during which they learn how to respond to others, etc. (see Linell 2009, pp. 255–259; see also Andrén 2010).

A consequence of this engagement with others is the expectation that one will understand and respond to others' interactive co-engagement. It is within this constant dialogical relation with others, and with the world, that one understands the effects of one's own actions. One learns about other's actions, and their consequences, and therefore one can predict one's own, or other's possible next actions (Linell 2009, p. 13). Social learning and pedagogy are made possible in such a relationship.

The fact that one stands in such a dialogical relation has to do with social reality in the sense that any expressive movement and act of a person always invites a responsive act of the other. This requires entering into a social relationship in which a series of social actions may be exchanged (see Schutz 1932/1967, chapters 22–23). This is the cornerstone of social relations, and the very foundation of social interaction whereby one's action is responded to by a countermove or follow-up move by another person. This responsive action, in turn, is heard, and responded to, its understanding is verified, and treated as both a display of an understanding of the prior action, and the motivation for further response, etc. (see "Co-operative actions", Goodwin 2017; see also Linell 2009; cf. Sacks et al. 1974).

One of the obvious properties of co-operative (inter)actions is that any potential meaning of any communicative action is monitored, confirmed or rejected not only through our past sense–experience of the world, but also through mapping our knowledge onto the reality of here-and-now situations with our simultaneous and successive reactions to it. In interactions with others, we make sense of what we

perceive through responses we receive as a warrant to build our further actions simultaneously or successively. This ritual–ceremonial and substantial social phenomenon that is called social interaction (see Goffman 1963, 1981) is the locus of forming and reforming the meaning-context of any *thing-in-interactional-focus* in any social interactivity. Such a dialogical relation with the environment (with the others and with the material world) is an endless exploration of expressive acts (cf. Bakhtin 1981, p. 426, at least in theory; cf. Bakhtin's notion of the 'unfinalizability of dialogue'), processing our lived experiences and learning, inter-acting with the world, coming to terms with others, and shaping a context and a meaning for our mutual understanding in each single social activity. In Garfinkel's (1967, p. 1) terminology it is 'an endless, ongoing contingent accomplishment'. What is, thus, proffered in the realm of language to learn is co-constructed in this dialogical system.

The organization of dialogue and interaction requires a systematic exchange of acts, which are formed by semiotic resources expressing '*something*' of a sense, or meaning which can be understood by an observer, addressee or respondent. On the one hand, one already knows that expressions, with regard to their objective possibilities, carry potentialities for providing some sense (Linell 2009, p. 235). This possible common ground (Clark 1996) for meaning-making, on the other hand, does not refute that there is a degree of freedom of meaning conferment before settling the signification of any sign/act on every single occasion (cf. Bühler 1934/2011, p. 76). This helps in shaping a mutually agreed understanding.

In other words, there is no absolutely ready-made and intelligible meaning of any sign in any objective sign system for every single occasion of its use. In a language system, for instance, meaning-formation does not always happen in 'the grammatically normal stock-in-trade of' that linguistic system (Husserl 1900–1/2001, p. 64, §11). The signs can indicate some 'adequacy' for the interpretive scheme for the participants in the social interaction, if they are understood 'to have accorded with their relationship of interaction as an invokable rule of their agreement' (Garfinkel 1967, p. 30). Otherwise, misunderstandings, social disagreements or conflicts are probable, or even inevitable.

Consequently, in any new circumstances, in any new environments, as part of any social situations, mutual agreement over the sense of things and relationships should, in principle, be renewed as the recurrent reestablishment of intersubjectivity. If 'the surrounding world is, in a certain way, always in the process of becoming, constantly producing itself by means of transformations of sense' (Husserl 1989, p. 196), we find ourselves in a constant negotiation of meaning, 'ever new formations of sense along with the concomitant positings and annullings' (*ibid*).

We are, therefore, dealing with the world of meaning, which is not merely objective, but it is also subjective and occasioned (Schutz 1932/1967, p. 124). People live under the constant negotiations of these two worlds, i.e. in an intersubjective world. Even if one can predict the use of signs (things, objects, a course of action, conduct, skill, etc.) on different occasions with the ideality of 'I can do it again' (Husserl 1929/1969, p. 188, §74), the reference to that objective world of meaning is not always enough to settle the meaning of each sign-using act on any single occasion.

Interactivity (or activity of any kind) within the intersubjective world implies that we invoke the phenomenon of *order* (see order in activity, e.g. in Goffman 1967) in consideration of the objective meanings on every single social occasion. The phenomenon of order is key to an understanding of what an action *actually* means (cf. the discussion on *indexical expressions* and *reflexivity* in Garfinkel 1967; Garfinkel and Sacks 1970/1986), what a task is about, what people are really talking about, what is accomplished in an activity, etc.

Therefore, in a conversation or any exchange of semiotic expressions between people, there is a necessity to: (a) discover the subjective meaning of any action, and any sign-using act from 'within' the occasion of its use (cf. Pike 1954, chapter 2 on the meaning of an 'emic perspective'; Garfinkel 1967; Sacks 1992); (b) see how one is being understood by the recipient of that action; and (c) understand how the negotiation displays their mutual understanding, and their agreement in and through that particular social event.

Based on this point of view, learnables are also the products of the lived experience of the members of a community of knowledge and practice. They belong to the intersubjective world, and their 'objectivity' gets established under the transient circumstances of their use (cf. Garfinkel and Sacks 1970/1986). They are signs or acts not only for communicative and practical purposes, but they are *resources* to be understood *as* something new to learn, to practice, and to use on future occasions.

3 Data Analysis: Learnables from Theory to Action

As put forth in the previous sections, uncovering the particulars of learnables does not entail *a* general knowledge about such objects, but *our* knowledge of them. This knowledge is also situated (Lave 1988), distributed (Hutchins 1995), and actively extended among *us* (Clark and Chalmers 1998). They do not exist in a vacuum but contextualized in the here-and-now in various communicative activity types (see Levinson 1992, 2013; Linell 2009, p. 201) that are bound together within a network of relations in the formal organization of particular social events. That is, instead of thinking of objects of learning as prefigured, isolated and context-independent, like any other objects, they are practically understood as what they are in their web of relations and in our business of interchange i.e. interactivities (cf. Malafouris and Renfrew 2010, p. 4). Therefore, learnables need to be studied in practice where they are topicalized, objectivized and made intelligible.

To look at learnables in their natural environment entails appealing to the common ground of human sociality (see Clark 1996, p. 92; Enfield and Levinson 2006) *to fit particularities of learnables to the particularities of learners' social practices*. This means that, in order to describe the existence of learnables in our daily life, one should explore how they come to be part of our activities. We do not, therefore, look at learnables as transcendental objective phenomena (as prepared beforehand), but as a phenomenal part of our intersubjective world that is achieved as a result of our intersubjective understanding of them in our material world (Schutz 1932/1967,

p. 115; cf. Wittgenstein 1953/2009). So, learnables are what corresponds to intersubjective objectivity, as something decidedly agreed upon by participants' cooperation. This agreement occurs in social activities on every single social occasion manifested in here-and-now actions. How this agreement comes about is an outcome of how participants in an activity contribute with various means to an understanding of a thing as a learnable, whether it is a concrete or abstract thing, verbal or nonverbal object, a course of action, etc. (e.g. how a piece of dirt in soil can become a meaningful object of knowledge to a novice archeologist, in Goodwin 2003).

3.1 First Example

Let us take an example of a situation in which a person who is learning a language, observably and reportedly, and thus accountably shows lapses in her mastery of that language during the production of an utterance. In the example below (Ex. 1) in a Swedish as a second language class, after finishing a group work session, a student (Sandra) leaves her group to go back to her seat in the back row. She goes past another student (Linda) who is almost blocking her way. Even though Linda gives way to Sandra on her way past, Sandra gently taps Linda's thigh and her lower back, and laughs on her way back to her own seat (Fig. 1). This prompts Linda to make an utterance in Swedish to excuse herself for having a big backside, during which she begins a word search for an appropriate term for this body part in Swedish. Using illustrative pictures, the transcript reproduced in Excerpt 1 depicts this movement and interaction (see the appendix at the end of this book to understand the Jeffersonian transcription conventions used in these extracts, and the appendix at the end of the present chapter for the multimodal conventions that are also used here).

When Sandra is passing Linda (FG 1), she touches Linda's lower back. Linda then turns her torso, hits her lower back and comments on her own body, playfully and jokingly. The touching prompts a sequence of talk-in-interaction about 'lower back' and the trajectory of talk shows how topicalization of the lower back changes from a joking matter to a word-search issue and finally to a socially sensitive matter. This example of multimodal interaction also demonstrates the granularity of the pedagogical focus in the language learning environment as manifested in the participants' orientations to both language form and language use during the entire sequence.

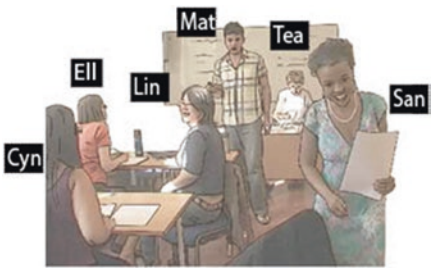

Fig. 1 Linda begins a word search after Sandra's tapping on her lower back

Excerpt 1: Big Butt: Tape M, C Level

Participants: Linda (Lin), Sandra (San), Cynthia (Cyn), Ellen (Ell), Mathew (Mat), Teacher (Tea)

((Sandra taps on Linda's lower back while going past her))

FG. 1

01 Lin: A:↑ (1) tyvärr, och (.) jag har (1) jätte: (0.2) #((hits her lower back for four times))
Unfortunately, and (.) I have (1) big: (0.2)

FG. 2

02 (0.8) ((Linda, Sandra and Cynthia laugh))

03 Lin: how can I say? .hh (.) # big: (.) jätte: HH[hh
big:
((hitting her lower back, turning to Cyn and Ell))

04 Ell: he¿

05 (0.5)

FG. 3

06 Lin: I have a big butt. ((hitting her lower back again)) °butt.°

07 Ell: e : (.) °skinka°¿=
e : (.) °butt°¿=

08 Cyn: =HIHIhi rumpa¿ (0.5) ((Linda, Cynthia, Ellen and Sandra laugh together))
=HIHIhi backside¿

09 (?) stor skinka
big butt

10 Ell: e- e- e- STORA, (.) STORA RUMPA.=
e- e- e- BIG, (.) BIG BACKSIDE.=

11 Cyn: °ja har (.) ja har st- HEHEHEHE
°I have(.) I have bi-

12 Lin: =HEhehehehehe

13 Cyn: aha (0.2) stora stora rumpan HEHEHEhehehehehe
big big backside HEHEHEhehehehehe

14 Lin: =hihihi

15 Mat: $vem har stora rumpa där?$(.) ((to Linda and Cynthia))
$ who has big backside there?$(.)

16 Tea: VEM har en stor rumpa? ((stands up))
WHO has a big backside?

17 (0.2) ((all are laughing))

18 Cyn: °vi har stora° ( )
°we have big° ( )

19 Tea: läraren
the teacher

On the whole, the talk in this excerpt seems to be made up of a few small sequences or what may be called local communicative projects (Linell 2009, p. 188) during which the topic of the talk morphs into various phenomena that are observably of interest to the participants. The intercorporeal event in which Sandra touches Linda's backside is first treated as 'laughable' (Jefferson 1979; cf. Sacks 1967/1992, p. 746) (see lines 1–2). Then the sequence gradually turns into a word search and thus into a language learning event (lines 3–8) when Linda turns back to other students (FG 2) and articulates an utterance in Swedish which is only completed by a gestural act: "unfortunately, and (.) I have (0.1) big (0.2)" and then she hits her own lower back four times (line 01). This "hybrid utterance" (Goodwin 2007) or "composite utterance" (Enfield et al. 2007; cf. Clark 1996, p. 163), which is constructed out of both verbal and gestural constituents, is at first treated by her classmates as just a laughable. However, Linda herself explicitly turns the event into a learning sequence, thus explicitly engaging in observable language learning behavior (Markee 2008). In fact, she explicitly asks in English "how can I say? .hh (.) big (.) jätte: HHhh" as she hits her own lower back again (line 03; FG 3). In her utterance, she shows what she specifically aims to highlight as a topic of inquiry by combining a verbal utterance and a gestural act, something that she simultaneously orients to as unknown or not-yet-mastered in Swedish: "I have a big butt" (line 06). This contingent focus on learning something new is also evident in the members' methods of interpretation displayed by Ellen and Cynthia, (see lines 07 and 08) who present two alternative *candidate suggestions* as possible alternatives to the word that Linda is searching for: "skinka" (line 07) and "rumpa" (line 08). By repeating the word "rumpa" in consecutive turns (see e.g. lines 08, 10, 13, 15), it seems that through the collaborative work of these participants, this last word is accepted as the correct solution to Linda's word search. The teacher's comment in line 16 further ratifies this choice.

At the same time, this extract also demonstrates how an object of inquiry can simultaneously be laminated with other work that addresses potentially delicate matters, such as which word (*rumpa* or *skinka*) is most culturally appropriate at that moment in that particular conversation (see lines 09–19). More specifically, "rumpa" (backside) ends up being treated as a laughable by the students (e.g. lines 02, 09). Thus, Linda's language learning behavior morphs into an extended joking episode (see, for example, Ellen saying "a BIG (.) BIG BACKSIDE" in line 10, Cynthia's repetition of this word in line 13, and the ensuing laughter by other students).

The pragmatic sensitivity of the use of the word "rumpa" is even more apparent in Mathew's question (line 15), which is then followed by the teacher's reaction (lines 16 and 19). More specifically, Mathew turns to Linda and Cynthia and asks, "who has big backside" (line 15). Remarkably, the teacher then repeats the question in line 16, and when she receives Cynthia's response in line 18, she replies in overlap to her own question by saying "the teacher" (line 19) (meaning that she, the teacher, has a big backside). By refocusing the conversation on her own body, the teacher's reply artfully functions as a face-saving move on Linda's behalf which defuses a potentially sensitive moment. Finally, observe also that when Mathew (line 15) asks "who has big backside", the utterance lacks an indefinite article,

something that gets corrected when the teacher recycles, the same utterance (cf. *recycling with différance*, Anward 2004): "who has a big backside" (line 16) (cf. embedded correction, Jefferson 1987).

The example above, demonstrates, first, how a commonplace event of getting past someone affords the possibility for the participants to turn the event into a learning opportunity as well as other social actions. Second, and more importantly for us in this chapter, this example shows how the organization of a social activity accounts for what may be oriented to as a learnable. And it also shows how an orientation to learning a new lexical item, and the consequences of this language learning behavior, are all anchored in that activity. That is, the event beginning with Sandra touching Linda's lower back becomes a display of a lapse in Linda's lexical repertoire, and gradually morphs into the participants treating the use of the word first as a laughable object, and then as a sensitive social object considered as a potentially negative comment (observe again how the teacher manages the sensitivity of the question "who has big backside" posed by Matthew in line 15). So, each sequential progression in the activity builds a new context for the use of the word "rumpa", out of which a new sense and function of the word also emerges. The emergent nature of meaning, and the use of the word, is a witness to the contextual sensitivity of its interpretation (its indexicality and reflexivity, see Garfinkel 1967).

This process of emerging understanding of a linguistic item also shows the multidimensionality of its use, not only as a linguistic object, but also as a social and cultural object. That is, what comes to be oriented to as a "learnable" in the unfolding interaction affords simultaneous changes in subjective understanding and objective behavior, which is reflected in the accountability of the participants' practical actions. It points to the granularity of learnables whose various parts can be highlighted as salient as part of an interactional activity. For instance, different aspects of a lexical form, its denotative meaning, connotation, pragmatic use, grammatical use, etc. may be constructed, recognized, oriented to and understood in a particular way during its use in a particular activity. Learnables not only seem to emerge and flourish owing to the activity and their practice within that activity, their sense and function are also accounted for by the same practices. Through these social practices, which often occur in the co-presence of others, the sense and function of things are recognized, understood and practiced. So, the dual distinction of subjective and objective sense, and function of things may be replaced by their intersubjective understanding within our intercorporeal world (see Csordas 2008; cf. Merleau-Ponty 1945/1962), that is, our interactivities with others.

3.2 Second Example

As argued above, the sense and function of learnables are settled in the situated activity where they are used (taught and learned). Considering linguistic items as part of the stock-in-trade of a sign system or communicative acts, I have tried so far to show that they are 'constituted into a synthesis of meaning-context' (Schutz

1932/1967, p. 131) which is shaped and reshaped on every occasion of their use. They are agreed upon and mutually understood as such by the participants in social activities (see also Garfinkel 1967, p. 9; Garfinkel and Sacks 1970/1986) – this can be witnessed, too, in the following example where 'the synthesis of the meaning-context' is actually formed during a spate of student–teacher talk (see also Kääntä this volume, on explanation/definition sequences).

We have also established so far that learnables have no prefigured existence, but they are what they are made of in a learning activity. Learnables are constantly changing in the process of becoming something for the learners, for the participants in learning activities (see "members' perspective", in Garfinkel 1967, *passim*). So, what needs to be attended to is how is this transformation done, what are the methods of the participants in those activities which are intrinsically dialogical for an object to be salient in situ, marked as something to be learned?

The second example is also from a Swedish language learning classroom in which a group of students are given a task to read, a story entitled '*slå följe*' (accompany), an expression unknown to them. When the students show that they do not know the expression, the teacher asks a student to stand up, and she inter-corporeally shows her students what the Swedish expression means, as shown in Excerpt 2:

Excerpt 2: To Accompany: M, D–Level (Simplified)
Participants: Bob (Robert), Tea (Teacher), Shi (Shima), and Jil (Jila)

01	Tea:	den heter slå följe, this is called accompany,
		((9 lines omitted))
11	Bob:	=va betyder slå ⌜följe? =what does acco ⌞mpany mean?
12	Tea:	s:- slå följe betyder att <ja (.) följer me (.) dej.> a:- accompany means that <I (.) go along with (.) you.>
13	Shi:	°va betyde (x x)?° °what does (x x) mean?°

14 Bob: #A::↑ (0.4)
#...points at Jil and himself two times with an open palm-->

FG. 4

15 Tea: mm a,
mm yeah,
16 Bob: a okay
yeah ok
17 Tea: ja slår följe me dej.=
I accompany you.=
18 Bob: =uhum, mm:, mm
19 Tea: förstår du?
do you get it?
#(.) du går, (0.2) bob, du ska gå=
(.) you walk, (0.2) bob, you'll go=
#....grabs Bob's arm and has him stand up-->

FG. 5

20 Bob: mm,

21 Bob: =aha
22 (0.3)
23 TEA: #och ja slår följe me dej. ((nods))=
and I will bear you company. ((nods))=
#...they go two steps arm in arm-->

FG. 6

24 Bob: =a: ((nods)) okay. °ja förstår nu.°
= yeah: ((nods)) ok. °I understand now.°

The excerpt begins where the teacher introduces the story by its title (line 01): "this is called '*slå följe*" [En: accompany]". When the teacher tells the students what their task is regarding the story (these lines were omitted), one of the students, Bob, asks the teacher what "*slå följe"* means (line 11). The unfolding sequence of actions demonstrates that in response to the student's question about *slå följe* ('accompany', line 11), the teacher provides the students with a synonymous verb, *att följa* ('to follow/go'), explaining that *att slå följe* means to go along *with* somebody where she distinctly produces each word and stresses the particle 'with' (*att följa <u>me</u> någon* – line 12). However, the uptake (line 14) and the student's articulation of A::↑affiliated with a nonverbal exhibition of a candidate construal (FG 4) is not treated by the teacher as an adequate exhibition of understanding the expression. The teacher then asks the student to stand up (line 19, FG 5), she holds his arm, and they walk arm in

arm a few steps until the student nods and says that he understands the expression then-and-there (lines 23 and 24, FG 6).

With this example, I intend to demonstrate that what is problematized as something learnable, and what is accomplished as a learnable, are the productions of interactivities. This 'minimal communicative interaction' (Linell 2009, p. 183) is an instructing/learning project, which contains something remediable, improvable, and also learnable for the students. The production of learnables is, thus, closely intertwined with social activities. This is an inter-corporeal intersubjective accomplishment, i.e. it emerges in bodily intersubjective interaction. The accomplishment of each action in the activity is materialized through a series of co-produced actions. The comment on what *slå följe* means is made by the teacher in response to the expectancy of the pedagogical context (cf. Garfinkel 1967, p. 36–7) through embodied actions. The teacher's concession to the need for further explanation is that she uses her own body to show the function of that expression. he engages her body, and ties it to the body of a student, to show what the expression could mean in real life (realization of knowledge through an embodied experience).

What is understood as the meaning of a learnable is, thus, specified in actions in the here-and-now situation, within the spatio-temporal reality of an interactivity. That is, the understanding of learnables is in relation to, and interdependent of, ongoing actions, which are themselves embedded in the sequential organization of a larger activity (cf. Levinson 2013). It is within this frame of the exchange of actions that the situated meaning of a learnable becomes decided, completed, and possibly agreed upon (for instance, not everybody who speaks Swedish may understand this action in the same way, or would depict this similarly as shown in the example above). That is why, any possible equivocalities become *situationally definite* regarding the *ad hoc considerations* for the recognition of the relevance of the action in a particular context (see Garfinkel 1967. p 21–22). In this way, the determination of what an object, action, material, etc., is, its sense and function, seen and understood as a learnable, is an accomplished objectivity in the activity at hand.

4 Discussion

Based on the arguments put forth above, the local contingencies and accomplishments of learnables in interactivities in language learning classrooms entail looking at endogenous action formations (see Goodwin 2013; cf. Levinson 2013), and the procedures in and through which the phenomenon of order in the activity of learning leads to the emergence of learnables. These interactivities are the bases for achieving the intersubjective objectivity of learnables.

Interactional activities as the locus of the organization of order for learnables are sociological phenomena in their own right (cf. Goffman 1963, p. 1981). Attending to social actions, both verbal and nonverbal, with all the aforementioned properties, is constitutive of social interactivities. The current chapter suggests that the basic tenet of an investigation about learnables is to probe the 'howness' of their

accomplishment, with regard to both verbal and nonverbal conduct. The focus, I suggest, should be on the bodily intersubjectivity of social activities, on the members' methods (see Garfinkel 1967), as to the emergence of learnables, and how the particular aspects of learnables (due to its multidimensionality and granularity), become salient in interaction through embodied actions. In other words, in language learning/teaching interactivities, the question is how the participants mutually accomplish an action in and through which a learnable emerges as an 'event-in-the-conversation' over the course of embodied activities (Garfinkel 1967, p. 40), highlighted as salient in the concrete actions to be perceived (seen and heard) as the product of order, and *as an object of knowledge*, in the sequential organization of events.

A qualitative study requires close observation of, and attention to, the details of an unfolding activity in a real, natural setting. By natural, it is meant that the researcher does not determine or lead an activity, manipulate the participants' behavior, change the course of events or environment, or does not set up the setting as it is done in laboratory studies. By natural, it is meant that the events are ordinary events, belonging to everyday experience (Heidegger 1967, p. 38), mundane, and occasioned (Sacks 1984a, p. 22). The researcher does not alter, modify, or control the trajectory of events, but lets it happen as it proceeds ordinarily in its actual context (Heritage 1987). The data gathered from everyday experiences may be called real data or naturally occurring data (cf. what Sacks 1984b, calls naturally occurring conversation).

The observation which is made under this condition is also specific. It is not only the observation of a researcher from outside, as it is usually done in conventional field studies, but rather exploring 'the normative features of the social system seen *from within*" (Garfinkel 1967, p. 90). That is to say, that what is at issue here is the rationale of the underlying pattern of that system whose rationality consists in members' actions, as units of that system (Pike 1954, p. 8), which are purposively appropriated on the occasions of their use. This is sometimes called an 'emic' analysis of a social system (Pike 1954, chapter 2), which starts out from the system's internal organization, from the members' perspective (Garfinkel and Sacks 1970/1986, p. 162) on their own methods of sociological inquiry.

In this method, there is no prior moral claim on members' views or values. This method is *indifferent* to the external interpretive positions of the adequacy of members' methods, and it avoids any prejudgments on their part (Garfinkel and Sacks 1970/1986, p. 166). Following this procedural method, one avoids overgeneralizing the common occurrence of practices as a tutorial for all similar events. Instead, the analyst focuses on what Garfinkel (2002, p. 99, footnote) calls "the *haecceity* of the phenomenon of order". With regard to learnables, this haecceity is achieved as the procedural accomplishment of the '*bodily intersubjective objectivity*' of the learnables, which is the 'just this' in here-and-now reality of learnables (cf. Heidegger 1967, p. 17).

Instead of any overgeneralization or speculation, what is offered may be a qualified generalization of the rationale of the events in terms of the property of actions, practices of mutual understanding, and a working consensus over the reality of

learnables in interaction. This requires uncovering the phenomenon of order in using learnables in practice and explicating the '*howness'* of the 'lived phenomenal properties' (Garfinkel 2002, p. 98; cf. Husserl 1989) to understand how learnables are understood as particular forms, practices, or communicative acts in various situations.

Therefore, this chapter suggests an action-based multimodal qualitative research on learnables from a pragmatic approach using empirical data from naturally occurring social events: an Ethnomethodological Multimodal/Multisensorial Conversation Analytic (EM/CA) approach to learnables.

5 Conclusion

The co-construction of bodily intersubjectivity in the social world supports the view that sociality and interactivities are primary, and language and learning are subordinate to our social activities. Language learning is not only concomitant with social activities, but a result of them. As bodily intersubjectivity, and its objective reality, are situated and local, learning is also situated, and contextualized in social practices (see also Macbeth 1996). So, learnables are accomplished through *doing* things (Lave 1988) and doing things with *others* (cf. Vygotsky 1978), in particular (inter)activities. This *doing of things* is not just using the material world, but operating on it, acting on it, building on it, etc. In other words, the bodily intersubjective world, where people live in one another's social embodied co-presence within a material world, is a spatio-temporal reality where human actions are formed, accomplished and used in our daily business of interchange. These actions, and their accomplishments, are the transformation zones of knowledge (see Goodwin 2013). Social co-operative actions and interactivities are, thus, the primordial sites for learning, and indeed for the accomplishment of the intersubjective objectivity of learnables.

Therefore, teachers' and students' accounts of learnables are reflected in their socially accountable actions and practices. That is, learnables are made observable and recognizable – and reflexively understood – in members' actions and practices. Teachers and students attend to this 'reflexivity' to 'fit' their practices to a particular occasion's practical purposes (see Wittgenstein 1953/2009, p. 59), and to produce and accomplish something as a learnable. Thus, by talking about an objective reality of learnables, we are talking about an accomplished reality, or an accomplished objectivity of them, achieved in an intercorporeal, intersubjective relation, with regard to multimodal/multisensorial human actions.

6 Theoretical Implications of Considering "Intersubjective Objectivity of Learnables": The Issue of Context and Saliency in Practice

Human interaction is based on co-operation and co-operative actions (Goodwin 2017). The co-operative actions and the exchange of those actions in human social life are the arenas for pedagogy, including language teaching and learning. Learning as well as teaching are based on both employing and building common grounds for human sociality, morality and cooperation through which knowledge of any kind is organized, performed, and exchanged among people. Language learning is not an exception. As I have a dialogical and a praxeological (action-based) view toward pedagogy, the first step is to assert that teaching and learning is taken to be a social, concrete (empirically observable) procedure accomplished through multimodal/multisensorial actions (through embodiment and the use of artifacts), and not just a mental, abstract (already existing) process. This means that teaching and learning are best observed in social situations and specifically in activities that are accomplished through interaction (interactivities) in which co-operation is the key concept and practice. On this view, teachers and learners would be charged with reinventing the present account of learning as a procedure in concrete activities in which they usually engage. The second step is to dissect what learning consists of, and also, what language consists in. Accepting the concept of learning as a social procedure, i.e. as an observable and describable phenomenon (Mondada and Pekarek Doehler 2004), one can think of its various components in social activities, e.g. orienting to something as a learnable, topicalizing and discussing it, correcting or improving the way that is defined, used or analyzed in a lesson, and even testing how students show their knowledge of it, could all be part of the social procedure of teaching and learning and, by extension, teacher education/training. Within the same approach, language is not considered something only abstract – a system of signs in mind – but a concrete observable verbal production that can be taught and learned (Markee 1994). Linguistic items are objects whose objectivity does not just lie in books or the heads of individual users but accomplished within the interpersonal arenas for social actions. It is within social actions where linguistic items can be oriented to and operated on as pedagogical foci or objects of knowledge. The operation may involve composing and decomposing the objects, or correcting and improving how they are produced, or even manipulating, demonstrating, and parsing them, and also using in various contexts, etc. This approach to teaching and learning raises two significant aspects in practice that are going to be discussed and highlighted: context and saliency.

It seems to me that one needs to think of 'context' in (language) learning event as an arena for co-operation where a pedagogical focus is foregrounded. In other words, one can think of a frame (Goffman 1974) which involves a focal event (here e.g. focusing on learnables) and also its background that is a field of actions that embed the focal event (e.g. unfolding interaction) (see Goodwin and Duranti 1992, p. 4). The context, therefore, consists of social and spatial environments including

language and interaction and also people involved in interactional spaces (ibid: 6–9). A pedagogical focus is always understood in relation to its ground (see figure-ground in Hanks 1990). So, focusing on learnables without considering the circumstances in which they are foregrounded ignores the reality of the context and the ground which was built surrounding the learnable. These surrounding environments (formats, actions, and practices) play significant roles in understanding a pedagogical focus in terms of meaning, forms and functions.

Concerning pedagogical contexts, they are perhaps considered to be built by shaping an appropriate surrounding in order for a pedagogical focus to be attended to. Such a context, like any other context, involves both the verbal chain of events, that is what in talk comes before and after the focal item (e.g. a lexical item), and also how nonverbal resources are used in practice to highlight the focal item as a pedagogical focus. For example, a chain of events is not a one-sided action built exclusively by teachers. In a dialogical and praxeological approach to contexts, various components are considered to be involved in the constructs of contexts that affect the chain of events. These components inform and interact with each other: speakers (e.g. teachers), hearers (e.g. students), objects (e.g. books, words in books, pen and paper, etc.), third parties (e.g. overhearers, audience, etc. – e.g. other students who are not directly involved in the talk), the configuration of physical settings (e.g. classroom), etc. These components in the interactional framework can also be categorized in two ensembles of participants and various resources that are at participants' disposal. Participants use available resources to make a frame in which the focus of pedagogy is made intelligible, tangible and useable.

Judgement for the appropriateness of context for learning is not just the matter of objective recommendation for every teaching and learning situation. It is the matter of 'here-and-now' reality for which the best judges are teachers and students themselves in *that* situation, at *that* time. They can together show in their activities how they can accomplish building together a context for learning. What I would like to draw attention to is the significance of 'togetherness' in an interactional procedure where the ensemble of resources forms contexts of teaching and learning. It is within the context (i.e. the ensemble of resources where the pedagogical focus is embedded) that the pedagogical focus finds its saliency.

By saliency, I mean how resources (verbal and nonverbal) are used to draw attention to a pedagogical focus as a conspicuous phenomenon in a given context. The teachers or students may use various strategies e.g. mobilizing their body or writing an item on a whiteboard or a paper, etc. while they are also talking about that item to make that item highlighted – visible and hearable as important e.g. for teaching and learning. Using artifacts, such as an overhead or showing things by projecting them on a screen, pointing to them, gesturing them into significance with members' hands, making annotations or marking them to be more visible, and also stressing their significance in verbal productions, etc. are all techniques that are often used by many teachers to foreground an item as a focus (e.g. to become explainable, correctable, improvable, etc.).

In order to make something salient, it seems to me that alongside other resources (talk and prosody or using artifacts), attention should be paid to the body which

plays such a crucial role in human interaction. Using the body in teaching is a known practice to many teachers. Both students and teachers use their bodies as resources in pedagogical activities. From manipulating objects to gesturing a form into existence or depicting an action and so on, teachers and students use their own bodies to highlight a pedagogical focus (see the examples in this chapter). It is within interpersonal and intercorporeal relations that the pedagogical focus – the object of knowledge – finds its sense and meaning. The objectivity of what a thing is is based on how it is oriented to, how it is highlighted and how it is made relevant and treated (perhaps also negotiated) by participants in the interaction. It is within this "installation of knowledge and competence" (Macbeth 2000, p. 24) that an object becomes salient, seen and considered as something learnable.

With the discussion of context and saliency in pedagogy, it is also high time to stress the significance of what may be called an embodied, interactive, and multimodal pedagogy. From a dialogical and a praxeological point of view, the design of human action is inherently embodied, interactive, multimodal and also multisensorial. By multimodality, I mean simply that we use an ensemble of various resources to build actions, and by multisensoriality, I mean we use our senses to perceive an object/thing (here, as a learnable). This may have consequences for designing lessons, practices for teaching and even testing. Even if, we cannot (and it is far from my research purposes) to come up with a model of teaching or learning that works in every occasion for pedagogical activities, without any doubt, the critical views toward the social-actionable details of how classroom interactions or pedagogical activities are designed can increase our knowledge for the improvement of the quality of pedagogy. The practitioners (teachers and other actors in teaching and learning) are encouraged to pay attention to the local field of instruction and how the context of teaching and learning is shaped interactively, and by various resources and multimodal/multisensorial actions and practices: the practices by which a pedagogical focus, an object of knowledge, is marked, made tangible, visible, intelligible and thus perceived as salient for the practical purpose of teaching/learning. It is where the power of instruction lies, and it is where perhaps learning occurs.

7 Practical Implications for Pedagogy and Teacher Education: Multimodality in the Design of Pedagogical Activities

In the previous sections of this chapter, I have shown how: (a) learnables are situated, emergent, and, particularly in classroom environments, interactionally made relevant and accomplished through the intersubjective achievement of understanding; and (b) the context of the emergence of learnables in pedagogical activities is multimodal. That is, the intersubjective objectivity of learnables comes from hands-on practices in which teachers and students use available communicative resources such as talk, the body (gestures, etc.), or material artifacts (pen, paper, whiteboard,

etc.) to engage with learnables. In other words, even if the goal of teaching is to have each student individually develop their knowledge, how that knowledge is constructed is due to the context of the pedagogical activity, and how individual students achieve that knowledge in a social and multimodal nature of learning/teaching activities.

To help the reader through the analytical process of identifying how a learnable emerges and how participants in a language learning classroom orient to a linguistic object through co-constructed language learning behavior, I will first briefly walk the reader through a third empirical example (Excerpt 3) which updates original analyses previously published by Markee (1994, 2007). The example is from an English as a second language classroom (ESL) and is taken from a group activity in which the students read an article on the greenhouse effect in order to do a subsequent whole class presentation on this topic. The analytical focus here is on one group consisting of three students called L9, L10 and L11. And second, I will show how this highly technical analysis written by and for researchers can be reverse-engineered so that teachers-in-training (or indeed any readers who do not have a background in CA) can inductively discover how to do a CA analysis themselves by answering a set of guiding questions that are developed by the researcher.

Excerpt 3: Coral (Original: Excerpt 5: Group Work Phase, Markee 1994: 104; Markee 2007: 359)
Participants: L9, L10, L11

01 ((L10 is reading her article to herself))
02 L10: coral. what is corals
03 (4)
04 L9: #hh do you know the under the sea, under the sea,
#...L10 raises up her head; mutual gaze between L9 and L10–>

FG. 7

05 L10: un-
06 L9: there's uh:: (0.2) ┌how do we call it
07 L10: └have uh some coral
08 L9: ah yeah (0.2) coral sometimes (0.2)
09 L10: de- eh (.) includ/e/s (0.2) uh (.) includes some uh: something uh-
10 (1)
11 L10: ┌that corals, is means uh: (0.4) s somethings #at the bottom of#
#...downward beats with her pen#
12 L9: └(x x x x x)
13 L10: ┌the sea
14 L9: └#yeah,#
#...nods emphatically#


FG. 8

15 L9: at the bottom of the sea,
16 L10: ok uh:m (0.4) also is a food for (0.2) is a food for fish uh and uh
17 (0.4)
18 L9: food?
19 (0.3)
20 L10: foo-
21 L9: no it is not a food #it is like a stone you know?#
#she holds her hands up & apart as if she holds an object#
22 L10: #oh i see i see #i see i see i see i know i know #.hh i see # (.) uh whi-
#.....claps-------#,,, #lifts head #...shows a shape

FG. 9

23 L10: (0.6) a kind of a white #stone ┌h very beautiful#
of a box in the air---------- #....raises her right hand and beats in the air FG.10 #
24 L9: # └yeah yeah #very big
#L9 nods twice ---------#

FG. 10

25 L9: yeah┌ sometimes very beautiful
26 L10: └i see i see i ok
27 L10 oh i┌ see
28 L9: └and sometimes when the ship moves ┌#ship tries (x x x x x)
29 └ oh i see i see
#points to the text in front of L11-->
30 (0.6)
31 L10: the chinese is uh *shānhú*
32 (0.9)
33 L11: #huh?
#L10 turns to L11-->
34 L10: *shānhú*
35 (0.6)
36 L9: what
37 (0.3)
38 L10: c┌orals
39 L11: └corals
40 L9: #corals oh okay#
#....L9, L10 & L11, each looks down to her own reading material#
41 L10: yeah

Right from the beginning of the sequence, as the students are reading their assigned text, L10 displays the fact that she does not understand what the word "coral" means. The question (line 02) emerges as L10 is still looking down and reading the text (line 01). Even though the question may be posed as directed to herself (since L10 is not directing her gaze toward anybody as she asks the question [see line 01], her action might also be understood as an instance of private speech), the out loud articulation of the question provides an interactional space for others to respond to it. L9 raises her head and begins to have a dyadic conversation with L10 (line 04; FG 7) by providing a reference to where in the world coral can be found

("under the sea", line 04). This is the beginning of an extended sequence in which the word is explained by describing its referent in reality.

Following the first clue given by L9 ("do you know the under the sea, under the sea" (line 04), L10 repeats the fact that that coral "is something at the bottom of the sea" while also making several downward beats with her pen as if to underline this fact through this embodied action (lines 11 and 13; FG 8). L9 emphatically then agrees with L10 (line 14). More specifically, note how L9 nods vigorously in line 14 and then partially repeats L10's utterance: "at the bottom of the sea," in line 15.

In line 16, L10 begins her turn with the word "ok", which shows that she now understands where corals may be found. She then adds the additional information that coral is also "a food for fish" (line 16). However, this new information is rejected by L9 (line 21) who uses a second position repair to suggest instead that coral is a stony substance ("it is like a stone you know?" (line 21). This last piece of information serves as the crucial catalyst that triggers a breakthrough moment of understanding for L10. Let us now unpack the variety of oral and embodied resources that L10 uses to demonstrate to L9 (and therefore also to us as analysts of this talk) that she now really does understand this word. More specifically, L10 begins her turn in line 22 with the change of state token "oh" (see Heritage 1984). In addition, she excitedly repeats the phrases "I see" six times in a row and "I know" two times, all of which constitute very strong spoken claims of understanding. This on-going verbal evidence of emerging understanding is complemented by L10's embodied action of self-congratulatory clapping (see FG 9), which is immediately followed by L10 making the box-like hand shape gesture shown in FG 10. These embodied actions co-occur with her comment about the beauty of coral in line 23, and L9's comment about the size of coral in line 24. Moreover, L10's comment on the beauty of coral is followed by L9's recycling of the idea saying that coral is very beautiful (line 25). In other words, all of these different, independent pieces of evidence serve to build a compellingly fine grained, convergent, and above all multimodal case that L10 has indeed correctly understood the meaning of the word "coral." In addition, the emphatic nature of these various pieces of evidence suggest that L10 is very confident that she now understands the meaning of this word.

Note, that further converging multimodal evidence that L10 has indeed understood what the word "coral" means is to be found in the remaining lines of the transcript. More specifically, as L10 and L9 overlap each other in lines 27 and 28, L10 points to the text in front of L11 and correctly translates the word "coral" into Chinese in line 31. This example of multimodal translanguaging is carefully recipient designed in that, like L10, L11 is also a native speaker of Chinese (whereas, as we will relevantly see shortly, L9 is not). This translation method simultaneously achieves two different actions. First, it actively involves L11 in the conversation. In this context, note that, until this point, L11 has not been involved in L10 and L9's dyadic talk. Second, it shows that L10 is now so confident that she really does understand what the English word "coral" means that she is willing to teach L11 what this word means in Chinese. However, this information is subject to repair: in line 33, L11 says "huh," thus indicating that she does not understand what L10 is doing. In line 34, L10 therefore repeats the information that "coral" means "shānhú"

in Chinese. However, this exchange in Chinese seemingly excludes L9 from this conversation, as is shown by the fact that, after a trouble relevant pause of 0.6 seconds in line 35, L9 says "what" in line 36. After another pause of 0.3 seconds in line 37, this repair initiator prompts L10 and L11 to translate the word "shānhú" back into English for L9's benefit, and this information ultimately leads to the multimodally constructed conclusion of this sequence in lines 38, 39 and 40. Thus, the task of understanding what "coral" means is finally achieved as a joint, publicly observable and co-constructed agreement by all three participants that they indeed are all on the same page.

Let us now finally see how this complex analysis might be made accessible to non-CA experts through a pedagogically-grounded process of reverse engineering which encourages teachers-in-training and others to discover these facts for themselves. What follows is an outline of a handout that might be given to students working as individuals, in pairs or in small groups. It is assumed that participants have been exposed to CA phenomena such as turn-taking and repair and have at least a basic understanding of such practices. So-called ideal model answers are provided for instructors. While not every single detail that is identified in these model answers may emerge from the participants' initial collaborative analyses, the answers they give provide the basis for a detailed, instructor-led debriefing in the final task on the handout.

Analyzing the "coral" transcript

Task 1 (Time allocated for this individual activity: 10–15 min)

Individually, listen to and watch the original video of three students (L10, L9 and to some extent L11) which shows how these user/learners attempt to figure out what the word "coral" means. Feel free to listen to/read these data several times.

Task 2 (Time allocated for this individual activity: 5–10 min)

In pairs or small groups, try to collectively work out what the answers to the following questions might be:

Q1 (Time allocated for this individual activity: 5–10 min): Look at lines 1–15 of the transcript and analyze how the phrase "under the sea" emerges turn by turn in the talk of both speakers. More specifically, how does the use of this phrase enable L10 to display (to L9 and herself and, by extension, to the analyst) her emerging understanding of what this word means? Use specific line numbers to support your argument.

(Ideal model answers: The phrase "under the sea" first occurs in L9's turn in line 04; it is then recycled in partial or complete form by L10 in lines 07, 11 and 13 and by L9 in line 15. These repetitions enable L10 to establish the specific environment in which corals are typically found.)

Q2 (Time allocated for this individual activity: 5–10 min): Now look at lines 16–29: First, what two actions is L10 performing during her turn in line 16? Second, what kind of repair occurs in lines 18–21? And finally, what does this repair enable L10 to do in lines 22–29?

(Ideal model answers: In line 16, L10 brings the preceding talk to a tentative close by saying "ok" and then adds the new information that coral is a food for fish. In lines 18–21, L9 disagrees with her and provides the alternative formulation that coral is a kind of stone. This new information provided by L9 is achieved as a second position repair, which prompts L10 to make a series of different claims about what coral is in lines 22–29.)

Q3 (Time allocated for this individual activity: 15–20 min): In lines 22–29, L10 observably displays her new understanding of what the leanable "coral" means by using both verbal and embodied actions to do learning. Make a list of L10's verbal actions that are found in this stretch of talk and show empirically how her talk is simultaneously choreographed with embodied gestures. Use specific line numbers to support your argument.

(Ideal model answers: L10 makes a series of claims of understanding that take the verbal form of "I see" (see lines 22, 26 and 29) or "I know" (see line 22). In line 22, the first "I see" is immediately preceded by the change of state token "oh", which strongly suggests that L9's prior information in line 21 is new to L10 (notice also that she again uses this change of state token with the phrase "I see" in line 29). It is also important to note that, if it turned out in L9's next turn in lines 24 and 25 that L10 was in fact wrong in line 22, the vehement nature of these repetitions would likely make L10 lose face. So, the observable strength of these assertions strongly suggests that L10 is very confident that she now knows what the learnable coral means. These verbal claims of understanding are complemented by a number of embodied actions. For example, L10 claps her hands in an observably self-congratulatory fashion as she says "oh I see I see" in line 22. Next, L10 raises her hand as she says the word "stone" in line 23 as if to emphasize the fact that her assertion that coral is "a kind of white stone h very beautiful" is new information that she is contributing to the on-going talk. These independent embodied actions all serve to underscore the simultaneous verbal evidence that L10 is really confident that she now knows what the word "coral" means.)

Q4 (Time allocated for this individual activity: 5–10 min): In lines 30–42, L10 engages in further, qualitatively different, actions that help us confirm the emerging analysis that L10 has actually learned this word, at least in the short term. What are these actions, and what verbal and embodied resources does L10 use to achieve these actions? Use specific line numbers to support your argument.

(Ideal model answers: In lines 29–41, L10 uses a translation method in lines 31 and 34 to inform her fellow Mandarin speaker L11 that "coral" means "shānhú" in Chinese (which is a correct translation). More specifically, notice that L10 is now so confident that she understands this word that she is willing to bring this word to the attention of L11 in line 29 by showing L11 where this word physically occurs in the text they have been reading and then do a first phase of oral translation in to Chinese in line 31. This leads L9 (who does not speak Chinese) to question in line 36 what L10 and L11 have been saying in lines 31–34; in lines 38–39, L10 and L11 then

translate the word "shānhú" in quasi-unison back into English for L9's benefit, which leads to the closure of the sequence in lines 40 and 41.)

Task 3 (Time allocated for this individual activity: 20–30 min): The instructor leads this debriefing activity in plenum, with a view to confirming or disconfirming participants' preliminary analyses during the pair/small group phase.

Conventions for Transcribing Embodied Conduct

hashtag: the position of an image within a turn at talk
dotted square bracket: aligning the position of an image with its nonverbal description and a turn at talk

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