Educational Linguistics

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Conversation Analytic Research on Learning-in-Action

The Complex Ecology of Second Language Interaction 'in the wild'

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The Complex Ecology of Second Language Interaction 'in the wild'

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Introduction: On the Complex Ecology of Language Learning 'in the Wild'

Søren W. Eskildsen, Simona Pekarek Doehler, Arja Piirainen-Marsh, and John Hellermann

I hope to evoke with this metaphor a sense of an ecology of thinking in which human cognition interacts with an environment rich in organizing resources.

E. Hutchins, Cognition in the Wild, 1995.

Abstract This introduction explicates the central issues informing the chapters in the volume. We outline the epistemological development of Second Language Acquisition research as it has evolved from being predominantly individual-cognitive to a more pluralistic endeavor in which social approaches to cognition and learning are becoming central. Social interaction has been recognized as key to language learning since the 1970's but the field is still lacking in research that studies the everyday social-interactional ecology in which the L2 speaker acts. We argue that it is time to broaden contexts for empirical investigations to study language learning in the full ecology of 'the wild', that is, in out-of-classroom, real world settings that put into play the multisemiotic resources inhabiting the worlds of L2 speakers.

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The contributions to the volume scrutinize the affordances of 'the wild' for the development of L2 interactional competence, investigate how L2 speakers configure learning opportunities in the wild, and analyze possible ways of integrating in-the-wild-experiences into the L2 classroom agenda. Leading to new empirical understandings of the richness of the affordances for L2 learning that emerge in people's lifeworlds, this affects our conception of L2 learning, as product and process, and holds important implications for teaching practices.

Keywords Second language acquisition (SLA) · Learning in the wild · Usage-based · Conversation analysis

1 Prelude

Social interaction is uncontroversially recognized as a primary site of both first and second language learning. This understanding has been embraced by a broad range of approaches to second language acquisition (SLA): Whether seen as providing the necessary input or feedback that structures the individual's cognitive processes required for language learning, or as the site where learning as a socio-cognitive endeavor is collectively shaped through socially coordinated courses of activities, social interaction is a – if not *the* – key locus of language learning (and possibly also of much other learning). Yet, most of the empirical results that current thinking in SLA is based on emanate from the analysis of learners' language use studied independently of the social-interactional ecology in which the learner acts, stemming from (quasi)experimental designs the ecological validity of which remains to be proven, or from the highly structured (and sometimes experimentally controlled) setting of the language classroom. This includes research from the theoretical and methodological approach taken by studies in this volume: Conversation Analysis. While existing studies have enhanced our understanding of multiple facets of language learning, both as an in-situ process and as a product, it is time to broaden contexts for empirical investigations to study language learning in the full ecology of 'the wild', that is, in out-of-classroom, real world settings that put into play the multisemiotic resources inhabiting the worlds of L2 speakers.

This volume sets out to do this. The contributions to the volume scrutinize the affordances of 'the wild' for the development of L2 interactional competence, investigate how L2 speakers configure learning opportunities in the wild, and analyze possible ways of integrating in-the-wild-experiences into the L2 classroom agenda. We borrow the metaphor of the wild from E. Hutchins' seminal work *Cognition in the Wild* (1995). Studying a navigation team on a US Navy ship, Hutchins documents how processes of problem-solving and learning are collectively organized, not residing in the individual's skull but in social practice; not as the cumulative result of the team members' solitary mental activity, but as the product of their coordination, mutual adaptation, and confrontation in action with a complexly structured socio-cultural environment. His point, in a nutshell, is that cognition is distributed and socially situated (as advocated by many others, e.g.,

Suchman 1987; Lave 1988; Maynard and Clayman 1991; Cole et al. 1993; Edwards 1997) and that, therefore, the complexity of cognition is best apprehended in its natural habitat, namely people's engagement in their activities in the real world – as opposed to the lab. The notion of cognition in the wild refers to "cognition in its natural habitat – that is, to naturally occurring culturally constituted human activity" (Hutchins 1995: xiii).

What does such an understanding imply for the study of SLA? For one thing, it invites us to broaden the SLA database (Firth and Wagner 1997) as we have done in this volume, focusing on people acting in their everyday social worlds, their out-of-classroom interactions. For another thing, and maybe less obviously, it sets the focal object, language, against a background of multiple and complexly intertwined resources for meaning-making (gesture, gaze, posture), of the sequential organization and mutual coordination of social actions, as well as of the socio-culturally structured material world, including computers or smartphones, pencils and papers, streets and buildings, and so forth. All these elements are part of the ongoing organization of social interaction, the natural ecology of everyday language use. While language has often been abstracted away from this natural ecology as a monolithic construct, we find that such a move deprives the analyst and the field of SLA of the possibility of understanding language in a more encompassing way as a constitutive part of a larger ecology of action, and hence of understanding its learning as inextricably intertwined with the complex organizing resources of the social world.

The purpose of this volume is twofold. We scrutinize learning in everyday mundane situations by means of micro-analyses of how L2 speakers/learners act in the world in concord with others while they accomplish social tasks and move through time and space; and we explore ways in which such L2 speaker experiences can be utilized for classroom purposes. We ask, for instance: What are the linguistic and interactional tasks L2 speakers confront in the wild and what are the in-situ learning processes and practices they observably carry out? What are the affordances that naturally occurring social interactions offer for language learning and how do (or can) L2 speakers, together with others, transform these affordances into mundane infrastructures for learning, thereby actively constructing their social environments as learning environments? What lessons can be learned from such observations for usage-based, experiential pedagogy? How can systematic bridges be established between the classroom and L2 speakers' lifeworlds through methods that start from the participants' everyday language use experiences? Such interrogations also raise fundamental conceptual issues: How can learning processes be reasonably understood as part of the organization of action embedded in the wider multi-semiotic ecology of diverse socio-cultural environments? And ultimately, how does the micro-analysis of language learning in the wild affect our very understanding of what language learning is, both as a process and as a product?

Drawing on sociologically-oriented research on language learning, the studies presented in this volume analyze language in the first place as action and language learning as profoundly rooted in action (cf. Firth and Wagner 2007). They see language learning as centrally involving the ability to adapt semiotic resources for action and constituted by the development of interactional repertoires for

context-sensitive social conduct (Pekarek Doehler and Berger 2018). Though they all mainly put to work the conceptual and methodological apparatus of CA, their breadth is not limited to a precise research paradigm. Rather, they all aspire, through scrutiny of L2 speakers' interacting in the social world, to bring us some steps further toward a better understanding of the enormous complexity of L2 learning products and processes, learning environments, and learning behaviors.

The volume synthesizes recent CA studies and introduces current research that critically examines the concept of L2 learning in the wild. The data collection methods involve video and audio recordings in contexts that range from everyday dinner table conversations between an au pair and her host family, through L2 learners engaging in service encounters which they record and analyze in class, to teacher-initiated tasks carried out outside of class, involving objects such as books and computer-mediated technology. The data come from Danish, English, Finnish, French, German, and Hungarian L2. While all chapters present empirical studies, some chapters additionally outline the conceptual implications that arise from analyzing SLA and L2 competence in the wild. Others spell out the pedagogical potential for intervention, that is, for constructively bridging the gap between classroom instruction and learning experiences outside of the classroom.

The chapters in this volume, then, each explore different aspects of the wild, the in-situ learning that occurs in different everyday social activities as well as the pedagogical potential for intervention. This latter point implies that 'wildness' of data may be a less binary category than previously indicated; here it has been implied to be the antitheses to the classroom, but real life is arguably less categorical. L2 speakers can deliberately exploit the wild for learning purposes (Eskildsen and Theodórsdóttir 2017) and classroom activities can be designed to support learning in the wild (Eskildsen and Wagner 2015a; Lilja et al. this volume). Moreover, teachers can design pedagogical tasks to be carried out in the wild ecology (Kasper and Kim 2015; Hellermann et al. this volume), and while all these phenomena in a sense tamper with the wild, or perhaps even tame it, they are nonetheless part of L2 learners' lives. Therefore, the chapters in the volume explore and discuss the notion of the wild itself as being a gradable concept; we are studying L2 language use and learning on a 'cline of wildness'.

2 Epistemological and Methodological Roots

Methodologically and conceptually, the chapters are all rooted in ethnomethodological conversation analysis, as used in SLA research (CA-SLA). Introduced by Harold Garfinkel (e.g. 1967) and emerging from sociology, ethnomethodology (EM) is concerned with people's achievement of social order through their methods of accomplishing everyday actions and practices in situ and in vivo. EM thus took a sociological micro-perspective, focusing specifically on how social order is understood from the participants' perspective (Garfinkel 2002).

Originating from EM, CA's objective is to explain the methods (i.e., systematic procedures) whereby the various interactional practices that specify social order are achieved in and through talk-in-interaction. It is important to stress, however, that although the early CA studies were based on telephone calls, CA is no longer solely concerned with the modality of *talk* but with all interactional behavior, including embodied actions such as gesture, gaze, and body posture, as well as uses of and orientations to configurations of space, objects, tools in the environment, etc. (cf. Nevile 2015). Accordingly, some chapters in this volume use multimodal CA and focus on embodied conduct.

Brief as these introductory marks must be, we emphasize two notions as crucial to an understanding of ethnomethodological CA (Sacks et al. 1974; Schegloff 1991; see also Eskildsen and Majlesi 2018): (1) intersubjectivity; and (2) the next-turn proof procedure. Intersubjectivity concerns the ongoing interactional work people carry out to ensure a common understanding of what is currently happening in interaction, and CA is concerned with explicating people's methods for achieving this. CA's focus, then, is on the interactional methods – people's production and displayed understanding of actions in interaction – whereby people achieve shared understanding. The next-turn proof procedure is the analytic method for scrutinizing people's practices for achieving and maintaining intersubjectivity. It derives from the basic CA finding that conversation consists of turns-at-talk and that these are sequentially ordered (Sacks et al. 1974) – that is, when an action is produced, the next relevant action is occasioned, and this next action gives meaning to the prior one. In other words, by providing an answer to a question, or accepting an invitation, or mitigating and producing an objection to a produced comment or assessment (etc.), people show their understanding of what their co-participant just said, thus ensuring the constant construction of intersubjectivity. If intersubjectivity is challenged, people can initiate repair and work through the challenge to restore intersubjectivity (for further detail on CA, see introductory texts such as Liddicoat 2011; Schegloff 2007; Sidnell 2010). The same analytic procedures apply in the chapters in the volume, for example, to show participants' orientations to word searches and other forms of language focus (Eskildsen, Greer, Pekarek Doehler and Berger, Wagner), public agreements of material objects made relevant in group talk (Hellermann et al.), multimodal displays of understanding (Greer, Hellermann et al., Kim, Lilja et al.), diversification of methods to perform assessments (Nguyen), and on-going interactional adaptations (Pekarek Doehler and Berger, Piirainen-Marsh and Lilja).

3 Background in SLA

Naturalistic L2 learning (i.e., learning outside of classroom contexts) has been part of the epistemology of SLA research for most of its history, at least since Rosansky and Schumann (1976). Numerous studies, as well as prominent large-scale research projects (e.g., the ESF project on adult immigrants in Europe), have drawn, entirely

or partly, on naturalistic data (Schmidt 1983; Perdue 1993; Ellis and Ferreira-Junior 2009a, b). Yet, it is only with the advent of the so-called 'social turn in SLA' (Block 2003) and of rigorous interaction analytic methods that approaches and research frameworks for SLA have emerged that systematically examine learning processes and practices as situated in the social reality and contexts of the L2 users' everyday world (Firth and Wagner 1997).[1] Unlike the early studies, much of the work after the social turn has used video-recorded data and methods from CA to delineate learning as situated social action and the development of L2 interactional competence as the focus of empirical investigation (e.g., Firth and Wagner 1997, 2007; Brouwer and Wagner 2004; Hellermann 2008, 2011; Nguyen and Kasper 2009; Piirainen-Marsh and Tainio 2009; Wagner 2010, 2015; Hall et al. 2011; Kasper and Wagner 2011, 2014; Pekarek Doehler 2010, 2018; Pekarek Doehler and Pochon-Berger 2011; 2015, 2018; Piirainen-Marsh 2011; Sahlström 2011; Theodórsdóttir 2011b; Achiba 2012; Hauser 2013; Kääntä et al. 2013; Burch 2014; Taguchi 2014; Barraja-Rohan 2015; Kasper and Burch 2016; Eskildsen and Theodórsdóttir 2017; Berger and Pekarek Doehler 2018; Eskildsen and Majlesi 2018). Alongside developments in CA-SLA, socio-cultural and socio-cognitive approaches to SLA have also established themselves (e.g., Atkinson 2002, 2011; van Lier 2004; Watson-Gegeo 2004; Lantolf and Thorne 2006; Lantolf 2011; van Compernolle 2015; Thorne and Hellermann 2015; The Douglas Fir Group 2016), as have second language socialization studies (e.g. Kanagy 1999; Zuengler and Cole 2005; Cekaite 2007; Duff and Talmy 2011; Anya 2017), identity theory in SLA (e.g., Norton 2000; Kramsch and Whiteside 2008; Norton and McKinney 2011; Kolstrup 2015), and dynamic usage-based approaches to SLA focusing on the way linguistic constructions evolve through real-world language use (Ellis and Larsen-Freeman 2006; Hall et al. 2006; de Bot et al. 2007; Eskildsen 2012, 2015 *inter alia*; Ortega 2014; Roehr-Brackin 2014; Cadierno and Eskildsen 2015; Ellis 2015; Lowie and Verspoor 2015).

We mention these approaches together here because, although they differ in their precise theoretical foundations and in the way in which they undertake empirical work, they all share a basic understanding that language learning and the cognitive processes that go into it are fundamentally situated in social practice; as such, any individual learning and cognitive processes are inextricably intertwined with language use. The breadth of the references also indicates that such perspectives on L2 learning are gaining prominence in the field to such an extent that it no longer makes sense to speak of a somehow competing 'mainstream SLA' (Swain and Deters 2007; Eskildsen and Markee 2018).

What is distinctive to the present volume is that the studies here investigate L2 learning specifically as a social process of the L2 speakers becoming members of a community – a process that is embedded in people's interacting with others, and

[1] Going further back there were earlier attempts at opening up the field, perhaps not so much in terms of abandoning the purely cognitive orientation, but for example to encompass bilingualism (Ochsner 1979), situate the emergence of L2 syntax in real discourse (Hatch 1978), critically examine theoretical constructs as literary metaphors (Schumann 1983), or redress the imbalance between theory and practice (van Lier 1988).

that involves the diversification and recalibration, over time, of methods of accomplishing social interaction (e.g. Hellermann 2008, 2011; Pekarek Doehler and Pochon-Berger 2011, 2015, 2018; Berger and Pekarek Doehler 2018; Pekarek Doehler 2018; see also Duff and Talmy 2011 from a language socialization perspective). While they do not neglect the import of learning linguistic resources, the studies' focus is on generic practices for social interaction, including practices for repairing, asking questions, listing, disagreeing, offering responses, and so on. While they ask how people go about accomplishing these practices in their L2 as they engage in real-world encounters, they also reflect on the consequences that ensue for language pedagogy and teaching (cf. Wagner 2015).

As outlined above, the chapters in the volume are all indebted to CA-SLA. As such, they are part of a larger stream of research that has, over the past two decades, transformed SLA from using, primarily, an input-processing model (for discussions see Markee 1994; Firth and Wagner 1997, 2007; Block 2003; Atkinson 2011; Eskildsen 2018a), to what it is today. They draw on a distinctive understanding of L2 learning and competence: learning behaviors are fundamentally embedded in the social, bodily and material world, and the ensuing competence is understood as context-sensitive and contingent upon the temporal-sequential unfolding of actions coordinated with others.

4 Learning and Competence: Conceptual Underpinnings and Empirical Findings

We started from the observation that learning – at least much of it – is happening in practice, that is, it is embedded in people's activities conducted jointly with others in the social and material world. As such, learning is socially displayed behavior, complexly articulated in joint activities and subservient to participants' understanding of what they are doing conjointly with others. Through this, learning behaviors become observable for the analysts. Importantly, although language learning behaviors might be most observable relating to lexical items (e.g., Greer, Eskildsen, Pekarek Doehler and Berger this volume), what they typically target (at least outside of the classroom) is language-for-action, i.e. the development of linguistic resources in and for accomplishing action as people co-establish shared communicative semiotic repertories (Kasper and Burch 2016). This is paramount to how we conceptualize the object of learning. L2 learning is not centrally about the formal mastery of linguistic structures per se, but about appropriating and developing such structures as resources for action – and linguistic structure, though central, is not the sole object of such learning. While this has been stressed early on in much research ensuing from Hymes' (1972) seminal statement on communicative competence, many existing studies on the pragmatic and sociolinguistic dimensions of SLA have encountered some skepticism from researchers interested in the dynamic and context-sensitive nature of social interaction (e.g. Young 2000; Kasper and Rose

2002; Kasper 2006). Surprisingly, and despite Kramsch's (1986: 367) early warning against an "oversimplified view of human interaction", it is only recently that SLA research has started to tackle empirically the nature and the development of those abilities that allow L2 speakers to specifically engage in the dynamic and context-sensitive coordination of social interaction. This has relevantly been captured in CA-SLA studies on L2 development over time which have re-specified the ultimate target of L2 learning as the development of interactional competence (Hall et al. 2011; for earlier statements, see Hall 1993, 1995; He and Young 1998). Following Garfinkel (1967), the notion of 'competence' for social interaction has been conceptualized in terms of members' 'methods' for accomplishing and coordinating social interaction. This has opened new avenues for understanding the products of L2 learning in ways that account for the praxeological, i.e. action-related, nature of the learning object (L2): Competence is not in the first place understood as an individual cognitive matter; rather, it is a matter of action, pertaining to members deploying conduct in locally appropriate ways (Hellermann 2011; Pekarek Doehler and Pochon-Berger 2011, 2018; for the notion of *competence-in-action* see Pekarek Doehler 2010).

Existing studies (for overviews see Kasper and Wagner 2014; Pekarek Doehler and Pochon-Berger 2015; Pekarek Doehler 2018) illustrate the development of interactional competence within different organizational domains of social interaction: turn-taking (Cekaite 2007), sequence organization (Hellermann 2008; Pekarek Doehler and Berger 2018; Berger and Pekarek Doehler 2018), repair organization (Hellermann 2011), and preference organization (Pekarek Doehler and Pochon-Berger 2011). Much of this work, though, has focused on the language classroom. For instance, in her case-study of a Kurdish child's turn-taking in a Swedish primary school, Cekaite (2007) documents the child's use of more and more subtle techniques for self-selecting at sequentially appropriate moments, as part of her developing L2 interactional competence. In his seminal work on dyadic interactions in ESL classrooms involving adult learners, Hellermann (2008) examines how students, over several terms, change their practices for opening dyadic tasks or disengaging from these, and for opening storytellings (see below): task-openings, for instance, are increasingly sequentially organized and designed in ways to be recognized and accepted by recipients, involving, among other things, increased pre-task opening work. In a cross-sectional study on disagreements in French L2 classrooms, Pekarek Doehler and Pochon-Berger (2011) compare intermediate level to advanced students, showing how with the advanced L2 speakers turn-designs emerge (such as the 'yes-but' dispreferred action turn-shape) that accommodate the preference organization of talk-in-interaction, as well as new uses of linguistic resources for accomplishing precise interactional purposes. Similarly, other longitudinal linguistically-semiotically oriented CA-research has shown how people develop their interactional competence with respect to particular words and other lexically specific items in and for an increasing variety of interactional contexts and purposes (Markee 2008; Kim 2009; Eskildsen 2011, 2018b; Masuda 2011; Hauser 2013; Eskildsen and Wagner 2015b, 2018a, Pekarek Doehler 2018).

Overall, existing findings suggest that interactional competence is not simply 'transferred' from the first language but is 're-calibrated' (Pekarek Doehler and Pochon-Berger 2015) in L2 talk over extended periods of time. This re-calibration entails an increased ability for context-sensitive conduct based on speakers' progressive diversification of methods for action (Hellermann 2011; Pekarek Doehler and Berger 2015, 2018; Berger and Pekarek Doehler 2018; see also Brouwer and Wagner 2004; Markee 2008), which is inextricably intertwined with their becoming more central participants (members) in the communities in which they interact.

Noteworthy is the fact that the existing research is almost exclusively concerned with educational settings, mostly classrooms (but see Brouwer and Wagner 2004; Piirainen-Marsh and Tainio 2009; Ishida 2011; Pekarek Doehler and Berger 2015, 2018; Berger and Pekarek Doehler 2018). Little is yet known about L2 interactional development 'in the wild'. The few existing studies on particularly advanced L2 speakers in the wild provide empirical evidence for the fact that despite their solid mastery of linguistic forms, there is still much that develops in terms of the practices participants deploy for dealing with basic organizational patterns of social interaction and the way they use language to do so (cf. Brouwer and Wagner 2004 on business telephone conversations; Pekarek Doehler and Berger 2018; Berger and Pekarek Doehler 2018 on au-pairs in a homestay context). Interestingly, and most relevantly for the present volume, the facets of interactional competence that have so far been highlighted as objects of recalibration in an L2 are often those that evade structured instruction: practices for disagreement, sequence organization or turn-taking or even the fundamental view of 'language' as a semiotic repertoire for social action are typically not a target of any official language pedagogy. There are many reasons for this, including lack of CA expertise among teachers, but work is accumulating toward principled ways of organizing L2 teaching around CA and interactional competence (Hall 2018; Waring 2018; Salaberry and Kunitz 2019). The present volume adds to this body of work by providing insights into how L2 speakers' experiences from the wild can reshape classroom agendas. We argue that extending SLA research toward analysis of L2 learning as situated in people's being and acting in the world can inform language pedagogies in various ways.

5 Towards a Usage-Based, Experiential Pedagogy

Classrooms have received a lot of attention in research, so much that part of Firth and Wagner's (1997) argument was to broaden the SLA database to include more than classroom data. While this is still a valid point that we also pursue here, classrooms are just as varied as language teaching methods. Classroom interaction is *designed* to be varied exactly for the purpose of enabling different kinds of pedagogical practice and offering opportunities for different ways of learning. A great deal of CA research since 2000 has shown the diversity of interaction in classrooms (see, among others, Markee 2000; Koshik 2002; Markee and Kasper 2004; Seedhouse 2004; Mori 2002, 2004; Sert 2015). This book's companion volume,

edited by Silvia Kunitz, Olcay Sert, and Numa Markee (forthcoming) is a current state-of-the art presentation of research in this tradition. The immense breadth of the chapters in Markee's (2015) volume on classroom discourse and interaction further attests to the variety of classrooms as interactional environments, showcasing how classrooms are viewed differently across perspectives including cognitivist, sociocultural, and conversation analytic standpoints.

Our volume builds on the growing attention paid to the coordination of epistemic, multilingual, and multimodal resources in the organization of tasks and pedagogical practices (Mori and Hayashi 2006; Mortensen 2009; Kääntä 2010; Kääntä and Piirainen-Marsh 2013; Jakonen and Morton 2015; Sert 2015) as well as to implications for teacher training (Sert 2015; Wong and Waring 2010; Walsh 2012; Kunitz et al. forthcoming), and to the teaching and testing of interactional skills (Lazaraton 2002; Roever and Kasper 2018; Taguchi and Roever 2017; Youn 2015). What has by contrast not been closely scrutinized is how to bring CA findings to bear on designs that integrate out-of-school interactional experiences into the pedagogical setup within the school (Wagner 2015).

Although uses of L2 learners' living environment have been explored for L2 teaching in the past (e.g., Nunan 1989; Pickard 1995, 1996; Beglar and Hunt 2002; Hyland 2004; Little 2007; Allwright and Hanks 2009; van den Branden 2012; Dewey et al. 2013; Hinkel 2014; Eskildsen and Wagner 2015a, 2018b; McLeod 2017; Pedersen 2018), they are largely singular practices that build on excursions out of the classroom and into society and/or aim to enhance and support learner autonomy, and they have not inspired lasting, widespread changes of generic teaching practices. As a consequence, language is too often distilled and abstracted away from its natural habitat in the world and reproduced in more or less unauthentic ways in teaching materials for language classroom use (cf. Wong 2002). This means that the version of the language that people encounter there and are expected to learn and use is not always in alignment with their interests and needs or with the varieties and practices that they encounter outside of such educational contexts. The present collection of chapters takes the viewpoint that, contrary to earlier assumptions according to which informal conversation is not a good source for language learning (Long 1996), everyday practices are, in fact, rich L2 in learning opportunities (e.g., de Pietro et al. 1989; Brouwer 2003; Egbert 2004; Egbert et al. 2004; Brouwer and Wagner 2004; Kurhila 2006; Wagner 2010; Theodórsdóttir 2011a, b, 2018; Theodórsdóttir and Eskildsen 2011; Greer 2013; Lilja 2014; Piirainen-Marsh and Tainio 2014; Kasper and Burch 2016; Eskildsen and Theodórsdóttir 2017; Eskildsen 2018a). There is ample evidence in this research showing not only that language learning activities are embedded in everyday life interactions, but also that L2 speakers actively engage in learning behaviors, creating spaces for doing learning, establishing and sustaining pedagogical contracts, soliciting co-participants' help, displaying formulations as tentative, and thereby continually checking their linguistic resources in use and the actions they accomplish therewith against what others do and how they react to it. And they do so not with regard to linguistic structures 'in the abstract', but with regard to exactly those resources that are made

locally relevant moment-by-moment, in the very course of the precise social interaction L2 speakers engage in.[2]

Pedagogically, then, the chapters in this volume aim to flip the coin: the classroom becomes a place of recollection, reflection and elaborated focus on what has happened or is happening in the world. We do away with the assumption that people practice to learn language in controlled environments first, and are then released to go out and use it later. Rather, language use in social encounters and language learning are two sides of the same coin that is L2 socialization: learning happens through ongoing socialization in the world (see Pekarek Doehler and Berger, this volume), and classrooms can be fitted and configured so as to support and scaffold this process.

One of this book’s raisons d’être is to explore possibilities to offer new forms of usage-based L2 pedagogies based on socialization and people’s real-life needs in everyday and work-related practices. This move is motivated, as outlined above, by a view of language as a situated, locally contextualized, embodied semiotic resource for social action and a view of L2 learning that is fundamentally usage-driven and experiential. The volume explores these views of language and learning empirically and, on that basis, proposes ways of developing and implementing usage-based L2 pedagogies.

To further increase out-of-class learning opportunities, pedagogical tasks can be designed to be carried out in the wild ecology (Kasper and Kim 2015; Hellermann et al. this volume; Eskildsen 2018a), arrangements can be made to build bridges between the classroom and local communities and classroom de-briefing activities can be designed to facilitate reflection and post festum analysis of out-of-classroom experiences (Wagner 2015; Lilja et al. this volume). Foundational to the attempt to bridge the gap between language pedagogy and the learners’ lifeworld, two Scandinavian initiatives, *Språkskap* in Sweden and *The Icelandic Village*, designed ways for newcomers to interact with locals in business encounters and everyday interaction (Clark et al. 2011; Wagner 2015).

The Icelandic Village is based on agreements made by the University of Iceland with local business operators in Reykjavik affording students of Icelandic the opportunity to come in to participating stores, cafés and other businesses to use their incipient L2 Icelandic for real purposes without the local co-participants switching to English. In Sweden a network of teachers, learners, researchers, and interaction designers developed a scheme to support Swedish L2 learning in everyday interactions by mapping out the actual L2 speakers’ arenas for language use and setting up spaces for reflecting on the social and linguistic resources used by the L2 speakers to achieve their goals (Clark and Lindemalm 2011). Several chapters (Lilja et al., Piirainen-Marsh and Lilja, Eskildsen, Wagner) in this book directly draw on, substantiate and build theory on the basis of these initiatives. They also propose infrastructures for language learning as mentioned above as the central element in the

[2] It is important to stress that this argument is in line with usage-based studies demonstrating that language emerges from use in particular contexts (Ellis 2002, 2015; Ellis and Cadierno 2009; Eskildsen 2011, 2012, inter alia).

learning and teaching of a second language and discuss how to build similar social infrastructures in other places.

6 Contributions to This Volume

The chapters in this volume each explore different aspects of the wild, focusing either on the in-situ learning that occurs outside instructed L2 environments, or on the outcomes of such learning as regards L2 speaker's interactional competence. They extend the already substantial body of research on language learning as situated social activity by (1) tracing L2 speakers' language use, learning potentials, processes and outcomes in diverse socio-material environments, (2) spelling out the conceptual implications that arise for our understanding of L2 learning and competence, and (3) discussing how learners' experiences of interactions in their lifeworld can be made relevant, nurtured and harvested (Wagner 2015) in the language classroom.

Chapters in Part I trace the development of interactional competence in the wild, as it is observable in changes in specific interactional practices over time. They open a window onto both the affordances and possible limits of language learning in everyday social situations.

Pekarek Doehler and Berger present a longitudinal case-study of how an adult French L2 speaker expands her repertoire for doing word searches over the course of her 10-month employment as an au-pair in a French speaking host family. While the authors document changes in language practices for word searches including the incorporation of the phrase *comment on dit*, they also point out how these changes occur within the context of the naturally-changing relationship between Julie and the host family.

Nguyen also reports on a longitudinal case study. In this investigation of turn design, an L2 user of English (a hotel employee in Vietnam) is seen to develop a wider repertoire of interactional practices for small talk. The employee does not engage, primarily, in service encounters with guests but is tasked with making international guests "feel welcome" by escorting them to their rooms and talking to them. Nguyen outlines changes in the employee's practices for assessments and topic pursuit during these interactions.

Kim revisits the SLA notion of fossilization as a pervasive feature of naturalistic L2 settings. Drawing on videorecordings of service encounters involving a Korean speaking shop owner in Hawaii with limited proficiency in L2 English, he describes how a routine sequence (informing customers about payment policy) is conducted multimodally relying on participants' previous knowledge and features of the environment. Longitudinal analysis of repair sequences shows "how embodied L2 use is reflexively tied to the stability of a non-targetlike routine practice in the wild".

In Part II the focus is on learning behaviors: the in-situ practices that L2 speakers use to show orientation to learning and accomplish learning. Building on the view of learning as occasioned and achieved through public sense-making procedures,

the chapters describe a range of methods through which L2 learners actively configure out-of-classroom situations as learning environments.

Eskildsen presents a collection of such methods used by learners of Danish in everyday interactions in out-of-classroom settings. He catalogs the methods of noticing and using new words in word searches, making explicit use of an expert, and re-indexing previously learned items. These behaviors are shown to be empirical evidence of the foundational, moment-by-moment 'usage' of usage-based theoretical explanations of SLA.

Greer describes learning activity in two distinct everyday settings: dinner talk between a Japanese student and his American host family and interaction between a Japanese hairdresser and non-Japanese clients. The focus is on instances of L2 interaction in which participants pay attention to and orient to learning new lexical items. He describes how noticings of a novel lexical item can lead to further talk that is similar to language classroom practices, including explanations, alternative formulations and repair; sometimes also explicit noticing of learning itself.

Part III explores the connections between real-life social activities and teaching practices that can support learning outside the classroom.

Like Wagner (2015, pp. 76–77), several chapters in this volume argue for a reflexive relationship between classrooms and the wild. Classrooms have a central role in nurturing the process of transforming language use experiences into learning. Through participants' observations and self-recordings, some of these experiences are brought back into the classroom for reflection and teaching purposes (Thorne 2013; Lilja and Piirainen-Marsh 2019; Eskildsen and Wagner 2015a; Wagner 2015), while others are scrutinized as to the complementary opportunities for learning they offer with regard to classroom instruction.

The chapter by Piirainen-Marsh and Lilja investigates how experientially based pedagogical activities that involve participation in real life service encounters provide occasions for developing L2 interactional competence. Drawing on students' self-recorded interactions in service settings and videorecordings of classroom planning activities and de-briefing discussions, it examines what kinds of occasions for learning arise as the students move between the classroom and the real-world service settings. The findings show that the different phases of the task complement each other in supporting the development of interactional competence.

Hellermann, Thorne and Haley investigate how small groups draw on multiple environmental resources and the physical environment in their activities while playing an augmented reality game. They describe "improvisatory, collaborative actions and language formulations that are made relevant by the rich and diverse sensory semiotic resources available to participants walking through the environment". The findings suggest that the underspecified task fosters participants' consistent use of a particularly salient, built environmental object as a raw material for the task. They also show ways that movement through the environment in small groups provides affordances for language learning that may not be available inside the classroom walls.

The chapter by Lilja et al. introduces a radically student-centered course for teaching Finnish as a second language and discusses how a CA-inspired experientially-based approach to language teaching can sensitize learners to social

interactions outside the classroom, widen their opportunities for interaction and support the socialisation process. The chapter describes tangible materials and pedagogical activities designed to support language practice outside the classroom and ways in which retrospective reflection and analysis of out-of-classroom experiences create opportunities for learning. It also illustrates how design solutions can support L2 speakers' participation in interaction in their lifeworlds.

The chapter by Wagner serves as an epilogue to the entire volume as it discusses, more broadly, the main conceptual issues addressed in the book such as the relationship between contexts for language learning and the content of instruction and learning. He presents an argument for an ethnomethodological and sociological perspective on learning that the chapters in the volume align with. Wagner argues that this perspective on learning is the foundation of a new kind of experiential pedagogy that puts the myriad of social encounters that people living in a L2 society participate in at the center of studies of language learning.

The chapters in this part of the volume thus contribute to socializing L2 pedagogy by bringing the L2 learners and their learning out of the classroom and into the L2 community. Some of them explore innovative reconfigurations of activities and local communities that encourage people to build L2 learning spaces in the wild (Kääntä et al. 2013; Eskildsen and Theodórsdóttir 2017). This reconfiguration equals a development of social infrastructures that enable newcomers to participate in the surrounding community without fear of being misunderstood or not being able to understand. Instead, newcomers will engage with locals to carry out their business (e.g., buying groceries, joining sports clubs, becoming library users etc.) in the local language under the agreement that the locals are cooperative and supportive (Wagner 2015). Such infrastructures need building through reconfiguration of local communities by engaging locals in the process, but it essentially remains the task of the newcomers to maintain and develop the infrastructure – and using it to form longer relations to locals (e.g., through sports club memberships or at work places).

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Part I
Learning in the Wild: Development of Interactional Competence

"We Limit Ten Under Twenty Centu Charge Okay?": Routinization of an Idiosyncratic Multi-word Expression

Sangki Kim

Abstract This chapter investigates the role of idiosyncratic multi-word expressions (MWEs) in adult second-language (L2) learning in the wild. MWEs are typically argued to be the source of rule derivation in L2 acquisition ((Bardovi-Harlig K, Stringer D, Second Lang Res 33(3):61–90, 2016; Wray A, Formulaic language and the lexicon. Cambridge University Press, Cambridge, 2002),), but to date, there have been few studies on how idiosyncratic MWEs are routinized from a usage-based perspective embedded in a material and sequential context; and such studies mostly account for routinization as the result of frequency effects. Accordingly, the aim of the present research is to examine how routinization processes are affected by the participants' *in situ* sense-making practices and by the material world. Data for this study were drawn from 79 h of video recordings of service encounters that were collected at a convenience store in Honolulu over a 30-month period. The study focuses on one adult Korean shopkeeper and the simultaneous use of one idiosyncratic L2 English MWE and a printed notice of the store's policy in service encounters. Multimodal conversation analysis revealed how customers' knowledge of the store's policy, and the participants' orientations vis-a-vis the notice, contributed to customers' successful recognition of the use of MWE with the printed notice as an action. The findings show the process of routinization as comprised of embodied, sequential, and experiential phenomena that were co-constructed in a particular material context.

Keywords Second Language Acquisition (SLA) · Learning in the wild · Usage-based · Conversation analysis

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1 Introduction[1]

Many aspects of mundane second-language (L2) interaction in the wild involve highly routinized and normative sequences of turns situated in a material context, such as the openings of service encounter at supermarkets (e.g., Félix-Brasdefer 2015; Shively 2011). When trying to coordinate highly routinized everyday social activities, novice L2 users have been observed to use what Eskildsen and Cadierno (2007) called multi-word expressions[2] (MWEs). Despite being highly routinized, L2 users' MWEs are often idiosyncratic – that is, nonstandard or otherwise unconventional (Bardovi-Harlig 2006; Mauranen 2009; Seidlhofer 2009).

Some researchers have considered idiosyncratic MWEs to be the hallmark of (untutored) adult L2 acquisition (SLA) (Klein and Dimroth 2009) arguing idiosyncratic MWEs to be the product of incomplete (or stabilized) L2 grammar (Schmidt 1983; Wray 2002). While most studies have investigated idiosyncratic MWEs as a cognitively or individually attributable phenomenon (Bardovi-Harlig and Stringer 2016), a few usage-based studies have examined idiosyncratic MWEs as a resource for actions in the classroom context (Eskildsen 2012) or in an arranged conversation-for-learning context (Hauser 2013). While these studies showed that the routinization of idiosyncratic MWEs are propelled by communicative success, they have not paid attention to the embodied and material resources involved in the routinization of idiosyncratic MWEs. While there is no doubt that routinization is contingent on frequency effects and L2 input properties (Ellis and Ferreira-Junior 2009; Eskildsen 2012), action formation is a linguistic, sequential, and embodied accomplishment occurring in a material context (Goodwin 2013; Mondada 2011). Therefore, we cannot hope to understand how idiosyncratic MWEs become sedimented through L2 use without considering the interactive, embodied, and material contributions to the accomplishment of ongoing understandings.

The present longitudinal case study of an adult Korean shopkeeper's service encounters focuses on the process of the routinization of idiosyncratic MWEs as it occurs in the complex multimodal ecology of everyday L2 life. Specifically, this study investigates one idiosyncratic MWE that was used in the payment activity in conjunction with a printed notice posted on a convenience store checkout counter, with the goal of revealing that the idiosyncratic MWE's ongoing routinization processes. Using longitudinal multimodal conversation analysis (CA) as a usage-based approach to L2 learning (Eskildsen and Cadierno 2015), this study provides a detailed analysis of how and why the idiosyncratic MWE and associated textual material were not amenable to change over a 30-month period.

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[2] Eskildsen and Cadierno (2007: 91) define an MWE as a "recurring sequence of words used together for a relatively coherent communicative purpose."

The following section reviews prior studies of the processes of routinization of idiosyncratic MWEs, and then assesses the potential of multimodal CA for investigation of such routinization.

1.1 Routinization of MWEs

Most previous SLA studies viewed routinized idiosyncratic MWEs as the product of incomplete L2 grammatical knowledge (e.g., Bardovi-Harlig 2006; Wray 2002), although some considered idiosyncratic MWEs as part of L2 users' communicative competence (Schmidt 1983; Seidlhofer 2009). It has been argued that incomplete L2 end-state grammar is the results of the interaction between linguistic factors (i.e., L2 input properties such as perceptual saliency, frequency, and variability or L1 transfer) and learner cognition (i.e., sensitivity) (Han 2013; Long 2003). In this vein, to date, some researchers continue to consider idiosyncratic MWEs as "reflective of autonomous syntactic development" (Bardovi-Harlig and Stringer 2016: 3). However, as a usage-based understanding of language and language learning emerged, the notion of fossilized internal L2 grammar has been criticized as being untenable and unrealistic (Larsen-Freeman 2006; Ortega 2014).

Studies that adopted a more usage-based perspective recognize the importance of MWEs as the seeds of L2 development (Eskildsen and Cardierno 2007) and looked at idiosyncratic MWEs as the results of entrenchment or sedimented resources for action (Eskildsen 2012). From cognitively oriented usage-based perspectives, routinization is seen as the manifestation of entrenchment of form-meaning correspondences (i.e., constructions). Entrenchment is a frequency-based phenomenon and plays a key role in learning of idioms and other formulae (Ellis 2015) and in constraining children's overgeneralization of linguistic items (Goldberg 2009; Tomasello 2003). Moreover, Schmid (2015) discusses entrenchment as both a product and a process. It occurs through repeated usage of given linguistic items and constructions. Also, it triggers routinization and re-organization of associations via a function of frequency of exposure and of processing, which are constrained by the social environment. A majority of these studies from cognitive usage-based perspectives focused on the entrenchment of well-formed constructions in learning L1 or in learning an artificial language. These studies in common showed how entrenchment inhibits (over)generalization of given linguistic items to novel constructions.

To date, there are only two longitudinal SLA studies that have used CA with a usage-based approach. These studies have demonstrated the routinization of idiosyncratic MWEs such as *you no write* (Eskildsen 2012) and the pre-verbal negation patterns *No*(*t*)-*X* and *X*-*No*(*t*) (Hauser 2013). Eskildsen (2012) explained the routinization of idiosyncratic MWEs as a frequency-based process, rooted in repeated successful uses of the MWE *you no write*. Similarly, Hauser (2013) conjectured that successful use of an idiosyncratic MWE enables it to outcompete alternative and possibly more conventional MWEs that could perform the same communicative function(s), although he did not account for the stable use of idiosyncratic semi-fixed linguistic patterns.

While these two longitudinal studies investigated the use of idiosyncratic MWEs in context, they have not paid attention to two important aspects of usage. First, although they examined the situated use of the idiosyncratic MWEs that is believed to shape the routinization of the idiosyncratic MWEs, they essentially treated the routinization process as a psycholinguistic process. As a result, they explained the routinization of idiosyncratic MWEs as the interaction between individual cognition and the frequent use of the idiosyncratic MWEs. Secondly, these studies have not focused on the multimodal aspects of interaction (see, however, Eskildsen and Wagner 2015, 2018). To add to this research, I use multimodal CA with longitudinal data to show how an idiosyncratic MWE is routinized as the sedimentation of the use of a variety of semiotic resources for accomplishing a particular social action. The resources include not only language, but the body, and objects in their respective material contexts.

1.2 CA-SLA as a Usage-Based Approach to SLA

Conversation analysis aims to capture “the competences that ordinary speakers use and rely on in participating in intelligible, socially organized interactions” (Heritage and Atkinson 1984: 1). As a prominent offshoot of ethnomethodology, CA shares the ethnomethodological assumption that “the production of observable social activities involves the local or situated use of member’s methods for doing such activities” (Francis and Hester 2004: 20). Thus, competence is understood as residing in socially shared practices used for accomplishing actions in interaction (Heritage 1984). From this perspective, SLA research using CA as an analytic framework (henceforth, CA-SLA following Kasper and Wagner 2011) takes a praxeological position on language, and focuses on *interactional competence*, understood as an ability to produce intelligible actions and to participate in social activities (Hall and Pekarek Doehler 2011).

From a CA perspective, the phenomenon of understanding is considered to be a sequential, co-operative, and multimodal achievement (Macbeth 2011; Mondada 2011; Schegloff 1991). As L2 learning activities presuppose mutual understanding, CA-SLA research argues that the structure of L2 use in interaction occasions L2 learning and development (Wagner 2015). CA-SLA’s perspective on language learning is closely aligned with usage-based approaches, since the essence of the latter is that “language learning is fundamentally usage-driven” (Eskildsen and Cadierno 2015: 1) and that “language structure emerges from language use” (Tomasello 2003: 5).

2 Participants, Data, and Transcription

The data for this study are drawn from 45 video recordings (a total of 79 h) of naturally occurring service encounters at a convenience store in Honolulu. The data were collected over a 30-month period from May 2012 through October 2014. The focal participant was Minji, the shopkeeper, who had immigrated from Seoul to Honolulu in June 2011 with her husband and two teenaged children. Born in Korea and educated there, Minji had studied nutrition at a university in Seoul. By her own account, Minji attended two English conversation courses at the university in 1988. After that, she did not study English or use it for communicative purposes until she arrived in Honolulu. She bought the convenience store upon arrival and had been running it for 11 months prior to the commencement of data recording. Her working day was 14.5 h long, 6 days per week (i.e., 6:30 a.m.–9 p.m. Monday to Saturday), not including 1–2 h per day she spent commuting. During most of each day, Minji worked alone, especially after her husband obtained a job unconnected with the store in January 2013. The other participants comprised customers who entered the store to purchase everyday items such as snacks, drinks, and cigarettes.[3]

In this study, I focus on one type of card-payment activity involving transactions of less than $10. In such cases, Minji informed customers of the store’s card-payment policy: that the store adds 20 cents for credit card purchases of less than $10. Minji informed customers of the policy and solicited their compliance with paying the transaction fee by using two versions of an idiosyncratic MWE (see Tables 1 and 2) and a printed notice (see Fig. 1) regarding this policy that was posted at the checkout counter throughout the data-collection period. According to Minji, she began to enforce the 20-cent fee policy in June 2011. As noted in the Dodd-Frank Wall Street Reform and Consumer Protection Act[4] that regulates interchange fees for card transactions, card-payment policies of this type are not uncommon among small-scale businesses in Hawai’i, although the minimums and the actual fees vary considerably. Based on a simple extrapolation from the 25 informing sequences collected in this study, Minji had probably enforced her store’s card-payment policy more than 1200 times by the end of the data-collection period in October 2014.

3 Analysis

The following analysis focuses on action-formation and ascription processes: that is, on how Minji informed customers of the store’s card-purchase policy using an idiosyncratic MWE and textual material, and how the constellation of these interactional practices gets recognized by her customers as the particular action of enforcing the

[3] The participants voluntarily agreed to participate in this study and provided consent.

[4] All merchants in the U.S. have been legally free to set a minimum card-purchase amount of up to $10 since October 1, 2011.

Table 1 The turn-constructional unit of the sentential MWE

Case	Ex.	Date (m/d/y)	Turn constructional unit				
2	(5)	8/3/12	yeah:- an:d	we limi ↓te:n: ↑ (0.4) and	under:,	>twenny centu charge.< (.)	>okay?<
3		1/11/13	yeah-	we limit te:n	under	twenny centu charge:	oke:?
4		2/1/13	yeah	<we limit te:n	under	twenny centu charge	oka::y?>
5		3/29/13	yeah. (.)	we limit te:n	under	twenny centu charge	oka:y↑
6	(3)	10/3/13	*yea:::*	we limi te:n	under	twenny °cen charge°	okay
10	(6)	1/11/14		we >limi=ten	under	twenny centu< ↓charge	okay?
12	(7)	5/12/14	yeah ·hhh	we limit ten	under	twenny centu charge	oke?
15		6/15/14	yeah	we limit ten	under	twenny centu charge?	okay?
16		7/11/14	uh:::	we limit ten:	under::,	twenny centu charge	okay?
18		7/25/14	yeah (0.2) ·hh	we <limit te:n	under	twenny centu charge	okay?>
19	(4)	7/25/14	yeah. (0.3)	we limi ten	under	twenny °cen- charge?°	
20	(1)	8/22/14	yo-	>we limi ten	°un-	twence charge?°<	
24		10/10/14	yeah- ·h	WE limit ten:	under	twenny centu charge	okay?

Table 2 The turn-constructional unit of the phrasal MWE

Case	Ex.	Date (m/d/y)	Turn constructional unit		
1		6/29/12		twenny centu charge?	
7	(2)	10/17/13	$yeah$ (0.5)	$·hh twenny cen chargee?↑	
9		1/11/14	yeah	>twenny centu charge	okay?<
11		3/13/14		twenny centu charge?	
14		5/16/14	yeah (0.2)	twenny centu charge	okay?
21		9/12/14		>twenny centu charge<	
23		10/10/14	yeah	>twenny centu charge	okay?<

store's policy. In Sect. 3.1, I discuss two variants of the MWE through which Minji implemented the informing action that occupied the first position in each informing sequence. In Sect. 3.2, I highlight the action recognition process with a focus on the customers' contributions; and in Sect. 3.3, I examine how the printed notice contributed to the processes of action-formation and ascription during payment activities.

3.1 Use of Two Variants of the Idiosyncratic MWE

When informing customers of her store’s card-payment policy in the first position of the policy informing sequences, Minji recurrently used two variants of an idiosyncratic MWE, in combination with the printed notice about this policy that was posted at the checkout counter, as shown in Fig. 1.

Comparison of the two variants of the MWE shows Minji’s orientation to customers’ epistemic status regarding the store’s card-payment policy. In both excerpts below, Minji initiates the informing sequence by using one of the two variants of the MWE (l. 19) after announcing the total transaction cost (l. 17 in Excerpt 1 and l. 14 in Excerpt 2). For the informing action in Excerpt (1), Minji uses a sentential MWE, *yo- we limi ten °un-twence charge?*, whereas in Excerpt (2) she uses a phrasal MWE, *yeah [0.5] $˙hh twenny cen charge$.*

Excerpt 1: Case 20, Recording #42 (08/22/14)

```
17      MJ:   two ↓nineny?
18            (8.9)
              C: pulls out a card from a wallet and hands the card to MJ

              +PT/GZ notice       +GZ C                  +GZ/moves to POS terminal
19 ➔    MJ:   +yo- [+>we limi +ten +°un-+twence +charge?°<
        C:          +GZ notice (F1)      +slightly nods

                                                   +eyebrow flash (F2)
20 ➔    C:         [yeah-
```

Frame 1. Frame 2.

```
21            (16.4)
              MJ: operates the POS terminal
              C: GZ right
```

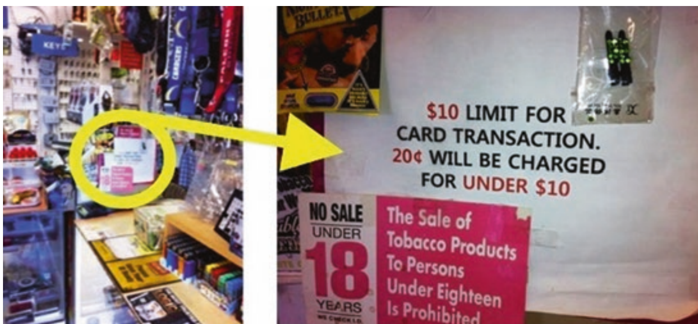

Fig. 1 Notice of the store’s card-payment policy

Note. A point of sale (POS) terminal refers to an electronic device used to process card payments at retail stores.

Excerpt 2: Case 7, Recording #3 (10/17/13)

```
14      MJ:   five ninety s::ixu
15            (0.8)
16      MJ:   no need?
17      C:    ↑no:: I'm (good on) cigarettes [thank you
18      MJ:                                  [eh heh heh hhh

              +LH stretch +GZ/PT notice    +GZ C/retracts RH (F1)
19 ➔          +$yeah$ +(0.5) $˙hh +twenny cen charge?$
        C:                  +gives credit card

              +nods
20 ➔    C:    +'f course
21      MJ:   yeah::?

22            (5.4)
              MJ: swipes card through the POS terminal

23      C:    (maybe I get) cigarette tomorrow.
```

Frame 1.

The phrasal MWE in Excerpt (2) appears to have been adapted from the sentential MWE, as the former excludes the information about the store's minimum policy for card transactions (*we limit ten under*). As such, Minji's use of the phrasal MWE evidences that she is treating the store policy as shared knowledge. By the same token, the use of the sentential MWE suggests that Minji identifies a given customer as unfamiliar with the store policy, or at any rate less familiar with it than those customers she addresses with the phrasal MWE.

Using the phrasal MWE serves to maximize the progress of the informing sequence, as compared to using the sentential MWE. Another interactional accomplishment of the phrasal MWE is that, by treating some customers as knowing about her store's policy, Minji marks them as regular customers. Indeed, evidence indicate that the customer in Excerpt (2) is one of the store's regulars. For instance, Minji proactively offers him a particular brand of cigarettes (l. 16), and although the customer declines them (l. 17), this is based on his currently having a sufficient supply; and the customer's future need for this item is expressly acknowledged (l. 23).

As can be seen in Table 1 and Fig. 1, the MWE and the text on the notice are not conventional, both primarily pertaining to the use of *limit*. Minji uses *limit* as a verb which means "to confine within limits, to set bounds to" in the MWE (Limit 2017). However, in the MWE Minji omits the role of patient of the action (i.e., the card transactions), instead inserting an argument regarding a characteristic of the limitation, which must be in a prepositional phrase (e.g., We limit card transactions *to more than a $10 total purchase*). On the notice, she employs *limit* as a noun which

Fig. 2 Card-payment policy notices posted at small businesses in Honolulu

can be defined as "a bound which may not be passed, or beyond which something ceases to be possible or allowable" (Limit 2017). In light of these dictionary meanings of *limit*, the literal meaning of Minji's formulations of the store's policy – both spoken and written – could be heard as that the customer cannot purchase *more* than $10 worth of items using a card (cf. Fig. 2 for more conventional notices of card-payment policies).

Minji continued using the same unconventional sentential and phrasal MWEs in the first position of the informing sequences in the payment activities over the entire 30-month period of data collection, as summarized in the two tables below. As those tables indicate, the use of the sentential and phrasal MWEs was clearly routinized.

Due to space constraints, I will focus on the use of the sentential MWE to demonstrate the ongoing routinization of the idiosyncratic MWE.

3.2 *Customers' Experiential and Sequential Knowledge of the Store's Policy*

This section focuses on customers' contributions to the success of the informing sequences described above, and in particular, on the sequential positions at which customers produced responses to Minji's use of the idiosyncratic MWE. The following excerpt, extracted from recording #23 collected in October 2013, immediately follows Minji's offer of a requested service (ll. 4-28), and begins with her announcement of its total cost (l. 29).

Excerpt 3: Case 6, Recording #23 (10/03/13)

```
29      MJ:   nine o nine:
30            (0.3)
31 ➔    MJ:   *yea:::* we limi te:n under tw[enny °cen charge° okay
32 ➔    C:                                  [yeah
33            (20.8)
              MJ: swipes card through the POS terminal and operates the POS terminal

34      MJ:   um um ((singing voice))
35            (3.8)
              C: signs
              MJ: gives C the receipt

36      C:    here we go
37      MJ:   thank ↑you:::[::
38      C:                 [>thank you<
39            (1.7)
40      MJ:   bye:
41      C:    by:e:
```

Note. This transaction was only audio-recorded due to the malfunction of the video camera.

After Minji announces the total payment due, the customer hands her a credit card (l. 30). After receiving the card, Minji does not swipe it through the POS terminal that initiates the authorization process with the card company. Instead, she informs the customer of the store's card-payment policy, because the purchase total is under $10.

In initiating the informing sequence, Minji uses the MWE: "*∗yeah:::∗ we limit te:n under twenny °cen charge° okay*↑" (l. 31). Although Minji treats the customer as being unfamiliar with the store's policy, as indicated by her use of the sentential MWE, the customer nevertheless turns out to have independent knowledge of the policy. This analysis is corroborated by the sequential position in which the customer produces a relevant response to Minji's prior turn. At the point where the customer provides an affirmative token (*yeah*, in l. 32), Minji has only told the customer the minimum-purchase policy, and not fully mentioned the addition of a 20-cent transaction fee. Note the variety of card-payment policies in the Honolulu area indicated by the printed or handwritten notices about them that are posted in small businesses as shown in Fig. 2.

As can be seen in Fig. 2, card-payment policies in Honolulu require different amounts of minimum purchases. Many stores do not accept card payments less than $10; others add a transaction fee varying between 20 and 35 cents. Despite the variety of card payment policies in Honolulu, the customer accepts the transaction fee at a moment in which the precise information of the transaction fee is not yet available (l. 32). The acceptance done in overlap with the informing turn thus suggests that the customer treated Minji's informing turn as *adequate* based on her knowledge of the store's policy (cf. Jefferson 1983).

The following excerpt from recording #40, collected on July 25, 2014 (i.e., 9 months after Excerpt 3), also shows how the customer uses her independent knowledge of the store's policy in responding to Minji's continual use of the idio-

syncratic MWE. Excerpt (4) begins with the customer making an additional request for a pack of cigarettes.

Excerpt 4: Case 19, Recording #40 (07/25/14)

```
25      C:     =can I have um: yu esei gold?=one?
26             (0.5)
27      MJ:    gold gol[- ah: menthol?
28      C:             [(one).
29             (5.8)
30      MJ:    ↑eight thirty.
31             (0.9)
               C: gives MJ credit card

                     +GZ notice  +PT notice (F1) +GZ C
32 ➔    MJ:    yeah.+(0.3)   +we   limi +ten  +under
        C:                   +GZ down (F1)        +big nod/GZ down
```

Frame 1.

```
                                  +moves to credit card machine
33 ➔           +twenny    °+cen-  +charge?°=
        C:     +nods/GZ down  +nods

34      MJ:    =m thank ↑you
35             (22.5)
               MJ: operates the POS terminal
```

In lines 25–29, the customer and Minji exchange a service-request and service-offering. Minji announces the total purchase amount (l. 30), and the customer presents a card to her (l. 31). As the total is less than $10, Minji informs the customer of the card payment policy, using both the sentential MWE and the printed notice. When initiating a new sequence, claiming speakership by saying *yeah* (Jefferson 1984), Minji attempts to draw the customer's attention to the notice through shifting her gaze, and leaning and pointing toward the notice, as shown in Frame 1 (l. 32). Minji then delivers the MWE: *we limit ten under twenty °cen- charge?°* (l. 32-33). By directly mentioning the minimum policy, Minji reveals that she regards the customer as either relatively or totally unfamiliar with the store's card-payment policy (cf. Excerpt 2). In response, the customer – without looking at the notice – accepts the transaction fee, as conveyed through a big nod (l. 33) that overlaps with *under* in the informing turn in progress (l. 32). Similar to Excerpt 3, the amount of the transaction fee has not been conveyed as of the moment the customer begins nodding, yet she continues nodding in overlap with Minji's turn in progress (l. 32-33).

Minji treats the multiple nods as compliance with the policy, and thus her voice trails off in the latter part of the MWE; simultaneously, she moves toward the card

terminal before she finishes the turn (l. 33). Minji responds to the customer's compliance with thanks (l. 34) while operating the terminal (ll. 34-35). By doing so, she closes the informing sequence and advances the payment activity. Although Minji has treated the customer as someone unfamiliar, or relatively unfamiliar, with the store's policy, the customer accepts the transaction fee in overlap, revealing her orientation toward the prior turn as being adequately recognizable.

Three observations can be made about the successful informing sequences in Excerpts 3 and 4. First, the customers in both excerpts grasped the import of the informing turn *in progress* owing to their knowledge of the store's policy. Secondly, the customer's understanding of Minji's informing action is displayed through either an agreement token (i.e., *yeah*) or embodied compliance (i.e., nodding). These ways of demonstrating understanding do not involve either repetition or reformulation of the MWE, either of which could have provided a more conventional version of it (Brouwer et al. 2004, Jefferson 1987). Finally, acceptance of the transaction fee is a relevant next action-type for the action being built by Minji's MWE. The successful achievement of understanding thus provides Minji with evidence of the practical intelligibility of the MWE: as working to inform, and therefore as an instance of intelligible L2 English use. This argument is supported by the way that Minji continually employed the sentential MWE to inform customers of her policy over the whole 30-month data-collection period, as shown in Table 1.

3.3 Orientations Toward the Notice

The previous section illustrated how customers drew upon their knowledge of the store's policy in construing Minji's MWE as informing them of that policy and eliciting their compliance, and further argued that the customers' relevant responses ratified the MWE's intelligibility. The three excerpts in this section reveal that the participants' focus on the notice was crucial in constructing and understanding Minji's practices in the informing sequences. Specifically, it will be argued that customers' reading behavior contributed to the success of informing sequences, and thus helped the routinization of the idiosyncratic MWE as an action inventory for informing customers of the store's policy.

Excerpt (5), below, was recorded on August 3, 2012 (recording #5). Just prior to the beginning of this excerpt, Minji had announced the total payment due (l. 15), and the customer had requested that the transaction be split into two payments, to allow her to pay for the purchase with a combination of cash and a credit card (ll. 16-17). We join the conversation at the point where the customer divides her items into two groups, one for each of the two payment methods (ll. 25 to 30).

Excerpt 5: Case 2, Recording #5, (08/03/12)

```
            +GZ cigarettes              +picks up cigarettes placed near her
25    C:    +no-no-no-no- (0.2) +you know what

            +puts it near the other cigarettes         +puts money on one cigarette
26          +(0.8) yeah jus: this one is +this.
27          (0.5)

            +GZ down +nods  +nods
28    MJ:   +um um +um  +um[um
                                                        +puts credit card on cigarettes
29    C:                  [this I gonna pay credit +car:d
30          (0.6)
            MJ: moves the credit card
            +GZ/PT notice (F1)    +GZ C                      +GZ notice
31 ➔  MJ:   +yeah:-  +an:d +we limit +te:n:↑ +(0.4)    +and under:,
      C:    +GZ left (F1) +GZ notice (F2)   + opens mouth wide (F3)  +picks up cigarettes with money on it
                                                  +GZ/RH down (F4)
```

Frame 1.

Frame 2.

Frame 3.

Frame 4.

```
             +GZ C
32 ➔        >+twenny centu charge.<(.)>o+kay?<
      C:                                   +puts down cigarettes with the money on it with loud noise

            +takes the card back
33 ➔  C:    +(0.3) oka.hhy +(0.4) just (put) [°that wa[y°
      MJ:                  + puts two packs of cigarettes together
34    MJ:                                    [eyh-    [yeah=
35          =uhhuhhuhh ˙hh °fifteen? sixty°
```

One result of this request for split payments is that the total cost of the group of items to be paid for by credit card drops to less than $10. Minji accordingly initiates the informing sequence (ll. 31-32) before launching the transaction-authorization process with the card company. Using the sentential MWE (ll. 31-32), Minji notifies

the customer of the store's payment policy, and also draws the customer's attention to the printed notice by shifting her gaze and pointing to it (Frame 1).

The looking and pointing lead to three practical outcomes. First, the notice, part of a complex setting, is identified as relevant to the ongoing formation of the action, and this immediately draws the customer's attention to it over Minji's production of *an:d* (l. 31), as captured in Frames 1 and 2. Secondly, through directing the customer's attention to the notice, Minji proposes a reconfiguration of the participation framework: from a dyadic to a triadic, embodied one involving the customer, the notice, and herself (Goodwin 2007). Finally, Minji points to different parts of the notice as corresponding to different points in her MWE; and thus, the combination of practices constituted by the semiotic package, *MWE-cum-notice*, topicalizes the text on the notice. This allows the informing turn to be heard as a succinct presentation of the notice within the embodied participation framework (cf. Nissi and Lehtinen 2016). This analysis is supported by the way that the customer turns to and apparently reads the notice (captured in Frame 1–2).

As the customer aligns with the embodied participation framework proposed by Minji, Minji looks at the customer while continuing to inform the customer of the minimum policy: *we limi ↓te:n:↑ (0.4)*, (l. 31). In overlap with the elongated production of ↓*te:n:*↑ (l. 31), by which time the customer has been looking at the notice for 1.1 s, the customer's mouth suddenly opens wide, as captured in Frame 3. Such a marked change in facial expression seems to be an example of what Kääntä (2014, 88) called "embodied noticing": a gesturally performed action that embodies a cognitive event. This analysis is corroborated by the customer's subsequent action.

Immediately after the moment of embodied noticing, the customer begins to change the previously arranged payment methods by combining the two groups of items into one (Frame 4, l. 31) and by withdrawing the credit card that had previously been placed on a pack of cigarettes and announcing a change in payment methods (l. 33). It should be noted that the customer's new preferred payment arrangements, as captured in Frame 4, occurs in overlap with the rest of Minji's informing turn: *(0.4) and under:, >twenny centu charge<. >okay?* < (ll. 31-32). The abrupt manner in which the customer rearranges her payment methods (e.g., putting the cigarettes down on the counter with a loud noise, l. 32) displays her disaffiliative stance toward the store's policy. This change also constitutes a fitting response to the informing turn (i.e., compliance with the store's policy), evidencing the customer's understanding of the action Minji constructed. Minji's lengthy laughter (l. 35) indexes her orientation to the disaffiliative stance, but also terminates the informing sequence (Holt 2010); and such termination clearly indicates that she regards the change

of payment methods as evidence of the customer's understanding of the informing turn. In this way, the conditionally relevant next action produced in overlap with the informing turn provides Minji with evidence that the MWE-cum-notice is an intelligible means of conveying the store's policy and soliciting compliance with it.

The customer in Excerpt (5) complied with the policy after reading the notice while Minji was uttering the MWE. In contrast, the customers in the following two excerpts briefly suspend their responses to Minji's informing turn. These delays create an interactional space in which the customers can perform a certain action: reading the notice. Minji does not interrupt this reading activity revealing her orientation to the customers' focus on the notice as part of the action-ascription process within the informing sequence. The excerpt below was recorded on January 11, 2014, 17 months after Excerpt (5).

Excerpt 6: Case 10, Recording #30 (01/11/14)

```
                +puts the items in a plastic bag
05      MJ:     ↑+nine ↓twenty five
06              (1.7)
                MJ: continues putting the items in a plastic bag
                C: holds out a card
                MJ: GZ the card & RH moves toward the notice

                +GZ/PT notice (F1)                  +GZ C (F2)
07  ➔   MJ:     +we   >+limi=ten  under     +twenny centu< ↓charge okay?
        C:      +GZ card  +GZ notice/moves to the right +GZ notice
```

Frame 1. Frame 2.

```
08  ➔           (1.8)
                C: GZ notice in a frozen posture
                MJ: GZ C

09  ➔           (0.5)
                C: stretches his RH with palm facing up (F3)
```

Frame 3.

```
                                          +moves to the back
10  ➔   C:      +I put one more ting then [+HaHaHa Ha H]ah
        MJ:     +returns the card

11      MJ:                               [h h h h  h h]
```

As the customer approaches the counter with items he has selected, Minji begins her calculations (l. 4) and then announces the total cost (l. 5). While she is bagging the items, the customer hands a credit card to her. Minji takes it in her left hand and at the same time constructs the informing action using the same gestures as usual, the notice, and the MWE. While saying, *we* (l. 7), Minji points to and looks directly at the notice (Frame 1). Following this combination of looking and pointing, which co-occur with Minji's verbal informing, *limit*, the customer sees the notice. He does not immediately respond to the action that the prior turn projects. Instead, he moves to the right, apparently to see the notice more clearly (Frame 2), and stands motionless while looking at it for 1.8 s (Frame 2, l. 8). In this way, the customer suspends the progress of the informing sequence. However, Minji does not treat the customer's focus on the notice as problematic (e.g., as an absence of response or problem of understanding), even though it delays a conditionally relevant response. This shows that Minji construes the customer as being engaged with the notice, and that she treats this engagement as an aligning move within the embodied participation framework that she launched in the prior turn.

After focusing on the notice for 3.5 s (ll. 7-8), the customer then silently extends his right hand with the palm facing up (Frame 3, l. 9). Minji takes this gesture to be a request for the return of the card (l. 10). After receiving his card back, the customer explicitly announces his adjusted purchase plan (l. 10). In this announcement, the tying device *then* is used to indicate that this change of plan is contingent on Minji's informing. The customer thereby signals that he regards Minji's actions as intelligible. He terminates the informing sequence by laughing and moving away (l. 10). Minji also aligns herself with the termination by reciprocating with laughter, thus demonstrating her view of the customer's change of plan as evidence that he understood the informing turn (l. 11).

Excerpt (7) also illustrates how Minji and a customer make use of the store's notice in constructing and recognizing the informing action, respectively. The customer initially appears to accept the transaction fee but a moment later reverses his initial acceptance and changes the payment method. Analysis suggests that this change in payment type results from his reading of the notice. Excerpt (7) was recorded on May 1, 2014, 4 months after Excerpt (6), and begins when Minji announces the total cost of the customer's items (l. 4).

Excerpt 7: Case 12, Recording #35 (05/01/14)

```
04      MJ:   four twenty ↓°+four:°
        C:                         +holds out an ID

        ((3 lines omitted: MJ checks ID))

              +takes the card (F1)
              +GZ/PT notice (F1)                       +G Z C (F3)
08 ➔    MJ:   +yeah ˙hh    we   +limit ten under twen+ny cen[tu charge oke?]
        C:    +GZ ID/picking up ID (F1) +GZ notice (F2)
```

Frame 1. Frame 2. Frame 3.

```
                                                                  +GZ notice
09 ➔    C:                                                        [+oh oke   oke.]
10 ➔          (0.7)                                  (0.6)          (0.2)
              MJ: nods and moves toward the cash register (F4)  MJ: GZ C (F5)   C: nods twice
              C: GZ notice (F4)                       C: nods/GZ notice (F5)
```

Frame 4.

Frame 5.

```
              +nods/operates the POS terminal
11 ➔    MJ:   +°yeah (0.4) thank you°+
        C:    +GZ notice                +GZ notice

12 ➔    C:    oh okay never mind then
13      MJ:   [yeah
14 ➔    C:    [how much is that?
15            (0.9)
16 ➔    MJ:   ↑four twenty four:?
17            (3.7)
              C: pulls out cash from wallet
              MJ: GZ C

18 ➔    MJ:   +do you have?
        C:    + puts the cash on the counter

19 ➔    C:    ye:s
20      MJ:   hhh thank you::
```

In the omitted lines, while Minji is checking the customer's ID, the customer hands her a card. Instead of proceeding with the card-authorization process, however, Minji initiates the informing sequence, using the same MWE-cum-notice multimodal package described above. Over the production of *yeah*, Minji looks at the notice posted on the counter while pointing at it with her right hand (Frame 1). These gestures incorporate the notice into the ongoing informing action, reconfiguring the participation framework from a dyadic to a triadic one. The customer adjusts to the proposed change in the participation framework by turning toward and looking at the notice (Frame 2) by which time Minji produces *limit* (l. 8). While continuing to focus on the notice, as captured in Frame 3, the customer claims to understand (l. 9), in overlap with the end of the TCU in the prior turn: *centu charge oke*? (l. 8). Minji treats this response as compliance with the addition of the transaction fee, and thus begins the authorization process by moving to the right where she can more comfortably operate the terminal. She also moves the card to her left hand to swipe it through, as shown in Frame 4 (l. 10).

While Minji is moving toward the terminal, the customer continues to focus on the notice, as shown in Frames 4 and 5 (l. 10). Minji registers the customer's spatial orientation toward the notice and stops the authorization process by stepping away from the terminal. She then repositions herself so she can better attend to the customer, as captured in Frame 5. Based on the customer's visible focus on the notice, which has continued since he initially complied with the transaction fee, Minji appears to revise her understanding of his previous utterance *oh oke oke* (l. 9) as a mere claim of understanding, rather than as an acceptance of the transaction fee. The way that Minji looks at the customer after ceasing to operate the terminal (Frame 5) demonstrates that she has re-engaged in the informing sequence that she had terminated, corroborating my claim that by this point, she has jettisoned her previous understanding of the customer's earlier response. In other words, Minji orients to the sequential placement of the customer's visibly continuing attention to the notice, and this indicates that she regards the notice as an essential part of her practices of conveying the store's policy.

The customer also registers the change in Minji's posture and spatial orientation which is indicated by his two nods (l. 10). With her own nods as a token of acknowledgment, Minji regards the customer's nodding as acceptance of the fee, and thus terminates the informing sequence once more. Only then does she resume the card-authorization process (l. 11). Even after these nods are exchanged, however, the customer continues looking at the notice (l. 11). After 1.1 s, he then produces another claim of understanding (*oh okay*), thus terminating the solitary reading activity that has continued for 5 s (ll. 8-11). He then cancels the use of the card as the payment method for the transaction, by saying *never mind then* (l. 12). The tying device *then* indicates that this change of payment method is based on his understanding of the policy, which in turn is apparently the result of his having read the notice. Minji's acknowledgement token responds to this turn, but she still advances the authorization process by sliding the card through the terminal (l. 14). In this way, she shows her non-understanding of *never mind then*, by which the customer had aspired to cancel the use of card. He requests information about the total

payment due while beginning to search for money in his wallet (l. 12-13). After glancing at the screen of the cash register (l. 15), Minji in response provides him with the total (l. 16).

The customer pulls cash from his wallet (l. 17), and Minji treats this as an indication that he wants to change his payment method, as shown by her candidate understanding, *do you have?* (l. 18). The customer presents the cash as an alternative payment method by placing it on the table (l. 19). In this way, the customer displays his understanding of the policy. This response provides Minji with further evidence that her multimodal practices (i.e., the use of the MWE and the notice) are an intelligible means of conveying the card-payment policy.

4 Discussion and Conclusion

This study's findings reveal the ongoing routinization of the action inventory that Minji used for informing customers about her store's card-payment policy and for soliciting their acceptance of transaction fees over a period of 30 months. This informing action was constituted by a constellation of routinized practices that included use of the idiosyncratic MWE (*We limit te:n under twenny centu charge: okay?*) combined with drawing the customers' attention to the printed notice containing an idiosyncratic formulation of the store policy (Fig. 1) through looking at, leaning toward, and pointing at it.

Usage-based studies have indicated that repeated processing of input results in the routinization of linguistic resources (Collins and Ellis 2009; Ellis 2015), and that this gives rise to (1) entrenchment, which preempts overgeneralization of verbs (Tomasello 2003); and (2) grammaticalization, or sedimentation, of routinized linguistic resources: for example, epistemic markers such as *I guess* and *I think* (Günthner 2011, Hopper 1998). More recently, Schmid (2015) further specified that routinization comprises syntagmatic associations between linguistic forms and meanings, on the one hand, and pragmatic associations between syntagmatic associations and contextual circumstances, on the other. Yet, despite various differences in their approaches, the usage-based studies cited above all explain the phenomenon of routinization in terms of frequency effects. The present study's findings, in contrast, suggest that the routinization of idiosyncratic MWEs is the result of co-constructed, embodied, repeated achievements of understanding. Specifically, the analyses of Minji's idiosyncratic MWE-cum-notice action inventory demonstrated the crucial and consequential contributions, of the cooperative actions of the co-participants, and of the textual material at the checkout counter, to the success of each informing sequence.

Prior research has concluded that communicative success is a major driving force for the routinization of idiosyncratic L2 utterances, including idiosyncratic MWEs (Eskildsen 2012; Han 2004, Hauser 2013, Mauranen 2009, Perdue and Klein 1992, Seidlhofer 2009). These studies all argued that, despite its ungrammatical or unconventional forms, idiosyncratic L2 use is mostly transparent to the recipients, and

thus serves the communicative purposes at hand. This study's findings in addition highlight the co-participants' contributions to communicative success in the informing sequences. Minji's customers drew on their experiential knowledge of her store's policy. This claim is supported by the customers' consistent production of relevant next actions in overlap with the informing turn by which time a relevant next response type has not been projected grammatically, prosodically, or pragmatically through the sentential MWE (Excerpt 3 and 4). While CA research has elaborated on grammar-, prosody-, and pragmatics-based projections as critical resources for action ascription (Auer 2005; Levinson 2012; Sacks et al. 1974), Heritage (2013: 552) argued that "the semantic, pragmatic and actional interpretations of utterances are both unavoidably and irremediably shaped by their contextual background." The results of the present study support Heritage's view, insofar as Minji's customers' experiential knowledge of the informing sequences at Minji's convenience store provided resources for their recognition of Minji's informing turn-in-progress as an adequate action.

The customers' overlapping responses evidence that a projection was being made available to them through the idiosyncratic MWE in progress. Günthner (2011) demonstrated that shared communicative experiences of German expressions (i.e., *die Sache/das Ding ist*-constructions) give rise to the sedimentation of their interactional functions. In our case, the projection of the relevant response after Minji's MWE was based on the customers' experiential knowledge of the store's policy, but their orientations vis-a-vis the projection ratified the MWE as a sedimented action inventory. These repeated, publicly displayed local understandings contributed to the routinization of the idiosyncratic MWE, as evidenced by Minji's continual use of it in every first position of subsequent informing sequences (see Table 1).

Turning to the contributions of the textual material, it can be noted that – unlike the customers discussed in Sect. 3.2 – the customers in Sect. 3.3, whom Minji treated as relatively unfamiliar with the store's policy, were clearly attentive to the notice during or after the informing turn (Excerpts 5, 6 and 7). Their extended focus on this sign suggests that they read it. The customer in Excerpt (5) immediately demonstrated an understanding of the policy through an overlapping embodied response, thus ratifying the intelligibility of Minji's practices. The customers in Excerpts (6) and (7), on the other hand, only produced relevant next actions after gaps, and this suspended the progress of the informing sequences. When the customers' reading of the notice delayed the progress of the informing sequences, Minji interpreted this as an aligning move with the proposed embodied participation framework; and for this reason, she neither pursued conditionally relevant responses nor provided self-repair (cf. Gardner 2004). Either course of action might have provided a learning opportunity (Hauser 2013). But in the event, both the customers and Minji oriented to the notice as a crucial resource for constructing and recognizing the action in the informing turn. As such, the notice embodied a routinized solution to a repetitive task, specifically, the work of informing customers of the store's card-payment policy.

The customers' relevant next actions in relation to the prior turn illustrate that they did not exploit repair opportunities either, given that each transition-relevance place (TRP) following an informing turn is an "understanding position" (Sacks 1992: 426), in which it is structurally relevant for the recipient to display understanding. In this sense, each TRP also constitutes a repair-opportunity space that is universally "understood to be there, [or] to have been there, even if not activated" (Schegloff 1992: 1327). Thus, every relevant action-type that followed Minji's informing turn, in the absence of other-initiated repair, constitutes evidence of the intelligibility of her idiosyncratic MWE-cum-notice action inventory.

Garfinkel and Sacks (1986: 174) asserted that "speaking practices" are "inescapably tied to particulars of talk, and thereby … are, inescapably, exhibited and witnessed as ordered particulars of talk." The recipient treats speaking practices as the speaker's rational choices, among "alternatives of sense, of facticity, of objectivity, of cause, of explanation, [and] of communality of practical actions [emphasis in original]" (Garfinkel 1967: 32). The speaker too treats relevant responses by the recipient as his or her displayed analysis of the prior turn. Macbeth (2011: 440) elaborated the reflexive implications of the presence of relevant responses in subsequent turns:

> To take a turn is to *evidence* understanding. And as every turn at talk displays an understanding of its prior, perhaps the first measure of common understanding available in the actual social world – and thus for its analysis – is the production of a cogent next turn, on time. [emphasis in original]

As such, the recurrent relevant responses from her customers provided Minji with repeated experiential evidence that they viewed her as "knowing how to speak" (Garfinkel and Sacks 1986: 179) in and for the informing sequences. Thus, it is perhaps unsurprising that, having repeatedly received various forms of *ratification* of the intelligibility of her informing practices, Minji continued using the same idiosyncratic MWE and the same notice in the same way throughout the two-and-a-half-year period of this study (cf. Nguyen 2008).

In closing, this study has attempted to broaden our understanding of the routinization of an idiosyncratic MWE through detailed analyses of situated multimodal L2 practices in service encounters, much in the same way that Hutchins (1995) moved beyond the laboratory setting to better understand situated cognition in the lifeworld. This CA-SLA study has advanced usage-based understanding of routinization, by demonstrating how the participants' *in-situ* practices – in particular, the customers' orientation to their knowledge and the textual material – were reflexively tied to the routinization and the sedimentation of the shopkeeper's idiosyncratic MWE.

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Appendix

Transcription Conventions

Verbal conduct	Visual conduct
˙hhh: hearable exhaling	GZ: Gaze directed toward
	PT: Pointing at
	F(number) refers to a specific frame in the transcript.
	RH: right hand
	LH: left hand

Description of the Tier System

		+A description of <u>the speaker's</u> visual conduct
`Line number`	`Speaker ID: verbal`	`+tran+scription`
	<u>Recipient ID</u>:	**+A description of <u>the recipient's</u> visual conduct**
		+nods/operates the POS terminal
`11`	`MJ:`	`+°yeah (0.4) thank you°+`
	C:	**+GZ notice +GZ notice**

The verbal transcription is presented in courier. Above the verbal transcription, marked in bold Calibri, is the description of the *speaker's* visual conduct. Below the verbal transcription, marked in bold Calibri, is the description of the *recipient's* visual conduct.

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On the Reflexive Relation Between Developing L2 Interactional Competence and Evolving Social Relationships: A Longitudinal Study of Word-Searches in the 'Wild'

Simona Pekarek Doehler and Evelyne Berger

Abstract In this study we extend current research on L2 interactional competence and its development by exploring the reflexive relationship between, on the one hand, peoples' changing practices for accomplishing social actions and, on the other hand, their evolving social relationships. Our analytic focus is on word-searches as a type of self-initiated repair, and hence as part of a mechanism of social interaction that is fundamental to in-situ meaning-making processes. We document change, over a period of 10 months, in an L2-speaking au-pair's 'methods' and grammatical resources for recruiting co-participants' assistance while searching for a word during dinner table conversations with her host family. We show how this change indicates the L2 speaker's increased ability to maximize the progressivity of talk while at the same time establishing mutual comprehension, and hence intersubjectivity. Zooming in onto one precise linguistic construction recurrently used in word-searches (*comment on dit* 'how do you say'), we also shed light on the progressive development of an L2 grammar-for-interaction as part of L2 interactional competence. We discuss how the observed changes constitute and simultaneously reflect dynamically evolving epistemic entitlements and social relationships between the participants.

Keywords Change over time · Epistemic asymmetry · Intersubjectivity · Progressivity · Social relationships · Word-search

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1 Introduction

During the past decade, longitudinal work on second language (L2) interactions has uncovered numerous facets of what L2 interactional competence (IC) is and how it develops, thereby offering important advances toward a holistic understanding of people's L2 abilities (for overviews see Kasper and Wagner 2014; Pekarek Doehler and Pochon-Berger 2015). The cumulative evidence from existing research suggests that the development of IC in an L2 involves a diversification of practices (or 'methods', in the ethnomethodological sense of the term; see Sect. 2 below) for getting precise actions accomplished, such as proffering a disagreement or initiating repair. We see this diversification as a basis for L2 speakers' increased ability for context-sensitive and recipient-designed conduct (Pekarek Doehler and [Pochon-]Berger 2015, 2018), that is, conduct that is adapted to the local circumstances of talk and to the particular others that are co-participants, and therefore is locally efficacious (cf. Brouwer and Wagner 2004; Markee 2008).

In addition to important methodological challenges that currently need to be addressed (see Wagner et al. 2018), there remain several open questions that call for close scrutiny in current and future research. Central among these is how, as part of their IC, L2 speakers develop L2 grammar specifically as a resource for interaction (i.e., as an L2 grammar-for-interaction; Pekarek Doehler 2018). Also central is the way IC development can be understood in relation to people's acting in the world conjointly with others as part of their processes of learning to know each other, and, ultimately, becoming more central members of communities of practice (cf. Hellermann 2008; Nguyen 2011). While the intricate relation between language and interactional development, on the one hand, and larger processes of socialization, on the other, has been prominently established for L1 (see Ochs and Schieffelin 1984), it has so far been subject to little systematic empirical scrutiny as regards L2 IC. To what extent can IC be teased apart from larger processes of socialization? How can we empirically evidence the intricate relation between the two? What conceptual and methodological implications follow from a better understanding of that relation?

In this paper, we wish to elaborate on these issues by documenting the reflexive relationship between people's changing practices and resources for accomplishing actions and their evolving social relationships. We zoom in onto a basic mechanism of social interaction: repair organization (Schegloff et al. 1977). Our analytic focus is on word-searches as a type of self-initiated repair that has been documented to be frequent in L2 interactions (Brouwer 2003; Kurhila 2006; Koshik and Seo 2012, inter alia). We document change, over a period of 10 months, in an L2-speaking au-pair's practices and grammatical resources for recruiting co-participant's assistance while searching for a word during dinner-table conversation with her host family, and we discuss how this change both constitutes and reflects changing social relationships between the participants.

2 L2 Interactional Competence, Accountability, and Reflexivity

Drawing on CA's ethnomethodological heritage, we understand IC in terms of members' 'methods' (Garfinkel 1967), that is, systematic procedures by means of which members of a social group organize their conduct in mutually understandable and accountable ways (cf. Pekarek Doehler and Pochon-Berger 2011). These methods include verbal, prosodic and embodied resources, and ways of sequentially organizing actions and larger activities. Competent members have at their disposal alternative methods for getting the same interactional business accomplished, and these alternative methods warrant members' ability to adapt their conduct to the local circumstances of their interactions, as well as to the precise others they are interacting with. The choices among these alternative methods in turn reflect participants' understanding of who they are to each other and of the interactional situation at large. This is captured by the notion of reflexivity. As Heritage (1984: 242) notes in his discussion of Garfinkel (1967), "Reflexivity means that members shape their actions in relation to context, while context is being redefined through actions". And Watson (2005:7) relevantly recalls that, for Garfinkel, "any particular social setting consists in the locally-embedded methods for its describable, identifiable production in a 'here and now' sense" – the setting is shaped into being by the very local methods that participants use for accomplishing social actions. Accordingly, we conceptualize the development of L2 IC in terms of change, across time, in participants' methods for accomplishing L2 talk-in-interaction – a change that we see as reflexively tied to who participants are to each other and how they relate to the situation at hand.

Such an understanding is in line with Garfinkel's notion of competence as residing in the first place in action (rather than in cognition), and pertaining to members deploying conduct in locally appropriate ways. Central, here, is Garfinkel's notion of accountability: Conduct is competent when it is analyzable and recognizable for what it is by co-participants, that is, when it provides no grounds for comment or correction (Mori and Koschmann 2012). This latter point, in particular, highlights an emic, participant-relevant, perspective on competence, based on close scrutiny of how participants treat each other's practices observably as more or less locally recognizable and acceptable.

3 Analytic Focus: Practices for Doing Word-Searches

Word-searches "can occur if an item (e.g., a word) is not available to a speaker when 'due'" (Schegloff et al. 1977: 363). Word-searches are ubiquitous to talk-in-interaction (Goodwin and Goodwin 1986). As part of repair organization (Schegloff et al. 1977), they pertain to meaning-making processes that are socially organized, that is, constituted by systematic, orderly practices that are analyzable as such for members. Rather than focusing on potential gaps in the (L2) speaker's knowledge

that word-searches may indicate, we are here interested in these searches as publicly displayed and inherently social activity (cf. Goodwin and Goodwin 1986).

Word-searches are publicly performed in that speakers display production problems by means of such varied resources as hesitation markers, pauses, recyclings, tentative descriptions, meta-comments or overt requests for assistance as well as embodied conduct (e.g., 'thinking face', Goodwin and Goodwin 1986). While these methods are common to L1 speakers, certain types may be more frequent with L2 speakers. For instance, Brouwer (2003) and Koshik and Seo (2012) show that L2 speakers in particular elicit words explicitly by means of meta-questions – but our data suggest that this may vary with the speakers' level of competence (see below).

Based on these and other techniques, speakers display that a word-search is under way, and they do so in ways to involve recipients. This is evidenced not only by the fact that recipients routinely provide such help by offering candidate solutions for the search, which are then, in a third turn, confirmed or disconfirmed by the speaker. It is also evidenced by the fact that recipients observably attend to word-searches by gazing at the speaker (Goodwin and Goodwin 1986) even in those cases where the speaker herself resolves the search. Word-searches, then, are inherently social in nature and are an observable part of socially distributed cognition (Kasper 2009).

Word-searches are also potentially delicate in social interaction. For one thing, the various techniques that speakers use for displaying word-searches and soliciting recipients' help may be more or less locally efficient; for instance, they may favor recipient recognition of the searched-for item to various degrees, and may therefore either enhance or block the recipients' opportunity to offer assistance (see Sect. 5 below). For another thing, the ways in which word-searches are displayed and treated puts into play participants' orientation to mutual expertise; these ways may involve and index not only epistemic states and authorities, but also construct and reflect asymmetries, and social relations (Siegel 2015). By means of a word-search, the speaker may appeal to the recipient as an expert in the precise domain at issue. Recipients, in turn, may accept or reject their (attributed) status as experts, or may display their expertise even when not notably invited to do so.

Finally, and not less importantly, as part of conversational repair, word-searches put into play the competing principles of progressivity and intersubjectivity: While repair is a central vector for the maintenance of intersubjectivity through mutual understanding (Schegloff et al. 1977), it may put at risk the progressivity of talk-in-interaction (Schegloff 2007; Heritage 2007), both at the level of turn construction and of sequence structure (cf. Schegloff 2007). Like corrections (Jefferson 1987), word-search sequences may be more or less embedded or exposed, promoting or hindering the progressivity of talk to various degrees.

In summary then, word-searches can be inspected for (a) if, how, and how successfully speakers elicit recipients' assistance, (b) how this entails precise interactional consequentialities and affects the progressivity of talk, and (c) how the interactional handling of the searches reflexively relates to mutual expertise among participants, and, ultimately, to their social rapport. In what follows we investigate how these three features of word-searches change over time in interactions between

an upper intermediate L2-speaking au-pair and her host-family, as part of both the speaker's changing L2 IC and the evolving relationship among the participants.

4 Data and Procedure

We present a case study of an au-pair's social interactions with her host family over a period of 10 months[1]. Julie, an 18-year-old L1 German speaker, is sojourning in the French-speaking part of Switzerland. At the start of her stay, she was rated 'upper intermediate' (B2) according to a test compatible with the Common European Framework of Reference for Languages that was administered at the language school she attended weekly. Dinner table conversations with the host family were audio-recorded on a regular basis by the au-pair herself throughout her stay. Her interlocutors were Marie, the mother of the host family, Victor, the father, and the two children Jordan (a 7-year-old boy) and Manon (a 4-year-old girl). The corpus comprises 20 conversations, amounting to a total of 7 hours of audio data. The investigation proceeded by establishing a collection of word-search sequences initiated by Julie. Here, we focus exclusively on those word-searches for which Julie does not provide a definite solution herself, that is, searches that in one way or another (e.g., by means of a meta-linguistic question or rising intonation on a candidate solution) called for co-participants' assistance, and hence ensued in a word-search sequence (n = 23). These were found between months 1 and 7, but no occurrence was found in the data for months 8 through 10. We undertook sequential analysis of these word-search sequences and identified recurrent patterns occurring at different moments in time.

In what follows, we first illustrate how Julie's practices for doing word-searches and recruiting co-participants to help change over the duration of her stay with the host family (Sect. 5). We then zoom in onto one recurrent grammatical resource Julie uses in her word-searches, and how it changes over time (Sect. 6): the multi-word expression *comment on dit* 'how do you say'.

Overall, the findings show three significant dimensions of change over time: (a) Julie develops new techniques for recruiting co-participants' assistance; (b) her word-searches become less disruptive in terms of progressivity; (c) her use of the grammatical construction *comment on dit* shifts from accomplishing an explicit call for help toward displaying thinking, and thereby holding the floor while searching for a word. We discuss how these developments over time reflect change in the social relationships between participants.

[1] The study was carried out as part of the larger research project TRIC-L2 « Tracking the development of interactional competence in a second language » financed by the Swiss National Science Foundation (grant no. 100012_126868/1).

5 Changing L2 Practices over Time: Techniques for Doing Word-Searches and Recruiting Co-participants' Assistance

In this section, we illustrate how Julie's practices for doing word-searches and recruiting co-participants' help change over the 10 months of her stay. One interesting feature of word-search techniques is that they differ in the constraint they exert on the co-participant to react. While this has not been discussed in the literature so far, it is something that significantly emerged from our data. We draw on Kendrick and Drew's (2016) notion of 'recruitment', referring to the various "ways in which assistance may be sought – requested or solicited – or in which we come to perceive another's need and offer or volunteer assistance" (p. 2). Although the authors refer to recruiting recipients for "material" action (such as passing the salt), the notion of 'recruitment' can be usefully brought to bear on how L2 speakers call upon recipients during word-searches. Kendrick and Drew (2016) suggest a continuum of practices for recruiting assistance, ranging from explicit requests for help through more covert ways of seeking assistance (such as trouble reports). Importantly, the types of methods deployed have different consequentialities for the talk-in-progress. Explicit requests establish a *normative constraint* for the co-participant to provide assistance; in the case of word-searches in an L2, such requests also confer epistemic primacy to the recipient with the linguistic matter at hand. By contrast, more covert recruitments merely create an *opportunity* for the co-participant to help; in the case of word-searches, they also weaken the epistemic primacy (or linguistic expertise) that is attributed to the recipient.

5.1 First Two Months

During the first two months of her stay, we see Julie deploy two ways of dealing with word-searches: (a) use of explicit calls for help combined with her L1 (Excerpts 1 and 2) and (b) stopping talk *in medias res* (Excerpts 3 and 4).

5.1.1 Explicitly Calling for Help

In Excerpt (1) Julie produces an explicit call for help with a lexical item, combined with the use of her L1. The excerpt begins with Marie's inquiry about the type of tea Julie wishes to have (l.1).

Excerpt 1: Cynorhodon 'rosehip' (Julie_090930)

```
01     MAR: tu  veux quoi comme  ( ) comme thé?
            you want what kind of     of    tea

02 > JUL: EH::M ↓eh::m °c(h)omment on dit en français°
                         how   do  you say in French

03          (0.6) hAgebutten.
                  rosehip ((in German))

04     MAR: cynorhodon.
            rosehip

05     JUL: cynor<ho:don>
            rosehip

06     MAR: celui-là?
            that one

07     JUL: oui.
            yes
```

Julie starts her response (l.2) with hesitation markers indicating upcoming trouble. She then uses the 'explicit word-search marker' (Brouwer 2003) *comment on dit en français* 'how do you say in French' (l.2), delivered with low volume, and indexes the searched-for item by means of her L1 German (*hagebutten* 'rosehip', l.3). Marie, who has some knowledge of German, immediately offers a candidate solution (l.4), thereby overtly attending to Julie's call for assistance while at the same time displaying her recognition of the trouble source. Julie ratifies the candidate by means of a verbatim repeat while 'doing pronunciation' (Brouwer 2004; see the slower speed and syllable lengthening, l.6). A short confirmation sequence (l.6–7) follows before the participants return to the preceding business.

Julie's word-search here ensues in an exposed side-sequence (Jefferson 1987) in which the lexical problem at hand is treated as a conversational object in itself. This is then further enhanced by Julie's focus on its phonetic form (l.5), which can be heard as her 'doing being a language learner'. Also, by means of the metalinguistic question and the use of L1, Julie casts the word-search in a way to display that the searched-for word is utterly unavailable to her (cf. Koshik and Seo 2012), thereby conferring to her co-participant epistemic primacy over the matter. The co-participant herself in turn readily endorses the language expert role that is attributed to her by immediately delivering the searched-for item. The word-search sequence not only halts the progressivity of talk, but also construes a strong asymmetry between Julie as a language learner and Marie as a language expert.

In Excerpt (2) the reaching of a mutual agreement on the candidate solution is distributed over several turns at talk. Julie is talking about a theater company she has heard of:

Excerpt 2: Gestes 'gestures' (Julie_091028)

Ex. (2) Gestes 'gestures' (Julie_091028)

```
01   JUL: .hh c'est:: ((swallows)) ils ne- parlent pas?
              it's                  they NEG speak  not

02        (1.2)

03   JUL: et:=ils  ont  des ehm des ma:sques?
          and they wear DET     DET masks

04       (1.3)

05 > JUL: mais:=euhm BEN: c'est que avec du:    =euh: gest-
          but        well it's only with DET.INDEF    +gest- ((in German))+

06 >      eh: (.) [gestik oui.
                   gesture ((in German)) yes

07   MAR:         [des gestes
                   DET gestures ((in French))

08        (0.3)

09 > JUL: m- ge- (.) >°comment on dit?°<
                       how do you say

10        (0.3)

11   MAR: m: la: (.) gestuelle   °ou°
             DET     body language or

12        (0.4)

13   MAR: les [gestes?
          DET  gestures

14   JUL:     [°°gestes°°
                 gestures

15   JUL: des gestes oui.
          DET gestures yes

16   MAR: mh=mh

17   JUL: avec des gestes (.) mais pas:=avec euh: <mimique>
          with DET gestures   but not   with       mimicry

18        parce qu'ont- ils  ont  les masques.
          because  have they have DET masks
```

At the beginning of the Excerpt (l.1-3), Julie explains that the theater company performs mime. The final rising intonation after each piece of information (lines 1 and 3) allows her to check the recipient's attention and understanding while carrying out her explanation. In line 5, Julie displays trouble regarding a specific linguistic item by producing hesitation markers (sound-stretch, *euh*, l.5) and the aborted *gest-* delivered with German (L1) pronunciation. The use of a German word, even if cut off, suffices to make the searched-for lexical item recognizable to Marie. Simultaneously with Julie's re-cast of the searched-for item by means of the German word *gestik* 'gesture' (l.6), Marie provides a candidate solution in French: *des gestes*

'gestures' (l.7), for which she solicits confirmation through rising intonation. The overlap having possibly hindered Julie's proper hearing of Marie's candidate solution, Julie does not ratify it, but pursues her word-search by an explicit call for help (*comment on dit?* 'how do you say', l.9), thereby expanding the repair sequence. Marie orients this time to Julie's call by providing two alternative candidate solutions: *gestuelle* 'body language' (l.11) and *gestes* 'gestures' (l.13), again marked as tries by rising intonation, the latter of which is overlapped by Julie's tentative (very low volume) offering of her own candidate *gestes* 'gestures' (l.14). Julie eventually confirms *gestes* as the searched-for item (l. 15), thereby closing the word-search sequence, and then returns to her pending explanation (l.17–18).

In this excerpt, the business at hand is suspended for a while as the participants seek to solve linguistic trouble. The use of L1 is first deployed by itself as a means for recruiting the co-participant to help, and is only then followed by an explicit call for assistance. Here, again, a strong asymmetry is established between the L2 speaker and her co-participant as to their language expertise, which is then slightly moderated by the fact that Julie herself picks one among the two candidate solutions provided by Marie.

5.1.2 Stopping *in medias res*

Another recurrent practice that Julie deploys when encountering lexical trouble during the first two months of her stay is simply to stop talking *in medias res*, aborting a TCU and turn in progress. Thereby she runs the risk of failing to allow co-participants to identify the trouble she is facing. In Excerpt (3) Julie reminds Marie of the next day's transportation arrangements. Shared knowledge about the nature of those arrangements (the children took the bus the day before) possibly enables Marie to infer what lexical item Julie is looking for:

Excerpt 3: Bus 'bus' (Julie_091012)

```
01   JUL: ah: OUI demain   c'est e-
          oh  yes tomorrow it's

02 >      encore une fois avec le ehm (1.1)
          another    time with the

03   MAR: avec le bus [tu dis?
          with the bus you mean

04   JUL:             [ouais.=
                       Yeah

05   MAR: =ah.
           oh
```

Julie self-interrupts in the middle of her turn (l.2): the hesitation marker *ehm* is produced at a point where a slot for a noun is strongly projected by the determiner *le*. However, Julie does not deploy any verbal means for indicating the trouble

source. The 1.1s pause may indicate Marie's problem with identifying the trouble source, or else her orientation to providing Julie with the opportunity to self-repair (Schegloff et al. 1977). Marie eventually offers a candidate solution (l.3), which is delivered as a best guess: *avec le bus tu dis?* 'with the bus you mean?'. The tag-like question *tu dis* 'you mean' indexes the highly tentative status of the candidate and displays the speaker's uncertainty as to the actual trouble source. Julie's ratification by means of an agreement token (l.4) comes in in overlap with the tag-like question. The word-search sequence is then brought to an end with Marie's sequence closing third *ah* 'oh' (l.5), a change-of-state token indexing that now she has recognized the searched-for item. While Julie stopped *in medias res*, it is her interlocutor who fosters here the progressivity of the interaction (cf. Goodwin and Goodwin 1986) by offering a candidate where Julie stalls.

Stopping *in medias res* after initiating a word-search represents, although not an explicit, still an obvious display of the speaker's inability to find the lexical item[2] and, in our data, either leads to giving up the line of talk facing a lexical gap, or else generates a side-sequence in which co-participants work together to identify the trouble source. Again, then, the progressivity of the ongoing course of action is halted by the word-search sequence. Although such stops do not explicitly appeal to the recipient as an expert, they are interactionally managed in such a way as to occasion the L1 speaker's display of her expertise by her providing a candidate solution, as well as the L2 speaker's acknowledging that expertise in a third turn. Just as in the case of explicit calls for help, a strong asymmetry is enacted between Julie and her co-participants as to their mutual language expertise.

In sum, during the first two months of her stay, Julie uses two alternative practices for managing gaps in her linguistic production repertoire. She either draws on resources that suspend momentarily the ongoing activity in favor of securing mutual understanding by overtly identifying the target of her word search (explicit word-search markers plus use of L1). Or, she stops talking *in medias res*, and fails to recognizably index the trouble source, which jeopardizes mutual understanding, and hence intersubjectivity, or else occasions extended side-sequences. In both cases, Julie shows trouble in striking a balance between the "conjoint operation of the principles of intersubjectivity and progressivity" (Heritage 2007: 260). In word-searches, the progressivity of turns is, in principle, always at risk; but in the cases quoted above, it is also the progressivity of sequences that is suspended (for this distinction, see Heritage 2007: 260).

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[2] An analysis of embodied conduct would be needed (but is not possible with our audio-recorded data) to identify how stopping *in medias res* is designed to invite recipient's help. Gaze on recipient, in particular, might be an important indicator of this, as well as iconic gesture.

5.2 Later Months

From the end of month 2 on, Julie develops two new techniques for dealing with lexical trouble in speaking: (a) periphrasis (Excerpts 4 and 5) and (b) tentative formulations (Excerpt 6). Stopping *in medias res* and use of L1 entirely disappear, and only one explicit metalinguistic question occurs during months 3 through 10.

5.2.1 Using Periphrasis

An illustration of Julie's use of periphrasis for identifying the target object of her word-search is provided in Excerpt (4), taken from month 3, where Julie reports on her staying with a group in a vacation home:

Excerpt 4: L'homme *the man* (Julie_091109)

```
01 > JUL:  et le soir euh:: (1.1) le:: l- l'homme (0.2) l- qui:
           and in the evening     the  th- the man      th- who

02 >       qui  a  la  mais(h)on(hh)?=
           who has the house

03   MAR: =ouais
           yeah

04        (0.5)

05   JUL: il euh:m cuisine pour toute la:: groupe
           he      cooks   for   the whole group
```

After initial hesitations (pause, cut off, lengthenings) indicating a word-search, Julie resorts to the periphrasis *l'homme qui a la maison* 'the man who has the house' (l.1–2), probably referring to the landlord. This allows her to clearly identify the trouble source, while presenting her own wording as a tentative solution inviting recipient confirmation (see the rising intonation, l.2; her turn-final laughter may index uncertainty and/or the embarrassment of not knowing). With her latched agreement token (l.3), Marie displays her recognition of the referent while at the same time providing a go-ahead for Julie to continue her course of action, which Julie resumes at line 5. Here, then, the word-search materializes in Julie's producing a tentative candidate solution for which she prompts the recipient's confirmation. This procedure allows the speakers to overcome a lexical problem in a way that maximizes the progressivity of talk while also warranting mutual understanding between the co-participants. Progressivity is further enhanced by the very syntactic trajectory of Julie's turns between lines 1 and 5: Taken together, these can be heard as one syntactic construction implementing a sentential pattern of the left-dislocation type: 'in the evening the man who has the house he cooks for the entire group'.

The production of a periphrasis also moderates the epistemic asymmetry displayed between the participants: By offering a candidate herself, Julie endorses a

certain degree of expertise in the matter; but at the same time, by means of the rising intonation on the candidate, she confers some epistemic authority to her co-participant. Compared to the word-search sequences involving explicit calls for help or stopping *in medias res* observed above, participants' (displayed and attributed) respective levels of epistemic authority are less asymmetrical in the present case.

Excerpt (5), taken from month 4, provides a further illustration. Julie is asking the family's kids, Jordan and Manon, about their prior experiences with tobogganing.

Excerpt 5: Bouée 'buoy' (Julie_091213)

```
01 > JUL: vous avez déjà fait une toboggan avec euh hum: (0.5)
          did you already do  a   toboggan with

02   JOR: un pire(bo[gan)?
          a worse(boggan)

03 > JUL:            [un toboggan avec euhm: (0.6)
                       a  toboggan with

04   JOR: non.
          no

05 > JUL: un tr↓UC- (0.2) °qu'on°    doit  go:nfl↑er,
          a   thing        that you need to inflate

06 > JUL: .h °comme ça: un:° (0.4)
              like that a

07   JOR: une bouée?
          a   buoy

08        (0.7)

09   JUL: °ou[ais]°
           yeah

10   JOR:    [non]
              no
11        (0.5)

12   MAN: non
          no
```

Julie's word-search extends from lines 1 through 9. It is displayed as such in line 1 by means of the hesitation markers *euh hum:*, which fill the projected slot for an NP (*avec euh hum:* 'with ehm', followed by a 0.5s pause) without providing any indications about the searched-for item. At this point, her recipient launches what appears to be a clarification request (l.2) targeting the word *toboggan*, instead of orienting to Julie's displayed trouble. Julie then re-casts *toboggan*, and again projects a slot for the searched-for NP (*avec euhm: (0.6)*, l.3). While Jordan's subse-

quent *non* (l.4) seems to respond to Julie's initial (incomplete) question (l.1) as to the children's having done tobogganing before, Julie extends her word-search, this time clearly indicating the searched-for item by means of the periphrasis *un truc qu'on doit gonfler* 'a thing you need to inflate' (l.5), produced with turn-final falling intonation, to which she adds another tentative description, possibly enacted by means of gesture (*comme ça un:* l.6). This time, Jordan orients to Julie's searching for help and provides a candidate solution (*une bouée*, l.7), which Julie ratifies with an agreement token (l.9). As soon as the candidate solution is confirmed, both Jordan (l.10) and Manon (l.12) provide the second pair part to Julie's initial question (l.1). Progressivity of talk is re-installed while mutual understanding is warranted.

Although the repair sequence is not quite as embedded as in the preceding excerpt, it does not result in an open request for help and the participants orient to maintaining the progressivity of talk rather than exposing the linguistic trouble. Julie seems first to work her way toward solving the trouble herself, but her lack of success leads her to extend her word-search sequence. Incrementally, she recruits Jordan's assistance for solving the trouble: Her use of periphrasis allows her to recognizably index her trouble source and to receive a relevant candidate solution. By contrast to what we have documented for the initial months of Julie's stay, this enables participants to immediately return to the preceding business by closing the adjacency pair sequence (l.10 and 12) that was temporarily suspended by the word-search sequence. As shown in both Excerpts (4) and (5), the use of periphrasis augments Julie's own status as an expert: She herself provides a solution – though this solution may be marked as a candidate. The asymmetry implemented is weaker, and the co-participant is not overtly treated as having absolute epistemic primacy over the issue.

5.2.2 Try-Marking

Sacks and Schegloff (1979) refer to try-marking as a technique for eliciting confirmation of referent recognition by co-participants. In L2 talk, rising intonation on a referential item can often be heard as doing two things at once: eliciting confirmation of a candidate solution and eliciting referent recognition (Koshik and Seo 2012). As the word-searches in our collection that include the production of candidates with rising intonation relate exclusively to referential items, we use the term try-marking to refer to the technique described in this section.

Excerpt (6) provides an illustration of the try-marking technique in word-search sequences. The excerpt shows the first occurrence found in the data, during month 6. Julie is explaining how she goes about doing carving skiing:

Excerpt 6: haut du corps 'top of the body' (Julie_100205)

```
01     JUL: c'est très difficile de ch↑anger ça.
             it's  very  difficult to change  that

02          (1.0)

03    MAR: [°(x)°

04 > JUL: [.h et puis je mets ↑euh (0.3) °mon° (0.2) °°>comment-<°° (0.7)
              and     I put                my            how

05 >        <haut de   corps>?
             top of the body

06          (0.4)

07    MAR: ouais?
           yeah

08          (0.4)

09    JUL: je mets  trop    en avant
           I  put  too much forward
```

Julie is displaying her encountering trouble by means of a hesitation marker and several pauses, followed by what can be heard as a cut-off word-search marker (*comment on dit* 'how do you say') (l. 04). Note that the *comment-* is delivered with accelerated tempo and very soft voice, being much back-grounded prosodically; rather than explicitly calling for help, it seems to be indexing cognitive search (see Sect. 6.2 below). Julie then delivers the candidate solution *haut de corps* 'top of the body' with slow tempo and final rising intonation, inviting the recipient's confirmation. Marie's subsequent agreement token (l.7), produced with rising intonation, can be heard as ratifying the tentative wording, displaying referent recognition and inviting Julie to further develop her point (see also Excerpt 4 above for the use of *ouais* as a go-ahead signal). Noteworthy is the fact that Marie does not provide a correction of the candidate solution (the target language wording would be *torse* or possibly *haut du corps,* but not *haut de corps*) when she has the sequential opportunity to do so; rather, she merely claims understanding (see Robinson 2014). By not engaging in other-correction, she refrains from adopting the role of a language expert (see also Excerpt 4 above). The word-search sequence is here fully embedded in the pursuit of the ongoing courses of action, the competing principles of progressivity and intersubjectivity are subtly equilibrated, and epistemic asymmetry is again moderated by the L2 speaker's producing herself a candidate solution, yet submitting it to the co-participant's approval.

5.3 Summary of the Findings: I

Throughout Julie's stay, significant change occurs in the way she carries out word-searches and recruits co-participants' assistance:

- *Identifying the trouble source.* During the first months of her stay, Julie either stops in the midst of an ongoing turn without indicating the trouble source, or she resorts to L1 to identify the trouble source. From month 3 on, she employs L2 resources for making the trouble source recognizable, first by using periphrasis, and then, from month 6 on, by try-marked tentative formulations.
- *Recruiting recipients to help.* Julie moves from explicit invitations for help based on questions of the 'how do you say X' type toward more implicit ways of eliciting co-participants' involvement into the word-search: rising intonation presenting an item as a candidate as well as periphrasis increasingly function as response-eliciting devices, while at the same time testifying to Julie's increased efforts to solve the trouble herself.[3]
- *Dealing with the competing principles of progressivity and intersubjectivity.* Julie deals with her word-searches more and more smoothly, minimizing – in collaboration with her co-participants – disruption of the ongoing course of action. Thereby, she progressively manages to balance more subtly the principles of progressivity and intersubjectivity in a way that is attended to and accepted by her co-participants.
- *Doing being a language learner.* We see Julie decreasingly behave as a language learner. She stops asking metalinguistic questions (although these are often frequent in L2 talk: Brouwer 2003, Koshik and Seo 2012), and she ceases expanding the repair sequence by 'doing pronunciation' for example. Instead, we see her increasingly orient to getting the communicative business at hand moving forward. Her co-participants, in turn, align with such conduct, for instance by providing a go-ahead signal after a periphrasis rather than offering a candidate in the L2.

These changes in the L2 learner's interactional 'methods' for dealing with word-searches testify to the speaker's growing interactional competence in the L2 as well as to a change in the way she and her co-participants mutually position themselves vis-à-vis each other (see Sect. 7 below).

[3] It is important to recall that we do not have access to embodied conduct as a resource for eliciting recipient response; cf. Goodwin & Goodwin (1986).

6 Developing Grammar-for-Interaction: Changing Interactional Uses of *comment on dit* 'how do you say'

In this section, we zoom in onto the most frequent grammatical construction that our L2 speaker resorts to in her word-searches, and we scrutinize how the interactional workings of that construction change over time. Our focus is on the multi-word expression *comment on dit* 'how do you say' – a type of expression that has been referred to as an explicit word-search marker (Brouwer 2003). The construction can be glossed as 'how PRO.INDEF.N say.3SG'. The verb is a complement-taking predicate; in its literal sense the construction hence calls for a complement ('how do you say X'). The indefinite neutral pronoun *on* corresponds to English 'one' (or indefinite 'you'). 12 occurrences of the construction are found in our collection of word-search sequences. That is, 52% of Julie's word-searches involve this construction, either in its full or its morphophonologically reduced form (see below).

Throughout her stay, we see Julie shift from using the construction exclusively as a first pair part, namely a question inviting co-participant's help (Excerpt 1 above), toward delivering it as a marker-like element, characterized by low volume, speed up of tempo, and often insertion into an ongoing syntactic trajectory. In this latter use, the construction is indexing ongoing cognitive search, thereby serving as a floor-holding device allowing the speaker to 'buy time' in the course of the search. Change occurs rapidly: By the end of the second month of her stay, Julie's use of the construction as an explicit metalinguistic question disappears and the marker-like use starts to emerge.

6.1 First two Months: *Comment on dit* 'how do you say' as an Explicit Call for Help

During the first two months of her stay, Julie uses the explicit word-search marker *comment on dit* 'how do you say', often complemented by the delivery of the target item in her L1, to call for co-participants' assistance during a word-search (see Sect. 5.1 above). Recall Excerpt (1), where we saw Julie say *°c(h)omment on dit en français° (0.6) hAgebutten* 'How do you say in French Hagenbutten' (Hagenbutten being German). Although produced with lower volume, the construction is clearly delivered as a 'how do you say X' question, where the complement X consists of the searched-for item expressed in the L1. As we have seen in Excerpt (1), the construction works as a first pair part accomplishing an overt request for assistance, and it is treated as such by the recipient Marie.

This is a recurrent characteristic of Julie's use of *comment on dit* in word-search sequences during the beginning of her stay. A further illustration is provided in Excerpt (7). In the start of the Excerpt (l.1-2), Marie explains what the fruits are that Julie had just declared not to know. Julie then displays sudden understanding by *ah*

ouais/oui (l.3 and 5) and subsequent designation of the fruit in her L1 (l.5). After an attempt at providing the solution herself (l.9), she explicitly asks for help by means of *comment on dit X* ‘how do you say X’ (l.9):

Excerpt 7: Grenades ‘pomegranate’ (Julie_091012)

```
01    MAR:  mais c'est tout des petits grai:ns à   l' intérieur comme
             but  it's  all  DET little seeds PREP DET inside   like

02          du ma↑ïs mais c'est r↑ouge.
             DET corn but  it's red

03    JUL:  <°ah ouais,°>
               oh yeah

04          (0.4)

05 > JUL:   .h ah oui granat[°apfe°-
               oh yes +pomegranate ((in German))+

06    MAR:                  [°c'est rigolo.°
                              it's funny

07    VIC:  °m↑hm°.

08          (0.8)

09 > JUL:   °pom°-  PR↑OM- comment on dit
                           how do you say

10          p↑omme (0.3) au grena(h.)?
             apple       PREP (grana)

11    MAR:  non eh:
             no ehm

12            (0.4)

13    VIC:  [(°eh°)

14 > MAR:   [des grenades     °en fran[çais°.
              DET pomegranates in French

15    VIC:                            [°grenades° (.) °hm°
                                        pomegranates

16 > JUL:   des- g- <gr↑enades.>
             DET     pomegranates
```

Again, the *comment on dit* implements a first-pair part of the question type. The construction is here complemented by a tentative formulation of the searched-for item in the L2, and implements a request for confirmation (see the rising intonation, l.10). Note also how Julie is attempting to guess the French word (*p↑omme (0.3) au grena(h.)* ‘apple PREP grana(te)’, l.10) by providing a word-by-word translation of the German equivalent, which is composed of two lexical items: *Granat* ‘granate’ and *Apfel* ‘apple’. Her *comment on dit* ‘how do you say’ confirmation request is

then treated as such by Marie, who first disconfirms Julie's trial (l.11) and then provides the target lexical item in French (l.14). This is in turn confirmed by Julie's repetition (l.16), delivered in a staccato rhythm suggesting that she is 'doing pronunciation' (Brouwer 2004).

In short, during the first weeks of her stay, Julie uses *comment on dit X* as a first pair part of the question type to overtly request co-participants' assistance (Excerpt 1: request for translation; Excerpt 7: request for confirmation; see also Excerpt 2). The construction comprises an object complement (X) and is delivered as a full turn ending on turn-final intonation. And it is oriented to as such by the recipient whose response is offered in the next turn.

6.2 Later Months: *Comment on dit* 'how do you say' as a Word-Search Marker Indexing Cognitive Search

From the end of the second month on, Julie's use of the construction as an explicit call for help disappears and a different type of use emerges: the construction starts to routinize as marker-like element, displaying the speaker's cognitive search and thereby working as a floor-holding device. This new use of the construction (just as its initial use) corresponds to what has been documented for related construction types with L1 speakers (see Schegloff et al. 1977). The following excerpt, taken from the end of month 2, provides a first illustration:

Excerpt 8: Cendrier 'ashtray' (Julie_091028)

```
01 JUL: on pouvai:t acheter ç↑a,
        we were able to buy this

02      .h et pui:s ehm: (.) je  vais  faire un .hh un:
           and then ehm      I'm going to do a       a

03      °>comm'on dit<°=euh (0.4) pour ma sœur   qui fume.
          how do you say euh      for  my sister who smokes

04 JUL: °un truc.°
         a thing

05      (0.3)

06 MAR: ah un cendrier.=
        oh an ashtray

07 JUL: =oui(h) HH. .EHH £c'est pas très bien
         yes        ehh  it's  not very good

08      parce que je ne veux pas en fait qu'elle °fume-°
        because   I don't want   in fact that she smokes

09      oui qu'elle fume£,
        yes that she smokes
```

The *comm'on dit* (l.3) is delivered not only with lower volume, but also with faster tempo and morphophonological reduction (the last syllable of *comment* 'how' is amalgamated with *on* 'we')[4], and it is inserted in a larger syntactic trajectory (l.2-4). Together, these features display it as a parenthetical insert rather than as accomplishing a base action. Most noteworthy is the fact that the *comm'on dit* is immediately followed by a filled pause, indexing that the speaker is not yielding the floor at this point in time but projects more to come, despite of the subsequent 0.4s silence (l.3). The construction functions as a display of cognitive search, allowing the speaker to 'buy time' while searching for the target item. The word-search gets solved only later on with Marie's candidate solution *un cendrier* 'an ashtray' (l.6) and Julie's subsequent ratification (l.7).

A further illustration is provided in Excerpt (9), again taken from the end of the second month of Julie's stay:

Excerpt 9: Spectateurs 'audience' (Julie_091028)

```
01 JUL: <et puis maintenant ils vo:nt q(h)ue>
         and then now       they go   only

02      euh dans les autres pays      parce que là    la- le-
        ehm in   the other  countries because   there the the

03      (0.4) °>(we-) comment=on dit=euhm°< les GENS   qui regardent
                       how do you say ehm    the people who watch

04      (0.9)sont-=
             are

05 MAR: =les spectateurs? [°mhm°
         the audience

06 JUL:                   [les spectateurs sont m- meilleurs.
                           the audience    is       better
```

Again, the *comment on dit* (l.3) is delivered in low voice, with speed up of tempo (yet this time without morphophonological amalgamation). It is again inserted as a parenthetical in the midst of an ongoing syntactic trajectory. At first sight it might seem that the construction is here complemented by means of *les gens qui regardent* 'the people who watch'; yet, that constituent is at best a 'floating' syntactic pivot element, being interpretable syntactically both as the complement of *comment on dit* 'how do we say' and as a syntactic subject related to the subsequent predicate *sont* 'are' (note also that there is no turn-final intonation on that constituent). Importantly, the recipient does not respond to anything like a question of the type 'how do you say the people who are watching', as evidenced in the 0.9s pause at line 04. Rather, by refraining to take the turn, the recipient displays his understanding of Julie's turn as being still underway. It is only after Julie's production of the subsequent predicate *sont* 'are', and hence after the delivery of 'the people who watch are' (l.3-5) – which can be heard as a designedly incomplete utterance inviting the

[4] '>comm'on dit<' is delivered phonetically as /kɔmɔ̃di/.

recipient to fill in the open slot – that a recipient response comes in: Marie provides the candidate solution *les spectateurs* 'the audience', marked as a try by rising intonation, which is then ratified by Julie (l.6).

Further evidence for the routinization of the *comment on dit* construction as a public display of cognitive search is provided by the fact that Julie, later on in her stay, uses the construction in lexico-syntactically heavily reduced form, sometimes aborting it mid-way. While such partial delivery can still be heard as a sign of 'doing thinking', it again cannot be taken as a question addressed to co-participants. An example is provided in Excerpt (10) taken from month 6 of Julie's stay (reproduced from Excerpt 6 above):

Excerpt 10 : Haut du corps 'top of the body' (Julie_100205)

```
04 JUL: [.h et puis je mets ↑euh (0.3) °mon° (0.2) °°>comment-<°° (0.7)
             and    I  put                my              how

05        <haut de corps>?
          top of.the body

06       (0.4)

07 MAR: ouais?
        yeah
```

Here, Julie produces what is just a possible fragment of the *comment on dit* construction, which is back-grounded by significant decrease in volume in addition to speed up in tempo. Just as in the two preceding excerpts, the construction (-fragment) is inserted in the midst of a syntactic trajectory, here between the determiner *mon* 'my' and the subsequent searched-for noun *haut de corps* 'top of the body'. Again, Marie refrains from taking the floor during the ensuing 0.7s pause (l.4) and actually comes in (l.7) only after Julie's production of the candidate item *haut de corps* 'top of the body'. Marie confirms the candidate by means of *ouais*, by the same token inviting Julie to pursue her turn (l.7). Again, progressivity is maximized while lexical trouble is being solved in an embedded manner.

6.3 Summary of Findings: II

In the course of her word-searches, we see Julie start off during the first two months of her stay by using *comment on dit* in its literal meaning as a request for assistance, making a second pair part in the form of a target linguistic item conditionally relevant as a next. And we see her co-participants orient to this just as what it is: a call for help with a precise lexical item. This ensues in exposed side-sequences, suspending the progressivity of talk. Over time, however, the construction starts to routinize as a display of cognitive search, and it is oriented to as such by co-participants who refrain from taking the turn after the delivery of the construction.

In this latter use, the construction shows features such as prosodic backgrounding, morphophonological reduction, and semantic bleaching (loss of its literal meaning) that suggest its grammaticization into a discourse marker-like element (cf. Thompson and Mulac 1991).

While such displays of cognitive search have been argued to accomplish a self-regulatory function (as part of 'private speech', or 'self-directed talk') (Lantolf and Thorne 2006), our point here is that they are inherently social in nature (Steinbach Kohler and Thorne 2011): They act as a resource for interactional purposes such as holding the floor, possibly along with other displays of cognitive processes, such as middle-distance look (Goodwin and Goodwin 1986). Such displays are part of speakers' "observable and reportable ("accountable"), practical, situated reasoning methods" (Kasper 2009: 13). Julie's change in the use of the multi-word expression at hand, from explicit question to marker of cognitive search, offers just a glance on how, progressively, she adapts her grammatical resources for dealing with fundamental organizational principles of social interaction (cf. Pekarek Doehler 2018), such as repair organization and turn-taking organization (via floor-holding), as well as with the competing principles of intersubjectivity and progressivity, as part of her developing L2 IC.

7 Discussion: Changing Practices and Changing Social Relationships

7.1 Developing 'Methods' and Grammar for L2 Interaction

In this study we tracked an upper intermediate L2 speaker's word-search practices in mundane conversation over a period of 10 months. Change was observed in the techniques the speaker used for indexing the trouble source and recruiting co-participants for assistance, as well as in the ensuing effects on the progressivity of talk: During the initial months, the speaker deals with gaps in her lexical repertoire by either suspending her talk in mid-turn, or using metalinguistic questions plus her L1, thereby overtly relying on co-participants to provide solutions to the linguistic problem at hand; over time, she increasingly addresses the encountered trouble in the L2, by means of periphrasis or try-marked candidate solutions. This shift entails a change in the sequential organization of the word-search sequences, moving from exposed side-sequences that suspend the ongoing activities towards embedded resolution of the linguistic trouble. This in turn testifies to the speaker's growing ability to strike a balance between the competing principles of intersubjectivity and progressivity.

This observation is further confirmed by change in the speaker's contextualized use of a precise grammatical construction (*comment on dit* 'how do you say') from explicit metalinguistic question to marker of cognitive search and device for floor-holding, indicating that the L2 speaker progressively adapts her grammatical

resources for dealing with fundamental organizational principles of social interaction, such as repair organization and turn-taking organization. We consider this development of ‘‘an L2 grammar-for-interaction’’ (Pekarek Doehler 2018) to be an integral part of the speaker's developing L2 IC.

Previous studies have evidenced L2 speakers' increased ability to self-repair over time (see Hellermann 2011; Siegel 2015): Not only do L2 speakers become more skilled in identifying what might be a possible trouble source (i.e., self-initiating repair), but also they are increasingly able to provide by themselves a solution to the trouble (self-repair), which converges with the preference for self-repair that has been attested for L1 speakers (Schegloff et al. 1977). Our findings are in line with these observations: Overall, our L2 speaker takes increasing responsibility for overcoming trouble due to gaps in her linguistic repertoire – either by providing candidate solutions, or by working her way around the problem using periphrasis. Additionally, the evidence reported here highlights the speaker's increased ability to balance the competing principles of intersubjectivity and progressivity as a central dimension of L2 IC, and this complements previous findings that spotlighted the ability for recipient design and context-sensitive conduct as key-features of that competence (Pekarek Doehler and [Pochon]-Berger 2015, 2018).

7.2 Issues of Mutual Expertise and Epistemic Authority

Repairing linguistic trouble brings up issues of epistemic rights and statuses, and this is particularly salient in L2 talk: By recruiting co-participants' assistance when encountering a lexical gap, the speaker displays some degree of lack of epistemic access, and confers epistemic authority to the recipient. Conversely, by offering a candidate solution, the co-participant not only claims but also demonstrates linguistic expertise.

In our data, the observed change in word-search practices reflects co-participants' changing orientations to their respective epistemic authorities: The L2 speaker's appeals to her co-participants as experts become less prominent over time, and this is inscribed in the very material and sequential organization of the word-search sequences. To paraphrase Kendrick and Drew's (2016: 6) take on recruitment: By using (during the first months) metalinguistic questions, the L2 speaker "establish[es] a normative obligation" for recipients to provide a candidate solution but thereby also attributes epistemic primacy to recipients; by offering (during the later months) herself a try-marked candidate or periphrasis, the L2 speaker merely "creates an opportunity" for the recipient to confirm (or disconfirm) that solution, while claiming for herself at least partial expertise with the issues at hand. This converges with Siegel's (2015) longitudinal study showing how an L2 speaker's word-search practices in English as a *lingua franca* reflect an increase in epistemic authority over time. In a similar way, Julie, over the duration of her 10 months stay with her host family, increasingly positions herself as a more confident and independent L2 speaker.

7.3 Reflexivity, Interactional Competence, and Evolving Social Relationships

But there is more to the story. The change in how word-search sequences are interactionally dealt with over time in our data is reflexively related to changing social relationships between the participants. During the first months of her stay, by using *comment on dit* 'how do you say' and her L1 for calling for help, but also by deploying practices such as 'doing pronunciation' (Brouwer 2004), Julie enacts the kind of work that a language learner typically does *as* a language learner: She reflexively constructs herself as an L2 learner who orients to her own talk as a way of practicing the language, and receiving solutions to linguistic problems. Her co-participants in turn provide these solutions, thereby overtly treating Julie as a learner and positioning themselves as experts. Over time, however, Julie's increasing attempts at self-solving her trouble, and her co-participants' providing mere confirmations (rather than target-language items) when Julie uses periphrasis or tentative formulations index a shift toward a mutual positioning that cannot be cast anymore in terms of language learner vs. expert. Symptomatic for this change over time are participants' increased orientation toward enhancing the progressivity of talk as well as Julie's use of the *comment on dit* as a device for floor-holding instead of calling for help: As they become more and more acquainted, Julie and the members of the host family cease to treat linguistic trouble as a conversational object in itself, and instead orient to the conversational business *as* conversational business, that is, as a site for communicating with each other, for sharing experiences and points of view, for achieving organizational goals related to family life, and for maintaining and developing the social bond. The repair practices studied here hence crystallize the L2 speaker's relationship with the family members, and particularly with the host mother, as going beyond that of mere language novice-expert, and encompassing a type of relationship where the claiming and renewing of the social rapport – rather than the learning of the language – is a central motor of their social interactions.

These observations boil down to what Kasper and Wagner (2014: 29) have referred to as the "reflexive relation between L2 speakers' development of social relations and interactional competence". In our data, we see change in IC as inextricably tied – reflexively related – to dynamically evolving social rapports over time (cf. Brouwer and Wagner 2004; Hellermann 2008; Nguyen 2011). And this is exactly what the grounding of our understanding of IC in terms of members' methods in ethnomethodology allows us to uncover. The analytic interest in exploring members' methods lies, among others, in shedding light on "the ways in which members bring about a given setting as a 'naturally accountable' local object" (Watson 2005:7, referring to Garfinkel). The emergence of new 'methods' for dealing with linguistic trouble and with any other features of social interaction is an instrumental part of the ongoing configuration of co-participants' locally enacted identities as well as of their social relationships. Accordingly, the ways in which our L2 speaker recruits assistance in her word-searches and how recipients provide that assistance is part of how participants negotiate, challenge or affirm such categories

as learner vs. expert, or implement other categories and social relations, as part of their understanding of the situation at hand. The development of abilities to participate more efficiently in social interactions – what we refer to as L2 IC – is reflexively related to dynamically changing social relationships and to how the participants orient to each other's locally relevant identities and expertise.

Appendix: Transcription Conventions

In addition to the Jeffersonian transcription symbols, we use the following (in the translation line): DET = determiner; PREP = preposition; ((German)) = the language of the original word or stretch of talk (if different from French), delimited by + signs.

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Turn Design as Longitudinal Achievement: Learning on the Shop Floor

Hanh thi Nguyen

Abstract This chapter examines the development of interactional competence by a novice hotel staff member during interactions with guests in which she used English as a second language. Specifically, conversation analysis of longitudinal data focuses on the novice's changes in turn design in assessments, topic initiations, and topic pursuits. The analysis suggests that over time, she diversified the linguistic resources to achieve assessments, with some of these resources appearing to have been recruited from the guests' assessment turns in early interactions. She also modified the formats of topic-initiation and topic-pursuit turns after earlier formulations became the trouble source in repair sequences. By examining a novice's changes in turn design practices, this study identifies the trajectories and impetuses of language learning in the wild. As such, the findings reveal a developmental dimension to the shop floor problem (Garfinkel, Ethnomethodology's programs: working out Durkheim's aphorism. Rowman & Littlefield Publishers, New York, 2002).

Keywords Interactional competence · Longitudinal · Conversation analysis · Ethnomethodology · Workplace · Lingua franca · EFL · Small talk · Hotel · Vietnam

1 The Shop Floor Problem and Learning

Ethnomethodology's concern with social order *in* practical, situated social actions is well expressed in Garfinkel's discussion of the shop floor problem, which refers to the "local and mundane ways that workers on the shop floor get their work accomplished" (Garfinkel and Liberman 2007, p. 5) in the lived circumstances of the actual workplace in contrast to abstract theorization of work expressed in bureaucratic procedures, forms, cataloging systems and the like (see also Cicourel 1974; Garfinkel 2002; Garfinkel et al. 1981; Sudnow 1974; Zimmerman 1974).

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Importantly, shop floor practices do not "*correspond*" to social order; they "*exhibit*" social order "as *achievements*" (Garfinkel 2002: 108–109, emphasis original). This means that staff members' *methods* (Garfinkel and Sacks 1970) for doing work reside in actual, observable actions in their day-to-day task accomplishment. To date, a large body of research on workplace social interaction has used conversation analysis (CA) to uncover the nature of members' methods on the shop floor in a wide range of workplaces (e.g., Arminen 2005; Atkinson 1995; Baker et al. 2005; Chevalier and Moore 2015; Clayman and Heritage 2002; Ford 2008; Heritage and Maynard 2006; Hutchby 2007; Maynard 1984; Nevile 2004; Nevile et al. 2014; Richards and Seedhouse 2005; Sarangi and Roberts 1999; Stivers 2007, to name a few book-length publications). We know, for example, that tourist officers may respond to clients' solicitation of assessment of tourist services with factual descriptions such as price, category, and external ranking while withholding explicit assessment, thus achieving their professional accountability as impartial information providers (Chevalier 2015). Members' methods on the shop floor like these reflexively constitute the "orderly social organization" (Garfinkel 2002: 109) of particular workplaces.

Importantly, because details of the shop floor problem are publicly displayed in the contingencies of social interaction, they are also "*instructably* witnessable," "*teachably* visible," and "situatedly *tutorial*" (Garfinkel 2002: 101, emphasis added). Workplace social interaction thus comes as both description and instruction of how to do work. With respect to how newcomers develop workplace competencies, Garfinkel's next note is particularly useful: "constituents of the Shop Floor Problem cannot be *learned* or taught by imagining them; (…) they can only be empirically found out" (p. 111, emphasis added). In other words, learning workplace practices requires direct participation in workplace interaction.

This view on learning is further expressed in Garfinkel's (1967) discussion of how Agnes, a transgender and transsexual individual born a male and starting to live as a female in her adulthood, learned to be a woman in the process of doing being a woman. With the goal of passing as a woman by achieving the "ascribed properties of the natural, normal female" (p. 133) and "competent female sexuality" (p. 121), Agnes was a "secret apprentice" who must learn the "rules" of acting as a woman "only over the course of the actual interaction, as a function of actual participation, and by accepting the risks involved" (p. 146). This learning is possible because members' conduct in commonplace social interaction is made observable and is reflexively "accomplished through witnessable displays" in particular occasions (p. 180). In this sense, Agnes's apprenticeship to gendered conduct is quite similar to the learning of members' methods at the workplace by novices, who also need to develop situated practices to do work-related tasks *while* carrying them out on the shop floor. What Garfinkel wrote about Agnes's learning could be applied to a description of workplace competence development:

> Agnes was required to live up to the standard of conduct, appearance, skills, feelings, motives, and aspirations while simultaneously learning what these standards were. To learn them was for her a continuous project of self-improvement. They had to be learned in situations in which she was treated by others as knowing them in the first place as a matter of

> course. (…) They had to be learned by participating in situations where she was expected to know the very things that she was simultaneously being taught. (p. 147)

This type of learning is truly learning "in the wild" (Hutchin 1996): In the midst of the rich ecology of the shop floor with the affordances of naturally occurring social interaction, the novice needs to sort out what it is they need to learn, how they are going to adjust their conduct as part of the learning, and what to change next based on an online assessment of the outcome of the previous learning (see also the introduction to this volume). Without the scaffold of an instructor or a more competent co-participant, the novice's "continuous project for self-improvement" (Garfinkel 1967: 147) involves engagement with practical activities while also making adaptations over time for more efficient and effective activity accomplishment.[1] Learning, then, is "situated locally in the here-and-now sense-making practices of the participants" with real-life consequentiality (Eskildsen and Theodórsdóttir 2017: 160).

While studies have shed light on novices' learning alongside more experienced members at the workplace—such as in surgery training in the operation room (Koschmann et al. 2007, Zemel and Koschmann 2014), nursing training in classroom labs (Melander 2017), and flight lessons in airplane cockpits (Melander and Sahlström 2009)—and other studies have provided insights on language learning in the wild, outside of instructional contexts (e.g., Barraja-Rohan 2015; Eskildsen and Theodórsdóttir 2017; Ishida 2011; Kasper and Burch 2016; Karrebæk 2010; Kim 2016; Pekarek Doehler and Pochon-Berger 2015; Theodórsdóttir 2011; Wagner 2010, 2015), there have been only a few microanalytic studies that examine the development of interactional competencies by staff members at the workplace. In a longitudinal study on telephone calls between business partners who were users of English as a second language, Brouwer and Wagner (2004) found that over time, the same participants achieved smoother openings that were free of delays, repair initiations, self-repairs, and other perturbations. In another longitudinal study of a Korean shop owner who was also an English-as-a-second-language user, Kim (2017, this volume) tracked her usage of an idiosyncratic fixed expression to request a surcharge for credit card purchases, and found that this expression persisted over time due to the shop owner's effective use of embodied actions and orientation to written signs, her co-participants' collaborative sense making, and her lack of competencies to self-repair. With a clear focus on how novices develop workplace practices, Nguyen's (2006, 2011, 2012) longitudinal study of two pharmacy interns showed how the novices adapted to the situated and local demands of patient counseling by revising the sequential structure and organization of actions, improving recipient-design in formulations, and recalibrating their self-positioning in participation frameworks. Importantly, the interns' changes over time were their modification of interactional practices in response to endogenous interactional troubles or the local need for more effective task accomplishment.

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[1] A similar parallel was drawn between *informal* learning (which involves doing and observing) and *formal* learning (which involves instructions delivered in the form of textbooks and training sessions) by Scollon and Scollon (2001), although they did not elaborate on the nature of learning in each type.

This chapter aims to expand this understudied area by examining how a novice adapted interactional practices over a period of time in her first few months working as a staff member to escort guests to their rooms at a hotel in Vietnam (see also Nguyen 2019a). In particular, I will focus on her changes in turn design with respect to assessments and topic initiation and pursuit in small talk about the guests' trips.

2 Turn Design and Interactional Competence

Turns-at-talk form the basic foundation of social interaction. As participants take turns to achieve actions, they also selectively design their turns to be sensitive to the sequential context of the unfolding conversation, the interactional project that is being pursued, and the recipient's perspectives. Turn design refers to "how a speaker constructs a turn-at-talk—what is selected of what goes into 'building' a turn to do the action it is designed to do, in such a way as to be understood as doing that action" (Drew 2013: 132). Specifically, in assembling their turns to fit their purposes, speakers can choose from a range of available resources, including lexical items, syntactical structures, pronunciation variations, intonation patterns, volume, voice quality, laughter, timing, gestures and other embodied actions (Drew 2013: 132, also Drew 2005; Fatigante and Orietti 2013; Ford and Fox 2010; Goodwin 1980; Haakana 2001; Heath 1981; Kern 2007; Lerner 1995, 1995). For example, the lexical choice of "burglar" and not "burglary" in a news delivery turn ("we had a burglar last night") signals to the recipient a focus on the intruder and enables the assumption that nothing was stolen (Drew 2013: 131–132). Turn design is also sensitive to and constitutive of the action being done. This can be seen in the contrast between more casual expressions in an impromptu invitation and more formal phrases in a pre-meditated invitation (Drew 2013: 141; also Curl 2006). Further, a speaker's choice of words, syntactical structure, and references in turn design, together with sequential organization, may reflect and construct the recipient's status and the speaker's relationship with the recipient. In another example provided by Drew (2013: 145–148), the same organizer altered her inquiry turn toward different members about their intention to come to an upcoming group meeting. To the new member, her inquiry turn was "are you thinking of coming to the meeting tonight." To the long-established member, her turn was "are you going to the meeting tonight." Finally, to the regular member who was also a close friend and neighbor, her turn was "are you going tonight." Drew pointed out that the omission of an explicit reference to "the meeting tonight" signaled shared understanding and thus was designed for the recipient who was a close friend. The question "are you thinking of coming" expressed a tentative, circumspect stance and thus was designed to fit their relationship as new acquaintances. The choice of "coming" rather than "going" indicated the speaker is the central figure and thus fits the recipient's status as a new member.

The ability to design turns to fit the local sequential context, achieve social actions, and be recipient-designed is a key aspect of interactional competence. Interactional competence is the capability to achieve social actions contingently and jointly with co-participants by employing a range of interactional practices in context-specific manners (e.g., Hall 1993, 1999; Hall and Pekarek Doehler 2011; Hellermann 2008; Mondada 2006; Nguyen 2012, 2017, 2019b; Pekarek Doehler 2006; Pekarek Doehler et al. 2018; Pekarek Doehler and Petitjean 2017; Young 2011). Turn design configures in conceptualizations of interactional competence as linguistic resources (Hall 1993, 1999; Hall and Pekarek Doehler 2011; He and Young 1998; Young 2007, 2011), non-verbal and prosodic resources (Hall and Pekarek Doehler 2011), and formulation (Nguyen 2011, 2012). Previous research showed that novices may modify the specifics of their turn design to achieve similar actions more effectively over time. For example, Nguyen (2011, 2012) described how a novice pharmacist in patient consultations revised her wordings from "allergy" to "drug allergy" and replaced deictic expressions with drug names after some problematic interactions with the initial wordings. Another novice pharmacist changed from technical terms to layperson expressions in order to refer to the internal processes of drug absorption, thus becoming more recipient-designed over time.

Given the significance and complexity of turn design in interaction and the scarcity of research on novices' development of turn design practices to accomplish work-related tasks on the shop floor, I aim to examine a novice's changes over time regarding turn design in small talk during the hotel escort.

3 The Hotel Escort as a Speech-Exchange System

After guests check in at some hotels, they are escorted to their room by a staff member. The hotel escort is defined in tourism and hospitality industry as an activity in which "the escorting staff will spend time explaining the services and facilities of the room, answering questions, and *trying to make guests feel welcome*" (Baker et al. 2000: 136, emphasis added). Thus, in addition to transactional talk, a key part of this activity involves interpersonal talk, or small talk. Small talk is an elusive phenomenon, yet a crucial part of workplace interaction (Holmes 2003, 2005; Holmes and Marra 2002). As in other workplace settings, interpersonal talk in hotel escort conversations is not separate from transactional talk, but it is part of the transaction itself (see also Holmes 2005; Nguyen 2007). In this study, I consider a sequence to be small talk when it is beyond the exchange of information about hotel services, such as talk about the guests' trip, the weather, hotel history, hotel decoration, the guests' well-being, and so on. In order to maintain consistency for the purpose of tracing changes over time (see Koschmann 2013, on same-but-different analysis), I will focus on small talk on the guests' trip.

The recurrent sequential structure of the escort talk in the data is presented in Fig. 1. This overall structure is a "socially organized 'package' which contains 'standard components in a standard order of occurrence'" (Jefferson 1988: 418).

OPENING

- Greetings
- Room location request/ confirmation by staff (e.g., "tell me your room number please"/ "your room is 302?") – response by guests
- Directive by staff (e.g., "this way please")

WALKING TO ROOM

- Ongoing description of amenities along the way by staff – assessment or questions by guests – response by staff
  - Massage and sauna location and hours
  - Pool and bar location and hours
  - Breakfast location and procedure
- Small talk
  - topic initiation by guests or staff
  - telling
  - assessment
  - closing

ARRIVAL AT ROOM

- Opening door with room key by staff
- Invitation for guests to enter by staff

ENTERING ROOM

- Assessment of room by guest or staff (e.g., "beautiful!" "nice room for you") – response
- Description of room facilities by staff – acknowledgement by guests
- Instructions about Wi-Fi by staff – acknowledgement by guests
- Announcement of complimentary fruit and water – acknowledgement by guests
- Instructions about how to access receptionist – acknowledgement by guests
- Announcement about luggage's upcoming arrival – thanking by guests
- Question by guests – answer by staff

THANKING

WELL-WISHING

LEAVE TAKING

Fig. 1 Overarching sequential structure of escort talk

This overall structure makes up the speech-exchange system[2] (Schegloff 1999) of hotel escort talk and consists of "accumulative practices" and "sedimented product of a long history of work" (Goodwin 2013: 17) that was given to the novice as part of her basic training. Focusing on sequences like this, this chapter aims to address the question: What are the novice's changes over time in turn design practices for assessments and topic initiation and pursuit in small talk concerning the guests' trip?

4 Data

The data consist of 110 audio recordings of escort talk at a hotel in Vietnam by a novice whose pseudonym is Xuân. At the time of data collection, Xuân was fairly new to the job, having been at the hotel for four months and in her position as a staff member in charge of escorting guests for 1.5 months. The recordings were made by Xuân herself, for ten consecutive months from June to March (that is, Xuân's second to twelfth month working as an escort staff member), each month with ten recordings, except for one month, in which she doubled the number of recordings, hence the total of 110. Among the 110 recordings, 57 (52%) involved small talk about the guests' trip, suggesting that this is a prevalent topic. The analysis will focus on these 57 recordings.

5 Analysis

I will first examine Xuân's turn designs in assessments as responses to the guests' telling about their trip in small-talk sequences (46 small-talk episodes contain an assessment sequence, initiated either by Xuân or the guests). I will attempt to trace the possible emergence of two adjectival phrases that Xuân utilized as part of the linguistic materials of her assessment turns, *beautiful* and *long way*. I will provide data which may suggest that this emergence was due to the in situ affordances of Xuân's co-constructed interaction with the guests. In the second part of the analysis, I will examine Xuân's change in topic-initiation and topic-pursuit turn design. I will demonstrate that this shift may have been triggered by interactional troubles that arose endogenously in the interaction.

---

[2] Alternatively referred to as "oral practice" (Hall 1993), "discursive practice" (Young 2007), or "interactional practice" (Nguyen 2012).

5.1 *The Emergence of Linguistic Materials in Assessments*

Assessments are essentially perspective and affiliation displays (Goodwin and Goodwin 1992; Pomerantz 1984) and thus can be quite tricky among new acquaintances. When a guest shares details about their trip, given the goal of "making the guests feel welcome" (Baker et al. 2000), a hotel staff member may face the challenge of how to give assessments that affiliate with someone in a first encounter. This challenge seemed to be real for Xuân, as shown in Excerpt (1), taken from her second month on the job. When the guest produces assessments about their trip, Xuân only shows recognition and acknowledgement without providing any second assessment. (In this and other Excerpts, "X" stands for "Xuân" and "G" for "Guest." All personal names are pseudonyms. Place names are well-known tourist attractions in Vietnam. Relevant phonetic details are transcribed between slashes after the word, using the International Phonetic Alphabet).

Excerpt 1: (2015June-5)

```
1   ((walking in silence))
2    X: °and then° where did you go w- before come here?
3   G1: um we are at (0.4) Ph: Pho::n-
4       (0.4)
5   G2: Phong Na.
6   G1: Phong Na:.
7    X: Phong Nha:?
8   G1: national park?
9    X: ye:s.
10  G1: yeah.
11      (0.2)
12  G1: it was so:: ni::ce.
13   X: yes. hh. hh.
14  G1: yeah.
15      (0.2)
16  G1: beautifu:l.
17      (0.3)
18   X: you have a good /ɣud/ trip /cip/?
19      (0.3)
20  G1: mmhm:
21   X: yes.
22  G1: yeah.
23  ((walking in silence))
```

In line 2, Xuân initiates the topic about the guests' itinerary by producing the first pair-part of a question-answer adjacency pair (Schegloff 2007). When the guests respond with the name of a well-known attraction (ll. 5–6), Xuân shows recognition by producing the correct pronunciation of the place name (l. 7) and acknowledgement (l. 9). After a brief pause, the guest produces an assessment to close her telling (l. 12). In conversations, after a first assessment about a referent of which both parties have shared knowledge, the relevant response is a second assessment (Pomerantz 1984). However, here Xuân responds with a receipt and laughter in the next slot (l. 13), although she has displayed recognition of the referent being assessed. The

guest's orientation to the absence of a second assessment from Xuân can be seen in the fact that she produces a minimal token (l. 14) and, after a pause, a second assessment herself (l. 16). After another pause, Xuân enters step-wise topic shift (Sacks 1995) and invites the guest's overall assessment of their own trip (l. 18).

Over time, however, Xuân seemed to exploit the linguistic materials afforded by the guests to build her assessments. We will see how this happened with two linguistic bits, the evaluative expressions *beautiful* and *long way.*

5.1.1 "Beautiful"

In a subsequent encounter in the same month as Excerpt (1), the guest produces an assessment after telling about their trip (Excerpt 2, l. 9). This time, however, Xuân responds with an acknowledgement and a second assessment (l. 10).

Excerpt 2: (2015June-8)

```
1    ((walking in silence))
2    X: uhm where did you go: before: >coming< here::?
3    G: °you:° ah we came from Ha Long bay:?
4    X: Ha Long bay. [yes.
5    G:              [and we went to Ha Noi.
6    X: [ye:s.
7    G: [after the bay.
8       (0.2)
9    G: >it's beautiful.<
10   X: yes. b(hh)eautiful. hh.
11  ((walking in silence))
```

It is important to note that Xuân's second assessment (l. 10) recycles the same adjective used by the guest, thus achieving coherence and affiliation (Drew 2013; Su 2016).

In an encounter one month later, Xuân independently initiates a first assessment in response to the guests' telling about their trip, using the word *beautiful* (Excerpt 3, l. 7).[3] In producing such a first assessment, Xuân also "claims knowledge of that which (…) she is assessing" (Pomerantz 1984: 57).

Excerpt 3: (2015July-2a)

```
1    ((walking in silence))
2    X: before: coming here:, where did you go sir:?
3       (0.9)
4    G: uh: Hanoi.
5    X: Hanoi.=
6    G: =Hanoi and Ha Long bay.
7    X: ((smiling voice)) Ha Long bay. yes. beautiful.
8    G: yes yes.
9    X: yes.
10      (0.7)
```

[3] While the guest does not produce a second assessment, the double "yes" (l. 8) serves as strong agreement.

In fact, Xuân continued to use the word *beautiful* to produce an assessment in this sequential environment 19 more times until the end of data collection. Excerpt (4), occurring 8 months later, illustrates Xuân's later assessment turns (l. 8).

Excerpt 4: (2016March-3a)

```
1    ((walking in silence))
2    X: how is /i/ your trip in Vietnam?
3       (0.2)
4   G1: ↑uh: yes, we: uh arrived in Da Nang:?
5    X: yes.
6       (.)
7    G1:↑u:::::hm Hoi A::::n
8    X: Hoi An yes [beautiful huh?
9   G1:            [↓and now we just came (for a little rain) heh heh .h
10   X: yes heh heh.
11      (0.3)
12  G2: yes. very beautiful.
13   X: yes.
14      (2.5)
```

Given the trajectory of her assessments over time, it is likely that she came to produce this word in this particular context thanks to previous interactions such as in Excerpts (1) and (2), where the guests employed it to display their own perspective. In so doing, they provided Xuân with the affordance needed to affiliate with guests in subsequent encounters. This process seems to be at work with another lexical item, *long way*, which Xuân also began using in later assessments.

5.1.2 "Long way"

Up until before Excerpts (5) and (6), Xuân had been using only two adjectives, *beautiful* and *great* in assessments. Excerpt (5) shows the appearance of a new evaluative expression by Xuân, *long way*.

Excerpt 5: (2015July-5a)

```
1       (0.3)
2    X: <did you have a good /ɣud/ trip /cip/?>
3   G1: oh yeah. hh. yes. hh. it's been very long though.
4    X: yes. long way. °huh?°
5   G2: o:h! yea::h.
6    X: heh. h.
7    ((walking in silence))
```

In line 3, the guest first responds to Xuân's invitation for positive assessment about their trip with a preferred response (Pomerantz 1984), then adds a negative assessment that is marked as not projected by Xuân's question (*it's been very long though*). Xuân affiliates with the guest's assessment by reproducing part of his turn in a second assessment (*long way*, l. 4). In two other episodes (not included here due

to space limit), Xuân produced a second assessment that affiliated with the guests' displayed perspective by appropriating part of their first assessment.

In three encounters later in the data collection period, Xuân initiated a first assessment about the guests' trip, independently using the expression *long way* and claiming access to the destinations mentioned by the guests. An example is Excerpt (6), taken from an encounter one month after Excerpt (5).

Excerpt 6: (2015August-3a)

```
1       (0.6)
2    X: did you have a good /ɣud/ trip.
3       (0.8)
4   G1: ↑yes!
5   G2: [yes
6   G3: [yeah!
7   G1: [yeah
8   G2:    [we've travelled quite a lot so far but
9    X:    [yes.
10   X: yeah:.
11 G2: we've been in Ho Chi Minh and we've been in- (0.5) uh:. Hanoi:
12 G1: Hanoi:, we've been to Laos.
13 G2: Laos.
14  X: oo:h long way: hh.
15 G1: yes it's a long way =and lots of traveling.
16  X: heh heh.
17 G2: but our next trip is to: Hoi An
18  X: yes:.
19 G2: by car: so as- we're not flying, so:
20  X: ye:s.
```

After Xuân's invitation for assessment about their trip, the guests respond with a preferred answer and an assessment about their trip as involving *quite a lot* of traveling, which they then elaborate on by collaboratively recounting the several places they have visited (ls. 4–13). In line 14, Xuân produces a sympathetic emotional response (*ooh*) and a first assessment that orients to the guests' perspective (*long way*). That Xuân's assessment is in line with the guests' stance is evidenced by the guest's reciprocal affiliation (l. 15), expressed in the form of the agreement token *yes*, repetition of Xuân's assessment in *it's a long way*, and an upgraded assessment (Pomerantz 1984) with an emphasis on *lots* in *and lots of traveling*.

5.1.3 Overall Diversification of Lexical Resources in Assessments

Over time, Xuân showed more diverse choices of lexical items, which enabled her to design turns that were more fitted to the guests' preceding turns. This sensitivity can be seen in Excerpt (7), taken from the last month in the data collection period (Xuân's 12th month on the job).

Excerpt 7: (2016March-2a)

```
1    X: how is /i/ your trip in Vietnam?
2       (0.4)
3   G1: un, good,
4   G2: ah: ex[cellent.
5   G1:       [we've actually been to Sapa?
6       (0.5)
7    X: ↑A::::H! Sapa.
8       (0.3)
9    X: co:::ld huh?
10      (0.6)
11  G1: ↑a:::[::h, a bit colder than ↓here.
12  G2:      [↑no:?
13   X: =yes.=
14  G1: =but dry=
15   X: =yes heh heh heh, dry, yes.=
16  G1: =we went (0.6) up into the mountains
17      [to see the (0.5) e::h villages and (.) it was [lovely
18   X: [yes.                                          [yes.
19      (0.2)
20   X: yeah.
21  G1: very nice.
22   X: yes.
        ((elevator chimes, arriving at floor))
```

In line 9, Xuân produces an assessment of the guests' previous trip destination that is specific to that location—its climate (*cold*). The first guest produces a downgraded assessment (l. 11), which could constitute a slight disagreement (Pomerantz 1984), while the second guest disagrees directly (l. 12), though with a rising intonation to soften the claim (Brazil 1997). The first guest then elaborates with a positive assessment of a different aspect of the trip, what they saw (ls. 16, 17), and finally closes with a positive assessment (l. 21). It could be argued that by producing a more specific assessment, Xuân creates next relevant slots for the guests to comment further on their trip, thus expanding the small talk (in this case, just in time for them to reach the room floor).

To obtain an overview of Xuân's employment of lexical resources in assessments in small talk about the guests' trips, Table 1 lists the evaluative expressions she used. Table 1 shows that as time went on, Xuân changed from producing predominantly *beautiful* to using a range of other adjectives and expressions. This diversification enabled her to engage with the guests in more specific manners (see Excerpt (7)).

In summary, Xuân diversified her linguistic repertoire to draw from and mobilize assessments locally as responses to the guests' telling about their trips, ultimately achieving the goal of the interaction, namely, to "make the guests feel welcome" (Baker et al. 2000:136). It is important to emphasize that this linguistic repertoire seemed to have been brought out by the endogenous mechanisms of doing assessments sequentially with the guests, as shown in the cases of the lexical items *beautiful* and *long way*.

Another change over time by Xuân can be observed in the turn design of her topic initiations and topic pursuits, which will be examined in the next section.

Table 1 Evaluative expressions in assessments by Xuân over time

Month	Evaluative expressions	Number of assessments in talk about guests' trip
June	beautiful	3
July	beautiful, long way, great	14
August	beautiful, long way	6
September	beautiful, lovely	4
October	beautiful	1
November	beautiful	1
December	beautiful	3
January	perfect for you, nice	2
February	beautiful, lovely, perfect	4
March	beautiful, lovely, perfect, long way, cold, warmly welcome	8
Total		46

5.2 Topic-Initiation and Topic-Pursuit Turn Design

Xuân initiated or pursued small talk about the guests' trip in two main format types: questions beginning with *where* (e.g., *where did you go*) and questions not using *where*. Among the second type, she used three expressions: *(did) you have a good trip* (l. 2 in Excerpts 5 and 6), *how is your trip* (ll. 2–4 in Excerpt 8, l. 2 in Excerpt 9), and *you (will) go around Vietnam* (l. 2 in Excerpt 10).

Excerpt 8: (2015December-6a)

```
1 ((walking in silence))
2 X: how is /i/ you:::r m::
3    (0.3)
4 X: how is /i/ your trip.
5    (1.6)
6 G1: ve::ry ni[ce. very easy.=
7              [yes.
8 X: =yeah.
```

Excerpt 9: (2016 January-5b)

```
1     (1.1)
2 X:  how is /i/ your trip /cip/ in Vietnam?
3     (0.8)
4 G2: ↑great?
5 X:  yeah (.) your trip in Vietnam?
6 G2: ↓mm↑hm,
7 X:  yeah?
8     (0.2)
9 X1: great.
```

Excerpt 10: (2016March-4a)

```
1 ((walking in silence))
2 X:  you will go around:: (0.2) Vietnam?
3     (0.5)
4 G1: yes.
5 X:  yes.
6     (0.2)
```

Table 2 displays the distribution of these topic-initiation and topic-pursuit expressions by Xuân over time. It shows a shift from the format *good trip* to the format *how is your trip (in Vietnam)* and the emergence of the format *you go around Vietnam* toward the end of the data collection period.

As shown in Table 2, from June to October, Xuân used only the format *good trip* in all topic initiation or pursuit turns that did not involve a question with *where.* After December, Xuân switched to the format *how is your trip (in Vietnam)* and later, *you go around Vietnam*. The transition took place in December, when the new format *how is your trip* appeared twice. Interestingly, in the first time this format appeared, residues of the earlier *good trip* format were present as part of Xuân's linguistic materials to build this topic-initiation turn (Excerpt 11).

Excerpt 11: (2015December-5)

```
1    ((walking in silence))
2    X: how is /i/ your good /ɣud/ trip.
3       (1.3)
4   G1: ye[s.
5   G2:   [yeah:,
6    X: yeah.
7   G1: yeah. it's the: (on the second)
        (0.3) (thirt- thirty two).
8       (0.2)
9   X:  yes.
10 G1: we've been to: uh Hanoi.
```

Xuân's topic initiation (l. 2) uses a formulation that contains both the existing format up to this point, *good trip*, and the emergent format, *how is your trip*. This results in the mixture, *how is your good trip*. The long delay (l. 3) may indicate the guests' trouble in providing an immediate response to this unusual expression.[4] The blended turn design between the two turn formats in Xuân's trajectory over time is concrete evidence for a change in progress in her interactional practices.

Xuân's longitudinal data (Fig. 2) provide a possible explanation for why Xuân made the shift in her topic-initiation and topic-pursuit turn format.

Prior to the transition in December, Xuân had experienced several interactional troubles (5 out of 11) when she used the formulation "good trip" (Fig. 2). Excerpt

[4] When the guests respond (ls. 4, 5), they treat Xuân's question as a polar question along the lines of "did you have a good trip." This is perhaps due to the fact that Xuân puts slight emphasis on "good trip."

Table 2 Topic-initiation and topic-pursuit turn design by Xuân overtime

Month	*good trip*	*how is your trip*	*how is your trip in Vietnam*	*you go around Vietnam*	All Topic-Initiation/Pursuit Turns Without *Where*
June	1 (100%)				1
July	6 (100%)				6
Aug.	5 (100%)				5
Sept.	3 (100%)				3
Oct.	1 (100%)				1
Nov.					0
Dec.	1* (50%)	2* (100%)			2
Jan.			1 (100%)		1
Feb.			2 (100%)		2
March			6 (67%)	3 (33%)	9
Total:	17*	2*	9	3	30

Note. An asterisk indicates an overlapping count of one instance (see Excerpt 11)

(12), taken from Xuân's third month working as an escort staff member, is an example of these interactional troubles. Although Xuân eventually repairs her turn, she does not seem to orient to the guest's signal of the precise trouble-source.

Excerpt 12: (2015July-5a)

```
1    X: did you have a good /ɣud/ trip /cip/?
2       (0.5)
3   G1: mhm?
4    X: did you have a good /ɣud/ trip /cip/?
5       (0.4)
6   G1: a what?
7       (0.3)
8    X: <did you have a good /ɣud/ trip /cip/.>
9   G1: oh. yeah. hh. yes. hh. it's been very
10      long though.
11   X: yes. long way.
12  G2: o:h! yea::h.
13   X: heh.
```

	Episode (Excerpt)	Turn Design	No Repair	Repair
▲	Jun-5 (Ex. 1)	X: you have a good /ɣud/ trip /cip/? (0.3) G1: mmhm:	✓	
▲	Jul-3a	X: and you have a good /ɣud/ trip /cip/. (0.9) G1: it was a long: train (0.4) journey. from Hanoi.	✓	
▲	Jul-3e	X: did you have a good /ɣud/ trip. (0.3) G2: so far okay.	✓	
▲	Jul-5a (Ex. 4) (Ex. 12)	X: did you have a good /ɣud/ trip /cip/? (0.5) G1: mhm? X: did you have a good /ɣud/ trip /cip/? (0.4) X1: a what? (0.3) X: <did you have a good /ɣud/ trip /cip/?> G1: oh yeah. hh. yes. hh. it's been very long though.		✓
▲	Jul-5b	X: did you have a good /ɣud/ trip? (0.7) G: very nice trip	✓	
▲	Jul-6	X: did you have a good /ɣud/ trip. G1: uh: we did take the: night bus.	✓	
▲	Jul-7d	X: did you have a good /ɣud/ trip /cip/? (0.5) X: sir? madam? G1: (sorry?) X: <did you have a good /ɣud/ trip?> (0.4) G2: yes. we did, yes.		✓
▲	Aug-1c	X: did you have a good /ɣud/ trip? (0.7) G2: yah. it was good. good.	✓	
▲	Aug-2a	X: did you ha:ve a good /ɣud/ trip. (0.5) G1: sorry? X: did you have a good /ɣud/ trip /cip/, G1: yeah? yeah yeah not too bad. the journey was a little long.		✓
▲	Aug-2b	X: did you have a good /ɣud/ trip. G3: [yeah.	✓	
▲	Aug-3a (Ex. 6)	X: did you have a good /ɣud/ trip. (0.8) G1: yes? G2: [yes G3: [yeah! G1: [yeah	✓	
▲	Aug-5b	X: did you have a good /ɣud/ trip, (0.2) G2: mhm,	✓	
▲	Sep-2	X: did you have a good /ɣud/ trip /cip/? (.) G1: yes, [we: just came up from: (.) Hoi An.	✓	

Fig. 2 Topic-initiation and topic-pursuit turns by Xuân over time

▲	Sep-7	X: did you have a: good /ɣud/ trip /cip/? (0.5) G2: good trip? [yes? X: [↑ye:s.		✓
▲	Sep-9	X: did you have a good /ɣud/ trip? (0.2) G2: yes, yes.	✓	
▲	Oct-2b (Ex. 13)	X: did you have a good /ɣud/ trip /cip/ madam? (0.7) X: did you have a good /ɣud/ trip /cip/? (0.7) G2: wood chip?		✓
→	Dec-5 (Ex. 11)	X: how is /i/ your good /ɣud/ trip. (1.3) G1: ye[s. G2: [yeah:,	✓	
■	Dec-6a (Ex. 8)	X: how is /i/ you:::r m:: (0.3) X: how is /i/ your trip. (1.6) G1: ve::ry ni[ce. very easy.=		✓
■	Jan-5b (Ex. 9)	X: how is /i/ your trip /cip/ in Vietnam? (0.8) G2: ↑great?	✓	
■	Feb-1b	X: yeah, how is /i/ your trip in Vietnam? (0.8) G2: very good,	✓	
■	Feb-1c	G1: [had a beautiful (boat-) X: [how is /i/ your trip in Vietnam? (0.9) X: how is /i/ your <trip> (0.3) in Vietnam? (0.5) G1: oh! very [(close).	✓	
■	Mar-1a	X: how is /i/ your trip in Viet↑nam? (1.0) G1: very good.	✓	
■	Mar-1b	X: how is /i/ your trip in Vietnam? (0.5) G1: we're having a [great ti[me.	✓	
■	Mar-2a (Ex. 7)	X: how is /i/ your trip in Vietnam? (0.4) G1: un, good,	✓	
■	Mar-2b	X: how is /i/ your trip in Vietnam. (1.9) G2: HH[HH. ((sighs)) [heh heh G1: [we:::ll. [little diff- little difficult.	✓	
■	Mar-2c	X: how is /i/ your trip /cip/ in Vietnam? (0.7) G4: pardon? (0.2) X: how is /i/ your trip (0.4) in Vietnam. (0.5) G4: uh >VERY GOOD<, very good		✓
♥	Mar-2d	X: and you go around your- (0.3) Vietnam? G2: yeah.	✓	

Fig. 2 (continued)

■	Mar-3a (Ex. 4)	X: how is /i/ your trip in Vietnam? (0.2) G1: ↑uh: yes, we: uh arrived in Da Nang:?	✓
♥	Mar-4a	X: you will go around:: (0.2) Vietnam? (0.5) G1: yes.	✓
♥	Mar-4b (Ex. 10)	X: you go around uh (0.2) Vietnam uh? (0.2) G1: yes.	

Notes

▲ indicates variations of the format "did you have a good trip?"

■ indicates variations of the format "how is your trip in Vietnam?"

♥ indicates variations of the format "you go around Vietnam?"

✓ indicates presence of phenomenon

Fig. 2 (continued)

In line 1 of Excerpt 12, Xuân initiates the topic about the guests' trip in a polar question to ask whether they had a *good trip*. It is important to note that like all the other instances of this phrase, Xuân's pronunciation of the initial consonant in *good* is a velar fricative /ɣ/ (present in Vietnamese) rather than the velar stop /ɡ/ (present in English but not Vietnamese). Also, her pronunciation of the initial consonant cluster in "trip" sometimes approximates a palatal stop /c/ (close to Vietnamese palatal /tɕ/) and some other times approximates English cluster /tɹ/. Perhaps due to these pronunciation features that deviate from expected English pronunciation, the guests' answer is not forthcoming, as evidenced by a pause in line 2. The guest then initiates repair with an open-class repair initiator (Schegloff et al. 1977) in line 3 and Xuân repairs by reproducing her entire turn, with no hearable modification (l. 4). Another pause ensues (l. 7) and the guest initiates repair again (l. 6), this time using partial repetition of the trouble-source plus a *wh*-interrogative (*a what?*) to signal that the trouble-source is specifically the noun phrase at the end of Xuân's turn (*good trip*). Usually in conversations, a response to this type of repair initiation would be a repair of just the trouble-source and not the entire turn (Schegloff 2007: 105). Xuân, however, reproduces her topic initiation in its entirety again; the only modification is the slowed-down speech tempo. This repair proves adequate for the guest to achieve understanding, as evidenced by the guest's change-of-state token "oh" (Heritage 1984) and the production of an answer to Xuân's question (ls. 9, 10). The guests' repair initiations, and especially the signal of the particular trouble source, seem to be clear indication of which part in Xuân's turn design is problematic and thus in need of revision. However, Xuân continued to use the same turn design in subsequent encounters for 12 more times until December (Fig. 2).

The last time Xuân used the *good trip* format in the data occurred in October (Excerpt 13), and I submit that the interactional trouble she had experienced and how she had oriented to the trouble-source in co-constructing the repair sequence with the guests could have led to her subsequent shift to a different format.

Excerpt 13: (2015October-2b)

```
1 ((walking in silence))
2   X: did you have a good /ɣud/ trip /cip/ mada:m?
3      (0.7)
4   X: did you have a good /ɣud/ trip /cip/?
5      (0.7)
6  G2: wood chip?
7      (0.8)
8   X: ye:s?
9      (0.7)
10     <did you have a good /ɣud/ trip /cip/?>
11      (0.7)
12  X: <good /ɣud/ trip /cip/.>
13 G2: <<wood°uh° chip.>>
14  X: ye:s.
15     (1.0)
16 G1: why:?
17     (0.2)
18 G2: uh:::: .hh I'm n(h)ot s(h)u:re I know what you mean. hh.
19  X: .h yes heh heh .h
20 G2: a wood?
21     (0.7)
22 G2: like wh- uh like (0.3) a wood.
23  X: <good /ɣud/ trip>.
24     (1.0)
25  X: did you have a good /ɣud/ trip.
26     (0.5)
27 G2: >↑a GOOD TRIP!<
28  X: YES!
29 G2: O(G):::H! ye:s. we had a good tri:p.
30     ye:::s. we started in Hanoi:?
31  X: yes.
32 G2: a:::nd we just came from Halong Bay:?
33  X: yes. beautiful.
34 G2: yea:::h. beautiful:.
35     (0.9)
```

In line 2, Xuân initiates a new topic by asking if the guest had a *good trip*, with the same pronunciation features as described above. Perhaps orienting to the guest's delay (l. 3), Xuân repeats her question (l. 4). Still, no answer is coming from the guest. In line 5, the guest initiates repair as she seeks to confirm a formulation of her understanding (Schegloff 2007: 101) by producing what she perceives as the trouble-source (*wood chip?*). Xuân's confirmation of the guest's understanding (l. 8) suggests that she hears the guest's utterance *wood chip* as being the same as *good trip*, a perception that may be due to her own treatment of /ɣud cip/ as the pronunciation for *good trip*. It is not surprising that after Xuân's confirmation, there is still a delay in the guest's response (l. 9). Xuân then reproduces in slowed speech the

trouble-source, which she seems to treat first as her entire topic-initiation turn (l. 10) then, in the face of another delay (l. 11), as the specific phrase *good trip* (l. 12).

With Xuân's confirmation and reproduction of the trouble-source, the guest now accepts "wood chip" as the material she needs to work with to make sense of Xuân's turn, as evident in the falling intonation of her repetition (l. 13). However, the fact that she enunciates the phrase *wood chip* in extra-slowed tempo may also suggest that she still has not achieved this sense-making, and needs further confirmation. Xuân seems to orient to this and provides confirmation again (l. 14). Both guests struggle to make sense of Xuân's turn, as evidenced in the next pause (l. 15), the *why* question (l. 16), and the explicit statement of failure to understand (l. 18) softened by laughter as a way to remedy the interactional trouble (see also Haakana, 2001).

The guest seems to attempt to get out of the deadlock by seeking re-confirmation of the first word in the phrase *wood chip* (ls. 21–22). Xuân issues the reconfirmation by repeating the phrase *good trip*; however, this time her pronunciation of the initial consonant cluster in "trip" is closer to English /tɹ/. With no response from the guest (l. 24), Xuân re-repairs the entire turn (l. 25), which puts the trouble-source in context. After a delay (l. 26), the guest finally can make sense of Xuân's turn. Her sped-up tempo, increased volume, and excitement mark her discovery of the solution to the understanding puzzle (l. 27). With Xuân's equally excited confirmation (l. 28), which establishes mutual understanding, the guest finally proceeds with an answer to Xuân's topic-initiation turn (ls. 29–32).

Unlike other problematic cases (e.g., Excerpt 12), Excerpt (13) shows Xuân orienting to *good trip* as the specific trouble source. It is highly possible that the participants' repair actions in this encounter have informed Xuân of this particular linguistic bit as the trouble-source in her topic-initiation turn and have been the impetus for her to shift to the phrase *how is your trip* then later *you go around Vietnam* in subsequent encounters (Fig. 2).

6 Summary and Discussion

The analysis above has shown two types of change in Xuân's turn design during small talk about the guests' trips. First, she diversified the range of evaluative expressions used in assessments to be more sensitive to the guests' tellings and in so doing, to potentially generate more small talk. Second, she shifted in topic-initiation and topic-pursuit turn design from using the phrase *good trip* to other phrases that do not contain this particular phrase. We have seen that in the first type, her change was the result of an appropriation of the linguistic materials in previous guests' assessments, which gave her a glimpse into guests' possible perspectives about their trips. The sequential organization of assessments and agreements to assessments constituted the interactional affordances that enabled Xuân to adjust her turns design over time. With respect to Xuân's second change, it was the multiple occurrences of local interactional troubles—including one in which the particular trouble-source

was indicated online in unfolding interaction— that could have led Xuân to shift her wording to avoid these troubles in later encounters.

This longitudinal study corroborates previous findings which indicate that the development of interactional competence involves increased efficiency and fitness in the novice's interactional practices (Nguyen 2012; Pekarek Doehler and Petitjean 2017). This study strengthens Nguyen's (2012) finding that endogenous troubles in interaction and participants' situated conduct to resolve them may inform the novice's modification of interactional practices. By participating in a recurrent speech-exchange system—the hotel escort—the novice was able to see how a certain turn design might or might not work in interaction with guests, then adjusted her turn assemblage for more effective task accomplishment. Thus, the novice was like Agnes, who "learned by participating in situations where she was expected to know the very things that she was simultaneously being taught" (Garfinkel 1967: 147).

A language's grammar has been argued to be emergent (Hopper 1987) in the sense that regularity of forms "comes out of discourse and is shaped by discourse… in ways that reflect the individual speakers' past experience of these forms, and their assessment of the present context" (p. 142). In other words, structures "emerge through reuse and modification of prior utterances" (Su 2016: 330). Similarly, when a novice participates recurrently in a speech-exchange system over time, she can recruit and manipulate linguistic resources afforded by the mechanisms of interaction for more effective goal achievement (see also (Pallotti 2002)).

In ethnomethodology, Garfinkel (2002) considered the shop floor as the locale where workplace social order resides. This study takes this insight further by providing empirical evidence that learning to become a member at the workplace also takes place on the shop floor. Moreover, Xuân's trajectories of change in the first few months at work as an escort staff member demonstrate on an individual and microanalytic level the dynamic transformation of workplace practices that Goodwin (2013) described:

> Individual actions emerge from, and use, *a consequential past shaped through chains of prior action*, providing current participants with a dense, present environment, a rich now, containing many different kinds of resources that can be *selectively decomposed, reused and transformed to build a next action*, a proposal for how the future will be organized. (p. 21, emphasis added)

Learning 'in the wild' is learning to build next actions contingently "in the midst of things" on the shop floor (Garfinkel 2002: 92, 101) by selectively drawing on situated past actions.

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Part II
Configuring the Wild for Learning: Learners' In-Situ Practices for Learning

Learning Behaviors in the Wild: How People Achieve L2 Learning Outside of Class

Søren W. Eskildsen

Abstract This chapter represents a first attempt at building a collection of learning behaviors in L2 speakers' social practices in the wild. Research has shown that repair, word search activities, and definition talk provide fruitful soil for L2 learning (Brouwer 2003; Eskildsen 2018a; Eskildsen and Theodórsdóttir 2017; Eskildsen and Wagner 2015; Kasper and Burch 2016; Koshik and Seo 2012; Kurhila 2006; Markee 1994; Markee Appl Ling 29:404–427, 2008; Theodórsdóttir 2018; Theodórsdóttir and Eskildsen 2011), but a principled overview of L2 speakers' learning behaviors when using the L2 outside of class remains to be built. Filling that gap, the chapter shows three distinct learning behaviors: (1) noticing and using new word in word searches; (2) making explicit use of the expert; and (3) re-indexing previously learned items. Consisting of out-of-classroom Danish L2 interactions, the data reveal that word searches may be built in a variety of ways, sequentially and with respect to turn-taking design, but public noticing and use of the new word on the part of the L2 speaker is argued to be a recurring learning behavior in all the examples. The re-indexing of previously learned items follows talk where an L2 speaker has been previously corrected or displayed lack of understanding.

Keywords Definition talk · Noticing · Repair · Usage-based linguistics · Word search

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1 Introduction

I will pursue in this chapter the theme of L2 learning as activities that are socially accomplished through certain displayed behaviors that are recognizable as such by interactional co-participants in situ. In so doing, I build and expand on a rich body of CA-SLA research (e.g., Brouwer 2003; Brouwer and Wagner 2004; Eskildsen and Theodórsdóttir 2017; Greer this volume; Hellermann 2008; Kasper and Burch 2016; Lee 2010; Lilja 2014; Lilja and Piirainen-Marsh 2019; Majlesi and Broth 2012; Eskildsen and Majlesi 2018; Markee 1994, 2000, 2008; Pekarek Doehler 2010; Theodórsdóttir and Eskildsen 2011). In particular I continue the work to build a collection of learning behaviors in the wild (Eskildsen and Theodórsdóttir 2017, cf. Markee 2008, 2011).

L2 learning in and through everyday interaction in the wild is a fundamentally collaborative enterprise in which the L2 speaker is often dependent on the willing participation of locals (Greer this volume; Theodórsdóttir 2018. See Evnytskaya and Berger 2017 for an empirical discussion of willingness to participate in the L2 classroom, and Hellermann et al. this volume on instructed out-of-class interaction). An empirical example, consisting of two excerpts, will serve as the point of departure to illustrate some basic points and exemplify some phenomena. The excerpts[1] come from Anna, a Canadian student of Icelandic at the University of Iceland who recorded her own encounters in Icelandic weekly over a three-year period as part of her L2 studies. The recordings are from her everyday interactions with locals, friends, and service personnel. The service encounters, which I will show an example of here, took place in bakeries, post offices, banks, stores, at hot dog stands etc., but to Anna they were more than service encounters, as she exploited these interactions for learning purposes (see Eskildsen and Theodórsdóttir 2017; Theodórsdóttir 2011a, b, 2018; Theodórsdóttir and Eskildsen 2011).

The example shows how Anna makes her identity as an L2 learner relevant in the wild by negotiating to speak Icelandic with a clerk in a service encounter (see Excerpt 1.1). This was something she did regularly and it allowed her to construct learning spaces in the wild – i.e., spaces where Anna and her co-participant might engage in learning/understanding/teaching activities in encounters that were otherwise reserved for doing business (Eskildsen and Theodórsdóttir 2017). The example takes place at a hot dog stand. The target lines in Excerpt 1.1 are 5–9 where Anna and the clerk make the agreement to speak Icelandic.

[1] Adopted and revised from Eskildsen and Theodórsdóttir (2017). The present analysis focuses exclusively on learning behavior. For a fuller analysis, please see the original source.

Excerpt 1.1

```
01   CLE: góðan daginn
          good afternoon

02   ANN: hæ
          hi

03   CLE: hæ
          hi

04         (0.8)

05   ANN: uh:uh:uh: MÁ É::g ((sniff)) TALA LÍTIL ÍSLENSKU
                    can I             speak a little Icelandic

06   CLE: JÁ
          YES

07   ANN: við þig
          with you

08   CLE: (á)kkúrat já
          precisely yes

09   ANN: já
          yes
```

Following greetings, Anna begins her request to speak Icelandic at line 5. The clerk complies (l. 6), and then Anna adds *við þig* ('with you') to her request (l. 7). The clerk is still displaying his willingness to cooperate, as seen in his response (l. 8), and Anna confirms (l. 9).

Anna then places her order a few moments later (see Excerpt 1.2). Despite production trouble with lots of *uh*s, stretched vowels, pauses, and incongruent gender and case usage, she manages to get through the delivery of the order, *ég ætla að fá einn pylsa* ('I'll have one hot dog, please') (ll. 17–18).

Excerpt 1.2

```
17   ANN: UH:UH:UH (0.9) UH:UH:UH: (0.3) ég ætla að fá: (0.3) UH:m
18        .ts (1.4) einn (0.6) pylsa
          I'll have one-masculine-nominative hot-dog-feminine-
          nominative ((incongruent gender and case usage))

19   CLE: <eina>
          one-fem-acc

20        (0.8)

21   CLE: <pylsu>
          hot-dog-fem-acc

22   ANN: pylsu?
          hot-dog-fem-acc

23   CLE: já?
          yes

24   ANN: eina pylsu (0.8) o:::g (0.5) .ts (0.2) a:::nd eina kók
          one-fem-acc hot-dog-fem-acc and one-fem-acc coke-fem-acc

25   CLE: já
          yes
```

The next relevant action is for the clerk to give Anna a token of understanding and prepare the order. Instead, however, the clerk adopts the identity of a language teacher and corrects Anna's incongruent and non-standard gender and case usage in two steps – *eina* (one, fem.-acc.) (l. 19), which is a correction of Anna's *einn* (one, masc.-nom.), and *pylsu* (hot dog, sing. acc.) (l. 21), a correction of Anna's *pylsa* in line 18. While Anna makes no attempt at picking up the first correction, *eina*, she repeats the corrected version of the second word, *pylsu*, with try-marked intonation (Sacks and Schegloff 1979) and the clerk confirms with a yes-token (ll. 22–23). Anna then continues her order from lines 17–18 using both newly corrected words from the clerk, *eina pylsu* (one hot dog), signaling her noticing of both corrections. The clerk accepts the order and resumes the business (not shown here due to space considerations).

Although the usual business at a hot dog stand is to buy and sell food and beverages, the bulk of this interaction, lines 19–23, is not aimed at that, but constitutes instead an L2 learning side-sequence in which language is the focus of attention, while the topical interaction is put on hold (Brouwer 2004). The clerk does not attend to Anna's action in lines 17–18 as an actual order but as an attempt at ordering in need of fixing, and Anna orients to the clerk's corrections through public displays of noticing. In light of these actions, their agreement to use Icelandic for the interaction is seemingly understood by the participants as an agreement to participate in language learning and teaching activities (Theodórsdóttir 2011b). The L2 speaker has built a context in which, apart from doing her business in the L2, she can co-create opportunities for learning with her expert co-participant in a social space set up in the wild. Here, the interactants may carry out language learning activities, in this case 'learning to order a hot dog in Icelandic'. Any sharp distinction, therefore, between practicing, using and learning an L2 cannot be upheld as the L2-speaker seems to be doing all at once. However, in terms of operationalizing learning, I argue that the repetition and use of the repaired items constitutes publicly accountable behavior displaying an orientation to learning, because the moment of intersubjectivity has been reached. The actions of repeating and using are, in other words, topically redundant – but not redundant to the L2 user and not redundant as showing an orientation to learning (Eskildsen and Theodórsdóttir 2017; Theodórsdóttir and Eskildsen 2011).[2]

This chapter will build an empirical collection of different learning behaviors in the wild based on the actions found in Excerpt 1.2. While Anna's habit of constructing learning spaces in business encounters seems crucial to her learning and thus a good example to follow for others who are learning an L2 in the wild, and while I have observed a similar phenomenon in my data (to be further outlined in a later section), this seems to be somewhat of an idiosyncrasy. Therefore, instead of dealing with how learning moments are created initially, my primary interest in this chapter is people's methods of displaying an orientation to learning or having

[2] The clerk's actions, correspondingly, may be referred to as "doing teaching". My concerns are with learning behaviors and I will not deal in any principled way with such actions here (but see Theodórsdóttir 2018 for a discussion).

learned something new. In the next section I will provide an overview of previous research before moving on to presenting my empirical material.

2 Background

CA-SLA has come of age over the last two decades and produced a wealth of insights into how L2 learning is accomplished in situ through particular practices, and how L2 interactional competence develops and diversifies as an emergent social-linguistic repertoire that is constantly calibrated and recalibrated in response to situational changes (cf. Pekarek Doehler and Pochon-Berger 2015). Of the highest relevance to this chapter is CA-SLA research on L2 learning as an on-site undertaking, in which interactants display their orientation to the goings-on as learning through various accountable actions of orienting to understanding/using something new/recently learned (e.g. Brouwer 2003; Eskildsen and Theodórsdóttir 2017; Firth and Wagner 2007; Kasper 2009; Kasper and Burch 2016; Lilja 2014; Majlesi and Broth 2012; Eskildsen and Majlesi 2018; Markee 1994, 2008; Markee and Kasper 2004; Pekarek Doehler 2010; Piirainen-Marsh and Tainio 2009). In this approach, language, learning, and cognition are seen as socially distributed and embedded in local ecologies of social interaction. The implication is that L2 learning may be investigated as a socially displayed undertaking in the here and now without essential consideration being given to permanent outcomes. Some of the phenomena investigated here, however, have been shown to have long-term repercussions, for example word searches (Eskildsen 2018a). Moreover, in addition to CA-SLA research which investigates long-term learning as sediments of previously achieved communicative functions and features in locally contextualized environments (e.g. Brouwer and Wagner 2004; Cekaite 2007; Eskildsen 2011; Eskildsen and Wagner 2015; Pekarek Doehler and Pochon-Berger 2015), usage-based studies of L2 learning have revealed that L2 learning is essentially a biographical process of amassing a repertoire of instances that, given time and experience, become linguistic-resources-for-social-action (Pekarek Doehler 2018; Eskildsen 2018b, 2018c, in press a, in press b; Eskildsen and Markee 2018).

Following up on Eskildsen and Theodórsdóttir (2017), the present investigation contributes to the on-going discussions by building a collection of learning behaviors in the wild. As such, we are getting closer to an understanding of how different learning practices are locally constituted. I differentiate between ‘behavior’ and ‘practice’, with the former referring to speakers’ particular, occasioned actions in situ, and the latter referring to a collaborative, interactional achievement that is (more or less) pervasive in mundane talk. An interactional practice, as operationalized here, is a co-constructed endeavor that is built sequentially through occasioned contributions from the participants; we recognize the word search as such when it is accomplished, whereas the participants have to construct it according to the recognizable, sequential patterning as they go along. There is, then, a mutually constitutive relationship between behavior and practice, and in order for something to be a

recognizable practice across instances and contexts, it has to have become established through observable behavior that is talked into being and routinized as an interactional, sequential pattern (cf. also Seedhouse 2011). In the empirical section I will show three different learning behaviors: (1) noticing and using new word in word searches; (2) making explicit use of the expert; and (3) re-indexing previously learned items.

The data consist of out-of-classroom, audio-only Danish L2 data, recorded by students of Danish at the University of Southern Denmark, in everyday interactions – in service encounters, at dinner tables, in kitchens while cooking etc. The students were enrolled in a bilingual (Danish/English) international business communication program at the BA level and they have recorded the interactions themselves as part of their Danish courses. Their recordings have been used for a variety of pedagogical de-briefing purposes (cf. Wagner 2015). The interactions used in this chapter are representative of recordings made by students at various stages in the degree program, and there are recordings from first, second, and third year students. As their teacher I only instructed them minimally on what to record – and in most cases I gave no instructions at all. The main idea was to simply ask them to record and hand in their everyday interactions in service encounters and with friends, for example while cooking or having people over for dinner etc.

3 Learning Behavior 1: Noticing and Use of New Word in Collaborative Word Searches

Word searches constitute a general and very frequent collaborative interactional practice that concerns how speakers initiate and carry out repair in the face of lacking or uncertain vocabulary. The practice concerns, in other words, the interactional organization of orienting to problems in understanding and restoring intersubjectivity (Schegloff 1992; Schegloff et al. 1977). Word searches can be initiated through the use of a lingua franca, explicitly marked through language (e.g. *how do you say (x)?*), or implicitly marked through turn-design (e.g. pauses and try-marking) (Brouwer 2003; Eskildsen 2011, 2018a; Koshik and Seo 2012; Kurhila 2006; Mori 2010; Mortensen 2011; Theodórsdóttir and Eskildsen 2011). As such, word searches have been shown to be collaborative learning activities and recently, with the appropriate longitudinal data, they have been documented to have repercussions for long-term language learning (Eskildsen 2018a). It must be stressed, however, that word searches constitute a mundane repair practice that is not exclusive to L2 speakers (Brouwer 2003; Goodwin and Goodwin 1986; Hayashi 2003) and it follows that issues pertaining to level of proficiency have no bearing on the pervasive nature of the practice, and that not all word searches are about L2 learning. This depends on the participants and the ensuing interaction (Theodórsdóttir and Eskildsen 2011). In the following I will show how word searches unfold as collaborative learning activities.

In Excerpt 2, Karina (a German student of L2 Danish) is talking to her friend, Jakob. Prior to the excerpt they have been talking about evening plans and Jakob has told Karina that he has football (soccer) practice that evening. He then goes on to ask Karina about her plans, specifically whether she has any sports activities lined up (l. 1).

Excerpt 2

```
01   JAK:  hvad med dig skal du til [noget sport]
           what about you are you going to any sport

02   KAR:                             [.hh °n:-°  ] na:hr det e:r ehm:: en: eh
03         party (0.2) eh på Flisen
                                                        nahr  it  is        a
           party at the Flisen ((name of nightclub))

04   JAK:  på Flisen
           at the Flisen

05   KAR:  s[om e:::h sen      ]sation white?
           which       sensation white

06   JAK:   [hva det for noget.]
             what is that.

07   KAR:  du skal: e::h (.) ts .hh ehm ff hvad er det (0.3) du skal: e:[h
           you have to                    what is it        you have to

08   JAK:                                                               [en
09         hvid::
                                                                         a
           white

10   KAR:  wear?

11         (0.6)

12   JAK:  ja (.) tage på
           yes    wear

13   KAR:  ja tage på en øhm hvidt, shirt?
           yes wear   a      white shirt

14   JAK:  ja=
           yes

15   KAR:  =°hvid shirt°, .hh så:: (.) hhh [heh heh]
             white shirt      so::

16   JAK:                                  [okay å ] så kan man gå og så skrive
17         på hinanden å:,
                                            okay and then you can go and then
           write on each other a:nd

18   KAR:  ja. eh heh heh [heh heh heh heh .hh ]
           yes

19   JAK:                 [okay det lyder sjovt]
                           okay that sounds fun
```

Karina responds that she is going to a party in a local nightclub and Jakob displays listenership and understanding with a partial repeat (ll. 2–4) (cf. Svennevig

2004 on other-repetition as receipt of information). Karina then elaborates on the party theme (l. 5), in overlap with which Jakob asks about the same thing (l. 6). Karina's response in the next turn is trouble-filled with perturbations and pauses and an explicit word search marker ('what is it') which Jakob orients to as an invitation to help (ll. 7–8). His contribution, *en hvid::*, ('a white') is uttered with a lengthening of the word-final sound (roughly corresponding to /ð/) suggesting uncertainty or incompletion; it may relate to the theme mentioned by Karina ('sensation white', l. 5), but it is not a successful candidate solution to the word search. This becomes evident in Karina's next turn where she simply says *wear* with rising intonation (l. 10), to which Jakob, following a pause, responds with a token of understanding ('yes') and the equivalent in Danish 'tage på' (lit. 'take on'). Karina (line 13) accepts with a 'yes', following which she continues the topic of the conversation, using the provided term. Following some repair work concerning 'white shirt' (line 14–15), Jakob offers a candidate understanding of the theme (ll. 16–17), which Karina acknowledges and responds to with laughter (l. 18) before Jakob gives an assessment (l. 19) which closes the sequence.

Word searches are pervasive in natural conversation but maybe even more so in L2 interaction (cf. Wagner and Gardner 2004). They therefore constitute a crucial interactional resource for L2 learning in the wild. As the example shows, L2 speakers can, given the appropriate, recognizable interactional work and turn-design, ask for and be provided with terms in the L2 for which they have a current and pressing communicative need. The defining moment as far as learning behavior is concerned is in the third turn in the practice, namely where the L2 speaker shows an orientation to the new item through pick-up and use in the service of topical progression (cf. Brouwer 2003). In sum, the practice can be outlined sequentially as follows[3]:

1. There is a perturbed action in which the item causing the trouble is productionally isolated from the rest of the turn.
2. The sought-for item is delivered by a locally designated language expert, perhaps an L1 speaker, while the topical interaction is put on hold.
3. There is pick-up and use by L2 speaker.
4. The topical interaction is continued.

The next three excerpts, (3), (4), and (5) show that word searches can be accomplished in slightly different ways but following the same sequential progression. Excerpt 3 is a short example of try-marking in word searches. Lena (German) and Polly (German-Danish bilingual) are cooking a meal with their friend Tina who does not say anything here. Prior to the excerpt, Lena has been reviewing the recipe and then she runs into mild trouble (l. 1) as she is struggling with the Danish word for 'roast'. Her own candidate solution, *riste*, produced with try-marking intonation, is confirmed by Polly (l. 2) and Lena repeats the word and continues the topical interaction (l. 3).

[3] This is not necessarily applicable to all word search instances but it seems to be a prototype of the instances found in my data where learning is argued to be involved. Speakers may, for instance, orient to a co-participant's speech perturbations as a word search even though the troubling item has not been specifically indexed (Brouwer 2003).

Excerpt 3

```
01   LEN: å du ska:: (.) rist- riste?
          and you mu::st ro- roast?

02   POL: riste [ja (   )
          roast yes

03   LEN:       [riste de:t (.) det hele (.) og så:: har vi brug for kartofler
                 roast it       it  all      and then:: we need potatoes
```

In Excerpt 4 the problematic item sits mid-turn but is still isolated from the rest of the turn through a speech perturbation and a pause leading up to the production of the candidate word, and followed by a backwards-oriented repair in the form of a confirmation request and a repeat of the problematic term. In the excerpt, Lena (German) and Molly (Danish) are talking about Lena's recent au pair sojourn in the US. Molly asks Lena about her typical working day there (l. 1), and Lena begins listing her chores in response (ll. 2–4).

Excerpt 4

```
01 MOL: hva sku du så lave sån i løbet af sån en dag
        what was like your regular day like

02 LEN: ahm:: så: jeg skulle (.) køre drengene til skole (.) å så:: (.) så sku
03      jeg: ehm for eksempel: vaske op, rydde op å:: (.) ja å: efter skole
04      øhm: skul jeg (0.8) afhente? ka man si: det? [afhente?
        so I had to take the boys to school                  and the:n for
        example I had to wash the dishes clean up a::nd  yes a:nd after school
        I had to (0.8) collect? can you say that? collect?

05 MOL:                                              [ja >vi si< ja sku hent
06      drengene efter skol:=
        I would say I had to pick up the boys after school

07 LEN: =ja jeg sku hent drengene efter skole
         yes I had to pick up the boys after school
```

However, the Danish word for 'pick up' (as in 'pick up the boys after school') is causing her trouble (l. 4). Her candidate word is isolated from the rest of the utterance by a 0.8 second pause and uttered with rising intonation, followed by a request for help ('can you say that?') before she repeats the word with rising intonation again. In overlap (l. 5), Molly begins giving Lena an alternative word (note that she mitigates her candidate word with 'I would say', which implies that perhaps Lena was not entirely wrong), and she packages it in its turn-relevant context in which Molly reuses lexical material from Lena's previous contribution, which underlines the fundamentally collaborative nature of the practice. Finally, Lena picks up and uses the entire utterance brought to the table by Molly (l. 7).

Excerpt 5 follows the prototypical sequential format initially. Johanne (German) and Peter (Danish) are talking about the recipe for Danish meatballs. In line 1, Johanne is beginning to ask about onions; her turn initiation ('and what about') builds on the list-of-ingredients-so-far in the talk and indicates that she wants to ask about a possible next ingredient. She initiates repair and in the end switches to English with the word 'onions'.

Excerpt 5

```
01  JOH: og hvad med: (.) hvad hedder de:t (.) tsfs (.) e::h (.) onions?
         and what about   what's it called

02  PET: .hhh ja, altså: e:h der er (mang-)=
              yes well there are (man-)

03  JOH: =hvad hedder det på dansk?
          what's it called in Danish

04  PET: løg
         onions

05  JOH: løg ja. (.) >hvad med løg?< skal det også ind [(eller)
         onions yes >what about onions< do you need onions too (or)
```

As is evident from Peter's response, line 2, a switch to English is not necessarily oriented to as an invitation to provide a corresponding term in the first speaker's L2 (Theodórsdóttir and Eskildsen 2011). Peter continues the topical interaction as he begins answering the question 'what about onions'. He is soon cut off, however, and Johanne makes it explicit that her previous action was meant as a word search (l. 3). Peter then provides the Danish word (l. 4) and Johanne picks it up and, using the newly provided word, restarts her topical question, *what about onions* (l. 5). Next, Peter confirms that onions are required and tells Johanne how to use onions in the meatball recipe (not shown).

The actions of the practice designate learner and expert identities (Brouwer 2003; Kasper and Wagner 2011; Theodórsdóttir and Eskildsen 2011) as they are constructed in situ. The learner's actions, moreover, accomplish three things: (1) displays of trouble and repair initiation (speech perturbations); (2) an account of the displays of trouble (use of lingua franca or word search marker); and (3) an invitation to help solve the trouble (rising intonation or word search marker or both). When the word search has been successful and the troubling item delivered, one might say that trouble has been overcome, and when the learner goes on to display having noticed the new item by way of picking it up and using it, one might say that learning has been done. Until recently, the nagging question was whether word searches constitute long-term L2 learning rather than merely *opportunities for learning* (Brouwer 2003). However, Eskildsen (2018a) demonstrates that (some) word searches have long-term consequences, and, moreover, there is also an increasing amount of evidence from longitudinal usage-based / CA research indicating that encounters with new L2 vocabulary leave traces in people's experience and that learning is a matter of appropriation in multiple encounters over time (Eskildsen 2012, 2015, 2017, 2018a; Eskildsen and Wagner 2015). Word searches constitute one kind of encounter, a practice for language learning where new L2 items are brought to the fore of the interaction as 'learnables' (Majlesi and Broth 2012; Eskildsen and Majlesi 2018), and are therefore important stepping-stones on the path to increased L2 vocabulary.

The learning behavior of interest here is the third component in the sequential structure – the pick-up and use by the L2 speaker. It constitutes an accountable display of noticing, which has been viewed as a necessary condition for L2 learning since its inception by Schmidt (1990). This concept, however, is a purely individual-

cognitive phenomenon equivalent to conscious registration on the part of a L2 learner, something that happens privately. Instead of debating over whether something has been 'consciously registered', a conversation-analytic approach to L2 data throws light on what noticing is in terms of publicly accountable behavior and supports the idea that it is of fundamental importance to L2 learning. We can see in the data that L2 users notice the new word and use it to progress the topical interaction. It is, however, interactionally contingent; Theodórsdóttir and Eskildsen (2011), for example, showed that the use of a lingua franca does not automatically result in learning because it may be just another semiotic resource drawn upon in the service of accomplishing intersubjectivity. It crucially depends on and is occasioned by co-participants' actions through which they display an orientation to the use of the lingua franca as a word search. This was also evident in Excerpt 5 ('onions').

We also know that collaborative word searches are more likely to result in learning behavior than the practice of doing embedded repair (Rasmussen et al. 2004; Eskildsen 2018a; Theodórsdóttir 2018). The next Excerpt 6 showcases this. Laila (German) and her fellow student Susanne (Danish) are talking about an upcoming assignment for one of their joint courses at the university. In line 1, Susanne is saying that they have not yet been told how many sources they are supposed to refer to.

Excerpt 6

```
01  SUS: men:- (.) vi har jo slet ik rigtig fået at vide hvor mange kilder vi
02       sk- (.) skal [angive eller noget så:
         bu:t-     we haven't really been told how many sources we're supposed
         to indicate or anything so:

03  LAI:              [nåhr
                       oh

04  SUS: det ka være vi får svar på det på onsdag
         maybe we'll get the information on Wednesday

05  LAI: ja. jeg vil gerne spø- spørge hende (.) hvad hun (.) ja (.) fordi i::.
06       England var det sådan at .hh hvis du havde ehm: ik mere end- altså du
07       skulle ha:: (.) e:h mindst (.) jeg tro:r e:h ty:ve (1.8) hvad er det?
         yes. i'd like to as- ask her           what she      yes  because in::
         England it was so that       if you had         no more than- well you
         were supposed to ha::ve at least i thin:k   twen:ty      what is it?

08  SUS: kilder?
         sources?

09  LAI: kilder.
         sources.

10  SUS: ja?
         yes?

11  LAI: ehm:: (.) i din: arbejde (.) ellers får du bare en fail.
         ehm:     in you:r work (.) otherwise you just get a fail

12  SUS: nå så dumper man hvis: man [nu kun har ti fo[r eksempel
         oh so you fail if you only have ten for example

13  LAI:                             [ja              [ja
                                      yes              yes

14  SUS: okay. altså sån noget har vi jo slet ik fået å vide indtil nu
         okay. well we haven't been given that kind of information yet at all
```

Laila then says that she would like to ask the teacher because in England (where she has just spent a semester abroad) they were supposed to have at least 20 sources in order not to fail. However, her turn at lines 5–7 is heavily perturbed and as it transpires she lacks a word. Following a 1.8 second pause toward the end of the turn, she simply says ‘what is it?’ to ask for the lacking word. Although this is rather unspecified, Susanne shows immediate understanding by suggesting ‘kilder’ with try-marked intonation (l. 8). Laila picks it up (l. 9) and receives a positive acknowledgment and invitation to continue from Susanne (l. 10) before she finishes her telling about England (l. 11). This telling ends in a use of English – ‘fail’ – that Susanne clearly understands, as seen in her response which reformulates and exemplifies Laila’s telling and includes an embedded repair (‘dumper’). Laila responds with two yes-tokens before Susanne comments that their teacher has not disclosed this kind of information yet.

The two yes-tokens from Laila in line 13 are ambiguous. They work to confirm Susanne’s displayed understanding (l. 12), but whether or not any of the yes-tokens also indicate noticing of the Danish word for ‘fail’, ‘dumpe’, is impossible to ascertain. That Laila noticed ‘kilder’, however, is a fact, evidenced in the collaborative word search (‘what is it’ – ‘kilder’ – ‘kilder’) where it becomes apparent that they both know what the trouble is. The participants’ different orientations to the two items (‘kilder’, ‘dumpe’) indicate that the former was clearly noticed by the L2 speaker, whereas the latter was not made relevant and thus less likely to have been noticed. This also substantiates the idea that embedded repair does not readily occasion public noticing (cf. Rasmussen et al. 2004, Theodórsdóttir 2018).

4 Learning Behavior 2: Making Explicit Use of the Expert

Word searches may also be carried out through explicit word search markers, in the form of “how do you say X′-types of questions, whereby L2 speakers make explicit use of the L1 speaking expert. We already saw a glimpse of this in Excerpt 3 when Lena asked for confirmation of the Danish word for pick up. That happened, like word searches through turn-design and lingua franca, in the same turn as Lena ran into trouble. In my data there is a particular, sequentially different word search practice that I here refer to as ‘making explicit use of the expert’, and the primary purpose of which is to preempt trouble. In Excerpt 7, which comes from the same conversation as Excerpt 3, Lena has been telling Molly about different places in the US that she went to during her au pair sojourn. Just prior to the excerpt Lena has related how much she liked seeing the Grand Canyon. Molly then starts asking Lena a new question (l. 1).

Excerpt 7

```
01  MOL: å: hvis [du::
         a:nd if you::

02  LEN:         [hvad- hvad betyder <at gå:> (.) e::h (.0.9) hiking (.) på
03       dansk
                  what does to go hiking mean                              in
         Danish

04       (0.3)

05  LEN: at
         to

06  MOL: der ville man- man ville sige det samme. (.) man ville enten sige man
         ska på haik? (.) eller man ska ud å vandre.
         you would      you would say the same        you would either say you
         go on a hike    or you go hiking

06       (0.5)

07  LEN: oka:y?

08  MOL: m[m?

09  LEN:  [så: i grand canyon (.) e:h sku vi på haik?
           so: in grand canyon        we went on a hike

10  MOL: mm?=

11  LEN: =o:g >det var virkelig dejlig.<
           a:nd it was really lovely
```

Before Molly gets to her question, however, Lena interrupts and asks for the Danish word for ‘at gå hiking’. Interestingly, this is already partly in Danish, as seen in Lena’s translation of ‘to go’ into ‘at gå’ which coerces the Danish words into the English phrase ‘to go hiking’. Molly then delivers two alternatives (ll. 4–5) and, following another pause, Lena accepts Molly’s first candidate (l. 7) and in overlap with a continuer from Molly (l. 8), she begins producing a telling that relies on the new item, *så i grand canyon sku vi på haik* (l. 9, simplified).[4] This gets another continuer (l. 10) and Lena gives an assessment (l. 11), which Molly aligns with (not shown).

Another example (Excerpt 8) comes from an interaction in which Sandra (Austrian), Patricia (Croatian) and Krista (Danish) are preparing pancakes in Sandra’s kitchen. In line 1 Sandra makes her lexical inquiry.

[4] Note that Lena also fits the new expression semantico-syntactically to her own purposes: she changes the pronoun to “vi” (“we”) and the tense to preterit “sku” (“went”), and she coerces the structure into the general Danish V2-pattern that posits that the finite verb is in the second syntactic position (here following the adverbial “in Grand Canyon”). Note also that the verb “sku” (preterit of “skal”) is an auxiliary, etymologically related to English “shall”, that in cases like this doubles as main verb denoting motion.

Excerpt 8

```
01  SAN: ahm: hvad betyder e:h det her
               what does this mean

02       (1.4)

03  KRI: e::::h (°   °) det er dej ((during the unintelligible quiet talk
         something is beeping))
                        it is dough

04  SAN: dej?
         dough

05  KRI: ja.
         yes

06  SAN: så ska vi lave dej for 3 personer? ja.=
         so we are making dough for three people yes

07  KRI: =°mhm°
          mhm

08  PAT: ja
         yes
```

Following a pause, Krista begins delivering a response. She produces a non-lexical item, then utters something in low volume while there is a beeping sound, probably from some household appliance, before eventually providing the sought-for item, ‘dej’ (l. 3). Sandra repeats it with rising intonation, which Krista orients to as a confirmation request, as seen in her affirmatory response (ll. 4–5). Then Sandra moves the topical interaction forward by asserting that they are going to make dough for three people. The two co-participants display agreement with this (ll. 6–8).

Finally, Excerpt 9 shows an example of the practice where another (more apt) phrase ‘hvordan siger du på dansk’ (‘how do you say in Danish’) is used. Betina (Danish) has just sneezed and Albert (Romanian) replied with a ‘gesundheit’ which Betina acknowledged with a ‘thanks’. Then Albert asks for the word in Danish (l. 1). Betina provides it (l. 2), Albert accepts it (l. 3), and they do the adjacency pair again – ‘prosit’ – ‘ja tak’ (‘bless you’ – ‘thanks’) (ll. 3–4). Betina’s pre-thanks ‘yes’ may be an acknowledgment of Albert’s appropriation of ‘prosit’.

Excerpt 9

```
01   ALB: hvordan siger du på dansk?
          how do you say in Danish
02   BET: prosit.
          bless you
03   ALB: prosit. okay pro[sit.]
          bless you. okay bless you
04   BET:                 [(  )] °ja tak°
                                  yes thanks
```

Sequentially the practice shown in the three excerpts looks like this:

1. The L2 speaker asks for a specific word in Danish
2. L1 speaker provides the word
3. L2 speaker accepts the word and delivers a full TCU containing the new word.

This third turn in the practice may include another adjacency pair in which the L2 speaker has the word confirmed before moving the topical interaction forward (as in Excerpt 8). However, the first turn may also be an abandoned telling, as shown in the next Excerpt 10. Just prior to the excerpt, Polly (who was also a participant in Excerpt 3) makes an exclamation of surprise and there is the sound of something falling to the floor. This yields a reaction from Tina (l. 1); she begins saying something about 'all things' but then abandons it and embarks on a word search asking explicitly for the Danish word for 'droppe'. Lena provides a term, 'falde ned', which Tina repeats twice, the second time with rising intonation occasioning a confirmation token from Lena (ll. 2–5). Tina then restarts and finishes her comment, using the new item, that 'all things fall down today', a comment that Lena aligns with (ll. 6–7).

Excerpt 10

```
01  TIN: alle ting a:h- hvad betyder (0.4) betyer (0.8) di: (0.5) dro- droppe
         all things     what does                             dro- droppe mean

02  LEN: falde ne[d
         fall down

03  TIN:         [>fald ned< falde ned?
                   fall down  fall down

04       (0.3)

05  LEN: ja
         yes

06  TIN: alle ting falder ned i dag eh [heh heh
         all things fall down today

07  LEN:                               [jaHer heh
                                        yeHes
```

So although Tina here has embarked on her comment before asking for a lacking item, the practice follows the same sequential trajectory as the previous excerpts: she gets a word, has it confirmed, and uses it for her planned purposes.

As is evident from Lena's quick response as she provided the sought-for item, she understood immediately what Tina was after. However, the word 'droppe', as given by Tina, does not exist a priori in any of the languages they share (English, Danish, German). It seems to be the English word 'drop' (as in 'drop down') but pronounced in a way that makes it sound Danish. It could also be a Danish word (the verb 'droppe') but that would not make sense here because Tina is asking for a Danish word for 'droppe' and because the Danish word 'droppe' cannot be used in this situation to mean 'fall down'. Another interesting thing, from the perspective of a Danish speaker, is that 'hvad betyder X?' seems to be a frequent way to ask for

items in this sequential position by L2 users. It usually means 'what does X mean?' and is a typical resource used to ask for clarifications of various kinds – by L1 and L2 speakers alike. There are examples of this in my data, too, but I will not show them because of space limitations. As opposed to the learning practice instigated by 'hvad betyder X?' as shown, such uses result in explanations, which highlights the difference between doing understanding and doing learning. This is not to say that people cannot learn anything from the definition talk generated by the request for explanation, but the primary purpose in that practice is not for speaker to elicit an item that she wants to appropriate there-and-then; she has no imminent use for it, productively. Rather, her action makes it visible to others that she did not understand something, and they in turn help her understand. In these instances, we, as analysts, also only know what she claims to have understood which is different from displaying having understood, for example through use. The excerpts shown in this section, by virtue of the L2 speaker using the problematic item in context for a real-life purpose, are examples of displays of understanding something new which, long-term effects aside at this point, is the sine qua non of learning.

5 Learning Behavior 3: Re-indexing Previously Learned Items

In a recent paper on language learning in the wild (Eskildsen 2018a), I reported how a German speaker of L2 Danish, Lena, asked a locally designated expert for and was provided with the Danish word for tissue, 'lommetørklæde'. Lena then incorporated the new item in her next turn but used a wrong gender marker. The expert's response was to correct it *en passant* which Tina displayed a noticing of. Twenty minutes later, Lena re-indexed the situation; she and another German, Tina, were discussing and agreeing on the gender of the Danish word for knife, following which Lena made a remark that overtly re-indexed her previous noticing of the gender for 'lommetørklæde'. Such an example shows learning from a radically emic perspective; the new item was not only made relevant on the first noticing occasion, it was brought back into focus again later. The remainder of this section is concerned with how such re-indexing of previously learned items might run off interactionally.

Excerpts 11.1, 11.2 and 11.3 show a situation in which a German speaker Johanne (JOH) is talking to two Danish speaking friends, Martin (MAR) and Rolf (ROL). Prior to the excerpt they have been discussing differences between the educational systems in Germany and Denmark. In lines 1–3, Excerpt 11.1, Martin begins telling a story about a friend of his who is studying to become a primary school teacher in Denmark. Martin opens the story with a pre-telling in the form of an assessment of the-story-to-come (*jeg synes det meget fedt*) and then embarks on the story per se which is about his friend having taken candy making lessons as part of his education to become a teacher.

Excerpt 11.1

```
01   MAR:  .hh jeg synes det meget fedt jeg har en ven der læser pæ- der læser
02         psykol: >el vrøvl< ø:h lærer til lærer? (.) han har haft timer i
03         bolsjelavning
           i think it's very cool i have a friend who studies pe- who studies
           psychol: or rubbish e:h teacher to become a teacher   he has taken
           lessons in candy making

04         (0.4)

05   JOH:  i hvad?
           in what

06   MAR:  i bolsjefab- altså sån- det der med at lave bolsjer har du aldrig
07         prøvet at lave bolsjer
           in candy mak- you kno- that candy making thing have you never
           tried making candy

08         (0.3)

((Omitted lines))

14   MAR:  øh ved du hvad bolsjer er.
           eh do you know what "bolsjer" is

15   JOH:  na::h (.) sån:
           na:h kind of:.

16   MAR:  candy=

17   JOH:  =candy[:   ] ting
            candy:     thing

18   MAR:        [ø:hm]

19   MAR:  #ø:[:h#

20   ROL:     [hard candy

21   MAR:  ja hard candy
           yes hard candy

22   JOH:  ↑okay
           okay
```

In line 5, following a pause, Johanne initiates repair, *in what?*, indicating the final word *bolsjelavning* (‘candy making’) as the repairable. Martin, however, does not treat the repair initiation as a linguistic comprehension issue but as a cross-cultural issue as his candidate solution is to ask Johanne whether she has tried making candy (ll. 5–6); his use of negation marks his interrogative as an elicitation of a token of confirmation or disconfirmation (Turk 1999). No answer is forthcoming and in the omitted lines Martin explains candy-making, still with no hearable acknowledgement tokens from Johanne. Martin then asks Johanne what turns out to be the key question ‘do you know what *bolsjer* is’ (l. 14). Johanne’s response is a tentative *na:h sådan:* (‘na:h kind of:’) (l. 15), and together the three co-participants agree that it corresponds to ‘hard candy’ in English (ll. 16–22).

Excerpt 11.2

```
((Omitted lines))

34   MAR: fordi så ka man- å [å å-
          because then can you- and and and-

35   JOH:                    [hvad hedder de? (.) bolsje:r?
                              what are they called (.) bolsje:r

36   MAR: bolsjer

37   JOH: °bolsjer.°

38   MAR: ja (.) hard candy.
```

Following some talk on the cultural specifics of candy-making in Denmark (omitted lines), Johanne re-indexes the Danish term, *bolsjer* (line 35) as she asks for confirmation that she remembers the word correctly ('what are they called? bolsjer?'). She gets the confirmation and does an accountable pick up by way of a soft repetition. Martin does one last confirmation with a *yes* followed by the agreed-upon corresponding English term (lines 36–38).

This is followed by a lengthy story from Martin about his friend, spanning from line 39–144 in the transcript. After that, approximately 45 seconds after line 38 above, Johanne begins constructing a joke on the notion that in a few years all teaching will be technologically mediated and candy-making will be obsolete (Excerpt 11.3).

Excerpt 11.3

```
145   JOH: jeg tror i nogen år? så bliver der bare i-pho:ne undervisning eller
146        sådan nohhget [hh hh
           i think in a few years then it will only be i-pho:ne teaching or
           somethihhng

147   MAR:               [mmheh

148   JOH: @bolsjer? hvad er det@ [heh heh heh .hh heh heh heh heh heh .hh
             hard candy  what's that

149   MAR:                        [mfhhh heh heh ((continues topic))
```

The punchline of the multi-turn joke is crucially dependent on the newly learned item, 'bolsjer' (line 148), and, in an enactment of the childrens' viewpoint, plays with the idea that children will not know *bolsjer* anymore; *bolsjer hvad er det* (line 147). Johanne and Martin both laugh, and Martin then goes on to talk about how their university has plans to do long-distance teaching (not shown).

This interaction, less than 2 min long, became a learning situation as Johanne went through a socially displayed process of appropriation from not knowing, or vaguely knowing, 'bolsjer' through recalling it to using it for her own purposes. This usage trajectory implies that Johanne's use of 'bolsjer' is occasioned by the

previous definition talk (Markee 1994) surrounding the item; without the prior talk on how to make candy, Johanne would not have been able to make this particular joke.[5] Therefore I also argue that her final use re-indexes those previous moments and hence her learning of the item.

Another example of people re-indexing previous learning moments can be seen in the next Excerpts 12.1 and 12.2 in which Mona (German) and her boyfriend Frank (Danish) are cooking dinner. In line 1 in Excerpt 12.1 Mona is doing an on-line commentary of her present cooking activity which concerns measuring the quantum of olive oil needed. She does it by posing a question and embarking on a candidate response. Her boyfriend does an en passant correction of her choice of verb (l. 2). In response, Mona makes a sound of annoyance before accepting the correction and picking up the new item (l. 3).[6] The production of the item is notable, however, as Mona makes a distinct laughter token on the final syllable, which Frank responds to with three high-pitch laughter tokens (l. 4).

Excerpt 12.1

```
01    MON: så hvor mange bruger jeg? jeg bruge::r
           so how much do I use? I us::e

02    FRA: skal bruge
           need

03    MON: n*årh* tseh jeg skal brughhe
           arh tseh I neehhd

04    FRA: ↑heh heh heh

05         (2.2)

06    MON: et (2.8) s:pi::se:: °s°
           an      ea:ti::ng::
```

Following a long pause, Mona continues. Of interest in her turn, which transpires as a search for the word for 'spoon(ful)' (not shown here due to space considerations), is her syntactic design which indicates that her turn at line 6 is a continuation of line 3, so she has now produced 'we need a (spoon(ful))'.

Less than 3 min later (Excerpt 12.2), Mona again makes an on-line commentary as she is weighing an ingredient, and again she uses the word 'bruger' ('use') (l. 1).

[5] On the role of language play in L2 learning, see Bell (2017) for a recent overview.

[6] This lexical distinction is expressed through a modal verb in Danish ("skal", lit: "shall"). "Bruge" is most typically translated into "use", and "skal bruge" can be translated into the English "need" in this context.

Excerpt 12.2

```
01 MON: hvor mange er der der er fem hundrede men vi bruger kun tre hundrede.
        how many is there, there is five hundred but we use only three hundred

02      (0.4)

03 FRA: hvorfor har du så købt to?
        then why did you buy two

04      (0.9)

05 MON: ja fordi vi s:kal bruge ha.:ah? £.ff:nh£ ehm: (1.8) eh::. (0.7) otte
06      hundrede
        yes because we n:eed                                              eight
        hundred

07      (0.6)

08 FRA: a:?:.h
```

This time, however, Frank does not orient to the word choice but instead to the topic as he makes an inquiry about the amount of the ingredient Mona has bought (line 3). In response, Mona gives an account, and this time she self-repairs to 'skal bruge' ('need'). Again the production of 'skal bruge' is marked; the word-initial 's' in 'skal' is stretched and the rest of the word is uttered with emphasis, followed by a non-verbal token which sounds like part laughter, part exclamation and seems to work as a comment on her self-repair. It does not, however, recieve any verbal attention from Frank; in response to Mona's explanation that they need 800 grams he produces a change of state token indicating that he now understands and accepts why Mona bought two packs.

Frank's correction from the first excerpt, then, seems to endure. When Mona first noticed it and picked it up there was a joint agreement that this was a notable feat as seen in the joint attention on Mona's production of the item as a laughable. In the second instance, only Mona seems to be re-indexing the item as previously corrected, as she seems to be assessing her self-repair through an exclamatory 'hah' with a particular intonation contour (cf. Goodwin (1986) on same-speaker and non-lexical assessments). Much later in the talk – 35 and 50 minutes later, respectively (not shown here due to space considerations) – Mona uses 'skal bruge' again on two occasions without marking them in any way; what was a noticeable item is becoming a routine-like part of Mona's mundane Danish repertoire. These examples ('bolsjer', 'skal bruge') show that L2 leaners not only notice new bits and pieces of the language they are learning as they are using it, they also have particular ways of showing an orientation to something as having recently been noticed. As opposed to word searches, the re-indexing of previously learned items seems to happen predominantly in environments where the L2 speaker has displayed non-understanding ('bolsjer') or has been corrected ('skal bruge'; cf. also the example from Eskildsen (2018a) discussed in the introduction to this section). This indicates that the re-indexing also serves to underline the reinstatement of epistemic equilibrium.

6 Summary and Conclusions

This chapter represents a first attempt at building a collection of learning behaviors in L2 speakers' social practices in the wild. The fundamental issue is that learning is occasioned by and accomplished through public sense-making procedures and methods (Koschmann 2012). Learning behavior, cognition and learner identity are socially constructed, socially displayed and socially observable phenomena and categories. Thus, L2 users' practices for accomplishing learning have been traced empirically as people's methods of showing an orientation to being in a process of learning, including how L2 speakers notice, re-index, and use newly encountered vocabulary, and how they make use of locally designated experts ('particular others'). What I have not been concerned with here due to space considerations is the social fabric of the practices of accounting for recognition, which seems to be another feat of dealing with challenged intersubjectivity (cf. Eskildsen and Markee 2018), nor have I investigated change over time in the way people accomplish learning behavior in the wild. These are questions for future research (but see Pekarek Doehler & Berger this volume).

Empirically, word search practices emerge as the most frequent learning environment. The examined data have shown a sequential and turn-design variety in the way people accomplish these practices. One practice is when the word search is initiated turn-finally by the L2 speaker. This is typically done as he/she visibly runs into trouble. The sought-for item is then provided and the L2 speaker notices it, picks it up, and uses it. Another practice is when L2 speakers ask for words just before they need them, thus preempting trouble, in a turn designed to do just that. It was argued that these examples all showcase 'noticing' publicly as the L2 speaker demonstrably goes from not knowing to knowing an item and shows the process through his/her actions in situ.

It could also be argued that the practice in which people use the phrases 'hvad betyder X?' / 'hvordan siger du på dansk?' to make lexical inquiries constitutes planning as it happens in situ and in vivo. As Burch (2014: 657) notes, planning does not have to be thought of as an invisible psychological construct, inaccessible to the analyst; instead, "plans can be made viewable by interactants through the unfolding trajectory of their interactions. Suchman (1987) suggests that such viewable plans, as "situated actions" (p. 6), can provide a resource for projecting and restructuring courses of action, creating and acting upon contingencies." This seems to be exactly what people do when they ask the locally designated expert for an item up front, get it, and use it to formulate their communicative act.

The re-indexing of something recently learned or otherwise made prominent in a previous interaction also serves to display noticing and having been learning. It shows us what people orient to as learnables, but it also shows us the fundamentally experiential nature of learning and the dependence of learning on people's social histories (Brouwer and Wagner 2004). People re-index the linguistic matter they noticed, picked up, and learned, and they show it to and share it with the particular others that they shared the first learning moment with (Eskildsen and Wagner 2013). This, in essence, is the empirical, in situ evidence for the usage-based understanding

of learning as the conspiracy of all the memories of all the utterances in a L2 speaker's entire history as language user (Ellis 2015). What the data show is how people can learn a language, essentially, because it is noticeable; it is derived from real-life encounters as people appropriate the nuts and bolts of language as part of an emergent semiotic repertoire for social action.

In this chapter I have focused on lexical items because these visibly attract the attention of L2 users. I have shown how noticing new vocabulary happens in local ecologies of action and how it can be done in sequentially different ways. By the term 'vocabulary' I do not exclude morpho-syntax as shown in the first example from Iceland (see also discussions in Eskildsen 2018a and Theodórsdóttir 2018). This is in alignment with usage-based models of language where no principled distinction is made between lexis and grammar. However, it must be stressed that language learning per se is much more than just learning semiotic items; there is a range of social practices to be learned in a broad range of situations and environments, investigated in the research field under the header of 'interactional competence' (Pekarek Doehler and Pochon-Berger 2015; Pekarek Doehler 2018). This research deals with people's methods to accomplish particular actions and how these change and are recalibrated over time. Research that investigates the intersection between the emergent linguistic repertoire and people's developing interactional competence is beginning to appear, based on the insight that language is a semiotic repertoire for social action and that learning it is the process of creating one's social, linguistic, and interactional biography through discovery.

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Noticing Words in the Wild

Tim Greer

Abstract This chapter draws on multi-modal Conversation Analysis to examine instances of mundane L2 interaction in which participants orient to learning new lexical items. Such sequences are initiated when one speaker pays attention to an instance of language use, either in the just-prior talk or via some environmentally available target word. This typically involves a repetition of the target lexical item which topicalizes it for the other participants and can lead to the sort of talk regularly seen in language classrooms, including explanations, alternative formulations and intersubjective repair. Occasionally such sequences also include explicit noticing of learning itself, which momentarily indexes the co-participants' relative identity categories. The study tracks episodes of L2 talk in two distinctive non-classroom contexts: (1) English dinner table talk between a Japanese student and his American homestay host family and (2) mundane Japanese talk between non-Japanese clients and Japanese hairdressers. The analysis examines the layered manner in which elements such as intonation, gaze, gesture and physical objects co-occur with the talk to accomplish noticing as an orientation to language learning. Epistemic asymmetries made relevant in the interaction afford novice language users access to the lexical resources they require and locally ascribe the expert speaker with teacher-like qualities.

Keywords Noticing · Conversation analysis · Second language interaction · Vocabulary learning · Repair · Socially distributed cognition

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1 Noticing as a Social Accomplishment and a Means to Language Learning

Schmidt's Noticing Hypothesis (1990, 1993, 1994, 1995) has been highly influential within Applied Linguistics over the past two and a half decades. Put simply, the hypothesis states that "(i)nput does not become intake for language learning unless it is noticed, that is, consciously registered" (Schmidt 2012: 27). The idea of noticing as an initial step towards language acquisition has repercussions for input, learning conditions, feedback and instruction, and has therefore been explored from a variety of psycholinguistic and cognitive perspectives (see Doughty 2001). In recognition of Firth and Wagner's call for a greater emic sensitivity toward such fundamental SLA topics (Firth and Wagner 1997), this chapter aims to extend that work towards the notion of socially distributed cognition (Kasper 2009)—the notion that learning happens via interaction and that cognition can be located outside the head to the extent that is made visible to participants by and through talk, particularly in interaction that takes place beyond the walls of the classroom.

As it was originally conceived, Schmidt's hypothesis treats noticing, attention and awareness as essentially private psychological phenomena, therefore rendering them inaccessible to the analyst or the other interactants in real time unless the speaker somehow makes them public via social interaction. However, noticing as an interactional accomplishment has also been studied from a Conversation Analytic (CA) perspective. Keisanen (2012), for example, investigated the way people in cars make use of "summonses, deictic terms, address terms, perceptual directives, and explanations" (p. 275) to accomplish noticings toward either the unfolding landscape outside or a textual artifact within the car. In CA, therefore, the focus is not on noticing only as a private cognitive state, but on the articulation of noticing (Schegloff 2007) and its consequences for the ongoing interaction. Schegloff (2007) states that "an interactional noticing need not be engendered by a perceptual/cognitive one. And many (perhaps most) perceptual/cognitive noticings do not get articulated interactionally at all" (87). More often, an articulated noticing is employed as a means of occasioning some other sort of action, and recipients treat it that way in the ongoing interaction.

Consider Excerpt (1), for example, taken from Pomerantz (1980).

Excerpt 1: Line Busy

```
1                    ((phone rings))
2 Receiver           Hello::
3 Caller             HI:::
4 Receiver           Oh:hi:: 'ow are you Agne::s
5 Caller     →       Fine. Yer line's been busy
6 Receiver           Yeuh my fu(hh) - 'hhh my
7                    father's wife called me
```

In line 5, the caller does a noticing that presumably relates to events that took place just prior to the call. However, "Yer line's been busy" is not simply a noticing and nothing further than that. The receiver of the call treats it as the initiation of an account and rightly goes on to provide a reason for why the line was busy.

Likewise in Excerpt (2), which has been reproduced from Schegloff (1980), when Carol arrives back in her dorm room without the ice cream sandwich she has gone to buy, her friends notice and comment on it, and this leads to an explanation of why she did not buy the ice cream.

Excerpt 2: Ice-cream Sandwich (Taken from Schegloff 1980)

```
151          [door squeaks]
152 S:       Hi Carol.=
153 C:       =[Hi::
154 R:        [CA:ROl, HI::
155 S: →     You didn't get en ice-cream sanwich,
156 C:       I kno:w, hh I decided that my body
157          didn't need it,
```

In both cases the person who does the noticing is in the epistemic K- position (Heritage 2012), meaning that she possesses less knowledge about the noticeable matter than the recipient does. In addition, noticing something and articulating that noticing occasions an account, explanation or reason. S is not simply noticing the missing ice cream sandwich: by doing so she is also in effect asking Carol *why* she did not get one.

So from a CA perspective, noticing may be occasioned by a perceptual event, but is often treated as an interactional event. Noticing also serves to bring about joint attention and initiate collaborative orientation (Goodwin and Goodwin 2012). In mundane talk between people with differing language expertise, the noticing of a particular language item, such as a lexical, syntactic or pragmatic form, can lead the relative expert speaker to provide an explanation (see Eskildsen this volume). Consider for example the following interaction, taken from my dataset. Mom (who is American) and Shin (who is Japanese) are watching a cooking show in Japanese on YouTube.

Excerpt 3: Harmony

```
01 Video      zentai no harmony o (.) ajiwau
              entire LK         O     taste
              ...savor all of the harmony
02 Mom        |har↑mony↓
              |((turns to Shin))
03 Shin       ah
04 Mom        same word.
05            (.)
06 Shin       yeah.
07            (2.4)
08 Shin       many many many american words, (.)
09            is used in japan. [ha:rmony or,]
10 Mom                          [ oh really? ]
11 Shin       yeah.
12 Mom        hmm.
13            ((both return to watching screen))
```

In this case, Mom is the novice language user, and in fact she probably understands almost none of the Japanese in the video without the subtitles. However, when an English loanword appears in the Japanese commentary (l. 1) she repeats it (l. 2), which serves to articulate her noticing of the word and simultaneously topicalize that segment of the video. After a brief acknowledgement for Shin, Mom then clarifies which aspect of the word she is noticing by saying that the same word exists in English. As in Excerpts (1) and (2), this then leads Shin to give an account aligned to the noticing, suggesting that he has heard Mom's noticing as a request for an account or an explanation.

From an interactional perspective then, the noticing of a word or a phrase has much in common with many other commonly found environmental noticings, even though the noticer's attention may be drawn toward a spoken (and therefore auditory) manifestation of language rather than a visual one. Although most CA work on the practices of repair is framed in terms of initiation and enactment of repair (Schegloff et al. 1977), such initiation might also be thought of as the articulation of a noticing, particularly one that departs from the repair initiator's current understanding. In doing so, the elements of the speaker's private mind become publically available, interactionally scrutinizable and sequentially consequential for the ongoing talk.

In addition, as Eskildsen and Wagner (2015) have noted, "humans use the entire body to participate in socially organized processes of understanding and learning, which ultimately challenges a strict Cartesian division between mind and body. Instead, the mind is the body" (291). The practices of noticing therefore are revealed both through spoken and embodied interaction, via a collaborative focusing of attention (Eskildsen 2018; Eskildsen and Markee 2018, Jacknick and Thornbury 2013). For example, when a teacher makes a written mistake on the whiteboard or a projected screen, students orient to it in a bodily and visible manner through gaze shifts, smiles, and stares before they articulate that noticing by initiating correction (Kääntä 2014).

Focus on Form (FoF) is a well-known pedagogical approach related to Schmidt's noticing hypothesis (Long 1991), which researchers have recently been reappraising from a CA perspective. Fasel Lauzon and Pekarek Doehler (2013), for example, investigated FoF in relation to corrections in an L2 French classroom to demonstrating how matters that applied linguists consider cognitive, such as *attention focus* or *noticing*, constitute a locally contingent process that becomes consequential for participants themselves through routinely recognizable practices of interaction—including repetitions, delays, repairs, and the like. CA researchers do not see noticing or focus on form as an individual endeavor (belonging solely to either the teacher or the learner), but as a joint accomplishment borne out through mutual adjustments and conjoint actions in the talk.

Although Schmidt's noticing hypotheses originated from his observations of his own language learning in everyday situations outside the classroom (Schmidt and Frota 1986), Kasper and Burch (2016) point out that, ironically, much of the later research that it generated took place in the classroom rather than in the wild. Kasper and Burch use CA to examine how L2 users adopt the FoF approach in their everyday talk beyond the classroom. They demonstrate how momentary attention to lexical items or syntactic forms is occasioned and dealt with within and around other mundane actions. Their aim is "to make visible how, and with what consequences, the participants generate, sustain and abandon attention to language form through their coordinated actions in the ongoing social activity" (199–200). Such concerns are arguably less relevant to the sort of interaction that takes place in language classrooms, where a focus on language is an omnirelevant project, frequently allowing the teacher to initiate noticings about words that are made publically available for the benefit of a group of students (Waring et al. 2013) and leading to interactional trajectories that are accomplished collaboratively with the students according to the locally emergent context (Stoewer and Musk 2018) and developed "on-the-fly" (Mortensen 2011).

The current study is very much in keeping with this perspective. Its objective is to examine episodes of interactional noticing related to language form that take place "in the wild" (Hutchins 1995), such as in mundane conversation where neither speaker is pre-designated as a "teacher" and the main purpose of the talk is not language learning per se. In such episodes, noticing a lexical item[1] located in the surrounding interaction can occasion a departure from the projected trajectory of the talk, momentarily putting it on hold while the participants orient to the noticing and the pursuant accounts and explanations that become procedurally consequential. The study will examine two extended episodes of such talk, one in which the noticing is occasioned by a chance reference to an environmentally available object and the other through the use of an unrecognized word. Both cases result in extended explanations of the noticed lexemes and the analysis will explore how the participants incorporate elements of the physical environment into these explanations and how they subsequently return to the noticed word in later talk, flagging it as a recently learned item.

2 Background to the Data

The study is based on interaction collected in two very distinct situations: (a) a Japanese student living with an American family in Seattle and (b) a Bolivian man having his haircut at a Japanese hair salon. Although the settings and the languages being used are quite different, such details are not of primary consequence to the study, since the focus on noticing lexical items is equally pertinent in either context. In fact, exploring the associated interactional practices in two diverse settings lends support to the universality of the target phenomenon (Schegloff 2006).

These excerpts have been taken from two broader data sets of L2 interaction. The first consists of 44 episodes of six Japanese learners of English communicating with host families in Australia and the US. The video-recordings were collected between 2012 and 2017 and comprise approximately 15 h of mundane interaction, mostly in dinner table settings. The second data set was collected in a Japanese hair salon and tracks the interaction between two stylists and four of their customers over a series of four monthly haircuts. Three of the four customers are novice users of Japanese (one Bolivian, one American and one Chinese), and the two Japanese stylists speak only limited English.

[1]Although the vast majority Schmidt's Noticing Hypothesis relates to grammatical forms rather than vocabulary, research that focus on the latter are not without precedent (e.g., Godfroid et al. 2010, 2013; Laufer and Hulstijn 2001).

The study adopts a conversation analytic (CA) approach (Sidnell and Stivers 2013). The data have been transcribed according to the conventions developed by Gail Jefferson (2004a), and embodied aspects of the talk are indicated below the talk in a tier rendered in gray. Where it occurs, Japanese talk is represented in English over two tiers; a literal gloss and a vernacular translation. See the Appendix for further details.

3 Analysis

My analysis will focus on two kinds of word noticings and in particular on the way they are occasioned and how that leads to opportunities for learning in the wild. We will begin by looking at circumstances in which physical objects in the environment allow the novice to speculate on the meaning or origin of the word without direct information from the expert speaker. We will then examine situations in which a word from the surrounding talk is noticed by the novice and treated as unrecognized, via the processes of interactional repair.

3.1 Noticing Occasioned Through Reference to a Physical Object

The short segment of talk in this section is taken from around a dinner table in the US. Shin is a Japanese homestay student living with a host family in Seattle for 3 weeks. The aim of the analysis is to track the way Shin notices the word *sliver* and how this subsequently leads to a display of vocabulary learning. Since this involves an extended sequence of interaction, the transcripts and their analysis have been divided into several pertinent segments in order to trace the development of Shin's learning. At the point we pick up the conversation, the family has been eating pizza for some time and there are only a couple of slices left. Mom has just cut one of the last pieces into three thin strips. She gives one strip to Gran and puts another on her own plate, meaning there is one thin piece as well as one whole piece left in the box as Mom goes to close it.

Excerpt 4.1: Sliver: Shin Notices a New Word

```
01 Dad       |I'll take the last,
             |((pointing at the box))
02 Mom     the |s:kinny or=
               |((points to thin slice with knife))
```

```
03         =[the |fat one?
                 |((Mom points to thick slice with knife))
04 Dad      [|sliver.
              |((wiping mouth))
```

```
05 Dad     |the sliver.
            |((Mom's knife returns to thin slice))
06 Mom     (the) sliver.
07             |(1.5)
               |((Mom gives thin slice to Dad))
```

```
08 Shin    |((looking at pizza box; gaze tracks
             slice as Mom passes it to Dad))
```

```
09      →   sli↑ver↓
10 Mom      $sliver.$ [|mm.
                       |((nods))
11 Shin               [a::hn,
```

Since Mom has cut one slice of the pizza into smaller strips and there is also still another full slice left, there are in effect two sorts of "last pieces"; a normal sized one and one that is a third the width of a normal slice. Therefore, when Dad formulates his request as *I'll take the last* (l. 1), Mom initiates a clarification sequence by specifying the two choices to Dad, as *the skinny one or the fat one?,* pointing to each available piece with the knife as she does so (ll. 2–3). Dad then produces the word *sliver* twice, firstly in overlap with Mom in line 4, a turn segment that is hearable as the completion of his initial request, and then again in the clear in line 5. This self-repetition is undoubtedly related to the overlap (see Jefferson 2004b); however, Dad's addition of the definite article *the* in the second version also formulates it as a response to Mom's clarification initiation (in which she used *the* skinny one, *the* fat one), and also coincidently provides some further information about the word *sliver* for Shin—it is being used as a noun in this context. Mom then repeats *sliver* in line 6 as a form of receipt, making it clear that she has understood Dad's choice (Greer et al. 2009).

In the next 1.5 s Shin tracks the knife with his gaze as Mom chooses the thinner piece of pizza and puts it on Dad's plate. He has heard an unknown word used three times in quick succession, is normatively able to equate it with one of the two choices (skinny or fat) and observes that the piece that Dad has received is the thinner of the two. In short, he has had the opportunity to watch a word being used in context by two expert speakers and is in a position to make some logical assumptions about its meaning; he has physically noticed it, and perhaps formed a theory about its meaning. What matters from an interactional perspective is that he then articulates that noticing by saying *sliver* in line 9 with a rise-fall pitch pattern that marks it as an initiation of repair. In next turn Mom demonstrates that she hears it that way, by repeating the word along with a nod and a minimal uptake token. Finally, of note in this section is Shin's sequence-closing acknowledgement token *ahn* in line 11, which displays his understanding that Mom has confirmed (at least) that he has heard the word correctly. In the next segment Shin tests out his theory with the expert English speakers around him.

Excerpt 4.2: Sliver: Shin Checks the Meaning

```
12 Shin   skinny like u::h it means skinny
13 Mom    |ye[s.
          |((nods))
14 Dad       [yeah.
15 Shin   m-hm, sliver.
16        (0.3)
17 Mom    m-hm. ((a lip smack))
18        (0.3)
19 Dad    it's-
20        (0.9)/((Dad wipes mouth))
21 Shin→ °I'm learning°=
22 Dad    =the real term comes from u::h
```

Having confirmed his hearing of the target word and simultaneously accomplished an articulation of noticing, Shin immediately proceeds to offer a candidate understanding of the word's meaning in line 12; *skinny like u::h it means skinny*. Mom's description of the slice of pizza as 'skinny' (Excerpt 4.1, l. 2) becomes what Goodwin (2013) terms a *substrate* in that it appears in just-prior talk and is recycled to accomplish another action. In the next turn Mom and Dad both treat Shin's turn as repair initiation, but in subtly distinct ways. In line 13, Mom's *yes* seems to have a stand-alone finality to it—as if there is no need for further discussion—while Dad's *yeah* in line 14 has a slightly tentative quality that leaves open the possibility of further talk.

In line 15, Shin gives a brief receipt token and then repeats the focal language item once more, possibly as a form of receipt but also one that affords him a further opportunity to pronounce it and commit it to memory. Even though he does not seem to be initiating further clarification, Mom does provide a short acknowledgement and for her the sequence may potentially end there. Dad, however, seems to be preparing to extend the talk in lines 19 and 22, but before he does, Shin produces one relatively quiet turn (l. 21) that seems to be directed primarily toward himself. Almost under his breath (and while raising a piece of pizza to his mouth), he says, *I'm learning*. This is an important turn because not only does it acknowledge that he has noticed the new language item, it also provides evidence that he is monitoring his learning progress. We will return to this turn below.

At this point it is worth considering again that the noticing is not an internal, individual process, but an externally shared one. Shin's move to make the word *sliver* prominent prompted Mom and Dad to search for the significance of Shin's repetition of that particular word at that particular point in time. It is therefore not only Shin's noticing that matters, but also how the recipients treated his turn as a repair initiation through their interpretive actions. As one reviewer pointed out, when Shin reformulates *sliver* as *skinny* it is not just a psychological noticing that leads to "theory building" and then, "articulating that noticing", but more that he is checking the reference "is this what you mean?" and "what is being referred to," and this leads all three interactants to an occasion of teaching and learning.

Excerpt 4.3: Sliver: Dad Elaborates on the Focal Language Item

```
22 Dad    =the real term comes from u::h
23             (2.1)/((looks right then left-back))
```

```
24        |°like a°,
          |((touches chair))
```

```
25             (0.3)/((Dad establishes gaze with Shin))
26         piece of wood?
27 Shin    ((nodding)) m:::[n.n.n ((an uptake token))
28 Dad                     [a very |sma:ll piece of wood?
                                   |((gestures 'small'))
```

```
29 Shin                           |((mirrors Dad's gesture))
30 Shin    |m:↑n↓
           |((Dad does stabbing gesture))
31 Dad         |(    )
               |((pricking gesture))
32         it gets in| your, (.)
                     |((gesture: finger to hand))
```

```
33 Shin    ((nodding)) [|nYah. ]
                        |((thumbs up gesture))
```

```
34 Dad                 [Stuck.] Sliver. Yeah.
35             (2.2)/((Shin wipes mouth))
```

At a point where Shin has made a claim of understanding of the focal item, Dad chooses to use this as a teaching moment by expanding on the talk and providing a further usage of the new word in the form of a spoken definition (Markee 1994). He explains that sliver can also refer to a small, thin piece of wood.[2] Initially he exploits another environmentally available physical resource, the wooden chair on which he is sitting, to illustrate the phrase *piece of wood* (ll. 22–26). Although Shin gives an enthusiastic uptake of this additional information in the next-turn, Dad immediately overlaps Shin's acknowledgement to initiate a specification; since the side of the chair is fairly large (a diameter of more than 5 cm), it does not adequately fit the definition of *sliver*. In line 28 Dad uses his hands to qualify his description while reformulating the just-prior phrase *a piece of wood* to *a very sma:ll piece of wood*. Shin mirrors this gesture and gives an additional uptake token (l. 29–30).

Having conveyed the notion of sliver as a *small* piece of wood, Dad follows this up with an iconic gesture that further illustrates an important part of the meaning he is trying to convey—that the *very small piece of wood* is one that can get caught in your finger. He initially stabs the space between Shin and himself with his hand in a position that emulates holding something. He then formulates a turn that gets abandoned or at least is finished with a gesture rather than a word (see Olsher 2004 on embodied completion). The start of his turn specifies that the sliver *gets in your* and the gesture indicates that the absent object is *hand*. Shin once again indicates his understanding of this extra information and Dad repeats the focal item *sliver* once more (l. 34), along with the word *yeah*, which works to close down the sequence.

In sum, Dad has used an environmentally available physical object (the chair) to begin his explanation and refined it through embodied interactional practices, including gesture and improvised physical depiction. This explanation is the sort of account that we have seen follows episodes of noticing in Excerpts (1, 2 and 3), and in this instance it also takes on a teacher-like quality that highlights the participants' relative interactional identities (see Antaki and Widdicombe 1998), in that both Dad and Shin treat such teaching as situatedly normative.

However, recall that Dad's explanation also comes immediately after Shin has done a noticing of another kind—a noticing of his own learning in line 21. Since that noticing did not receive any specific uptake from the expert speakers, Shin then initiates a second version of it in the ongoing conversation in Excerpt (4.4).

[2] In other dialects of English, this would be known as a splinter.

Excerpt 4.4: Sliver

```
36 Shin   AA::::gh. (.) I'm learning.
37 Dad    yes you are.
38 Shin   HEh hah hah ha.
39            (0.5)
40 Mom    and don't forget a single thing.
41            (0.4)
42 Dad    [heh  ha  ]
43 Gran   [.heh .heh] .h-heh .heh
44 Shin   ha.
45            (12.4)
```

As a kind of coda, Shin repeats the turn that he produced earlier, but in a way that is more firmly on record. After a significant gap of silence in line 35 (Excerpt 4.3) in which the topic could have potentially ended, in line 36 he self-selects to let out a long and audible sigh that seems to indicate satisfaction rather than disappointment. This is followed by an articulated noticing concerning his own language progress, *I'm learning*. Notice this is exactly the same as the turn he produced in line 21 (Excerpt 4.2), except that it is produced more audibly and in a slot in which his audience is more available to listen—Dad has finished the explanation he was preparing and Mom has finished handing out the pizza. In line 21, even though the noticing was public, the participants seem to treat it primarily as private talk, with neither Mom nor Dad commenting on it. In contrast, this second version in line 36 receives a reaction from both of them. Dad produces a simple agreement in next turn and Mom acknowledges it as well in line 40, although in a very different way, mildly rebuking Shin in a playful manner.

It is worth considering what the act of publically noticing a change in one's own epistemic state is doing at this particular point of the conversation. Shin has already made it clear that he has learned the word as early as line 11, where he produced a change-of-state token (Heritage 1984). This constitutes his visceral reaction as he acknowledges the change from not-knowing to now-knowing (Schegloff 2007), and it is publically available to the other participants: they are aware that he has just learned the word. So in line 36 when he says *I'm learning*, Shin is doing more than just noticing, he is making that noticing relevant as a

means of extending the talk. It can be normatively understood by the others that further on-topic talk is a relevant next action at this point—although it is not a first pair part (Schegloff 2007), it would be difficult to let a comment like this go without any acknowledgement at all. Turns can be potentially interpreted as having multiple pragmatic actions. By noticing his own progress, Shin may, for example, be "fishing for a compliment", and indeed a compliment is one action that is missing from Mom and Dad's talk up until this point. *I'm learning* could even be interpreted as a form of self-congratulation, in the absence of a compliment from others around the table.

Whichever the case, Dad at least acknowledges and agrees with Shin in next turn (*Yes, you are*). Shin receipts this through laughter that may provide evidence to suggest that he hears Dad's turn as the sort of missing compliment he was looking for. Mom then formulates her response in a very different manner, with a joke-like warning not to *forget a single thing*. This is hearable as 'doing being a teacher', and thus acknowledges Shin's learning, but in a way that more explicitly indexes his identity as a relative language novice. Far from the compliment Shin may have been looking for, Mom takes this as an opportunity to playfully admonish him, and it is perhaps this sequential disjunct that occasions the next-turn laughter from Dad and Gran. Notice that Shin's laughter here is audibly later than the other two expert speakers and consists of just one brief pulse of laughter, which implies that he may not understand the joke.

In short this sequence shows us two ways of noticing a new vocabulary item, one a visceral interjection as soon as the noticing happens and the other a more thought-out formulation that can occur well after the appearance of the new word. In addition, we have seen how learning in the wild can be occasioned by the layered interplay between mundane talk, embodied interaction and physical objects that exist in the participants' immediate environment. The two slices of pizza, Mom's description of them and Dad's choice reformulated as the focal item *sliver*, as well as the embodied actions of pointing and passing the thinner slice, all serve as affordances for enabling Shin to learn a new vocabulary item. A textbook could just as easily, or perhaps even more efficiently have included this word and its gloss in a list of vocabulary, but arguably Shin's active engagement with the word in a real-life situation offers greater potential for learning the word and its uses. He puts forward

his own theory of its meaning, which is confirmed by the expert speakers and then occasions an expanded explanation. Although it may be difficult to argue that learning has taken place here, Dad's explanation is definitely a form of teaching, which suggests that Dad himself is orienting to Shin's noticing of the word sliver as an opportunity for learning.

3.2 Noticing Occasioned Through the Use of an Unrecognized Word

As demonstrated in the previous section, an orientation to learning can be occasioned by a novice speaker noticing a label being applied to something within the physical context, but this is also intricately linked to the interactional context. Interaction gives rise to words, turns and sequences that learners may notice and orient to through the practices of repair.

This section will explore a similar practice in a completely different setting. In the following extended sequence of mundane talk, which takes place in a hairdresser in Japan, we will examine how a Bolivian learner of Japanese orients to a lexical item as unknown, and then later how the Japanese interlocutors orient to it as recently learned. The L2 speaker of Japanese, Emil, is having his hair cut by Yoh and his assistant, Yumi. Although the data are largely in Japanese, these participants often communicate in an interactional medium I have called a dual-receptive language alternation (Greer 2013), such that Yumi and Yoh speak in Japanese and Emil responds in English, which is his second but stronger language.

At the point where we begin our analysis in Excerpt (5.1), Yoh is comparing the weather in Japan and Bolivia. The focus of our analysis will be on how Emil notices and later recognizes the Japanese word *shikke*, which means *moisture in the air* or *humidity*. As with our discussion of *sliver* in the previous section, we will divide the interaction into meaningful sections in order to facilitate its analysis, and in this case those sections are also divided naturally by the participants themselves, as they do other things then later return to their discussion of the target word.

Excerpt 5.1: Emil Notices a Word

```
01 Yoh      kion        wa (0.3) hikuku wa naranai   kedo,
            temperature TP       low     TP become-NG but
02          |(0.7)  ppari nihon wa (0.3) yuki ga,
             as expected japan TP        snow S
            |((gesture: fingers down, hands move down))
03          takusan furimasu  ne.
            a lot   falls-POL IP
            It doesn't get that cold, but Japan gets a lot of snow, right?
04 Emil     ah yes
05                (3.6)
06 Yoh      shikke   ga:, (0.2) shikke ga o:i des kara  ne.
            moisture S          moisture S much CP because IP
            The moisture- because it is so moist, right?
07 Emil→    |a- shikke?
            |((looks at Yoh, smiling))
08 Yoh      shikke  ga=
            moisture S
09 Emil     = |(shikke [na- nani)
                            what
                W-what's shikke?
              |((holds gaze at Yoh, smiling))
10 Yoh                 [sh(h)ikke wa ne: e::: >shitsudo.<
                          moisture TP IP  HM    humidity
                        Shikke is like umm, shitsudo.
11                (0.6)
12 Yoh      shi:tsu:do:=
            humidity
13 Yumi     =wo- n-|wa(h)ter    |johki
                                 steam
                  ((|hands even |raises RH |turns to Emil))
```

```
14 Yoh       ahahahaha a-  schi::mu
                       CS  steam
15                (0.4)
16 Yumi      a- |schi::mu=
                steam
               |((moves head to side))
17 Emil      =ah steam |yes ah ah: hih- humiditeh?=
                       |((fist clap))
18           =|no.
              |((Yumi's head remains to the side))
19                (1.0)
20 Yoh       humidity
21 Yumi      |so:iu koto  kana:=
              that  thing maybe
              I wonder if that's it.
             |((looks away, head to side))
22 Yoh       =>so:iu koto kana=chotto shirabete<
               that  thing maybe just find out
              I wonder if that's it. Go and look it up.
```

23 Yumi h[ahahah
24 Yoh [ss hahah
25 Yumi [|sh(h)irabe (t(h)oku)
find out in advance
I'll go find out.
|((walks off laughing))

26 Yoh ha| haha .hh
|((turns Emil's seat))
27 Yoh soredewa ichido (0.3) kochira de
okay once here-POL at
28 shampu: o shima:s
shampoo O do-POL
Okay, we'll just shampoo you over here.
29 Emil okay
30 Yoh ha::i
yes
Okay
31 ((Emil moves to the shampoo seat,
Yumi goes behind mirror))

In line 6, Yoh's discussion of the weather leads him to use the word *shikke* (which means 'damp air' or 'humidity' or 'moisture in the air'). He produces it twice in this turn, pausing after the first occasion and then incorporating the repeated version into the syntax of the ongoing sentence, a turn that is not particularly lexically or grammatically difficult. This may allow Emil to focus in on *shikke* as the only part of the sentence that he does not understand. Listening to it twice potentially affords him

the opportunity to be sure that he has heard the pronunciation correctly. In line 7 then, when Emil repeats the word *shikke* with upward intonation he is other-initiating repair, but at its most fundamental level he is also noticing or paying attention to this lexical item as something unrecognizable to him, and then goes on to do a second, more explicit, version of this by asking *What's shikke*? (l. 9). In Schmidt's terms he is doing a confirmation check (Lyster 1998).

In line 10, and in overlap with Emil's question, Yoh attempts to unpack the word by replacing it with a synonym, *shitsudo* (humidity), which is a more formal, slightly more scientific or bookish word that means roughly the same as *shikke*. However, Emil does not indicate any understanding of that word either (as evidenced by the 0.6 s gap in l. 11) and Yoh repeats his synonym with extended vowels, which suggests a display of thinking.

Yumi then self-selects in line 13 to proffer a related English word ('water') followed immediately by another Japanese word that might be considered within the same word family—(*johki*/'steam'). She accompanies her delivery with iconic gestures that help to convey a sense of the word, raising her hands into the air to suggest that the water has floated away as she self-repairs to the word steam, then looking back to Emil to monitor his reaction.[3] Although this still does not elicit a response of recognition from Emil, it does get one from Yoh and leads him to produce a phonetically Japanese version of the English equivalent (*schiimu*/'steam') in line 14. Although Yumi does not appear to consider steam the most appropriate translation (based on her non-committal intonation and embodied display of doubt in l. 16), the word does enable Emil to make a guess of his own that eventually turns out to be correct—the word *humiditeh* in line 17. Note, however, that this is not an English word that either Yoh or Yumi appears familiar with and this leads them to consult the dictionary. Immediately after he formulates *humiditeh* in line 17, Emil tags it with a negatively-valenced confirmation initiator *no?* which displays his orientation toward his guess as being potentially wrong. In a slot where a response is sequentially due, Yumi does not provide any uptake to confirm or reject Emil's candidate repair, and her head remains cocked to the side, suggesting she does not recognize this English word. In line 20, Yoh repeats the word humidity and in line 21 Yumi makes her display of non-understanding more concrete by verbalizing the message her physical

[3] Due to the camera angle, the screenshots in this transcript are largely taken from reflections in the mirror, so when Yumi is looking forward in the third figure in line 13, she is actually establishing mutual gaze with Emil via the mirror, a practice that I have explored in greater detail in Greer (2013).

Fig. 1 Emil and Yoh are at the shampoo chair. Yumi is standing some distance away behind the mirror after having just looked up the word on her laptop

stance has been projecting, saying *I wonder if that is it* while looking away. In short, the conversation has reached an impasse with neither party able to confirm the link between the two words in their preferred language. The problem is temporarily set aside by Yoh in line 22, when he perfunctorily admits that he also does not know the English word. He repeats Yumi's just-prior turn then quickly directs her to look it up in the dictionary, a move that suspends the sequence so that he can direct Emil to the shampoo sink. It is worth noting, therefore, that all participants are not always equally invested in resolving trouble in any given instance of interaction. Yoh has multiple involvements in this talk (Raymond and Lerner 2014) and arguably he is first and foremost committed to cutting Emil's hair rather than the small talk that goes on while he is doing that, whereas Yumi, who is not directly taking part in the haircut, is free to carry out the interaction with Emil. Their laughter in lines 23–26 attests to the relatively abrupt ending of this sequence, and Yumi goes to another room to look up the word *shitsudo* in an online dictionary and Yoh and Emil move to the shampoo chair for a period of time.

Throughout this sequence the participants have used a variety of means to explain the target word, including same-language synonyms, other-language equivalents and mimed approximations. However they also seem to be orienting to the problem as one entirely consisting of finding an equivalent lexical item—they make no effort to try to explain the word in a Japanese sentence, but instead simply give one-word answers. This may be a strategy that orients to Emil's limited level of Japanese as well as Yumi and Yoh's limited level of English.

The talk shown in Excerpt (5.2) takes place about 1 min later, when Emil's shampoo is just about to start and Yumi has finished looking up the word *shitsudo* in an online dictionary and is able to confirm to Emil that it does indeed mean humidity. As shown in Fig. 1, she is approximately 5 m away from Emil at this point.

Excerpt 5.2: Yumi Confirms the Meaning in English

01 Emil then if I get (.) tired? (0.4)
02 Yoh ah:hn
03 Emil >I go home.<
04 Yoh h'h hah hah
05 chotto tsukareta n da ne
a little exhausted N CP IP
You get a little tired.
06 Emil °yes°
07 (10.2)/((Yoh runs the water))
08 Yumi |sakki no wa:
before N TP
That thing we were talking about before?
|((Yumi pokes head out from behind mirror))
09 (1.2)/((Emil looks to Yumi))
10 Yumi etto: shitsudo?
HM humidity
Um, shitsudo?
11 Yoh |shitsudo
|((looks back to Yumi))
12 Yumi e- |one more
|((beckons from Emil to self))
13 Emil ah- humidity?=
14 Yumi =aah- |s- [so- so:.
CS th- that that
Yes yes yes. That's it.
|((nodding))
15 Emil [ah- (real-)
16 Yoh ha[hahaha
17 Yumi [shikke
18 Emil |(s)hitsudo
|((smiling))
19 Yoh sh(h)itsu[do heh
20 Yumi [heh shitsudo
21 Yoh ha[hahahaha
22 Yumi [hehehh
23 Yoh taoshima:su
put down-POL
I'll just let your seat down.
24 ((seat moves))
25 ((water runs, Yoh shampoos Emil's hair))
26 ((Yumi cleans the floor, conversation lapses))

Since there has been a significant change in the physical and interactional participant constellation in the minute or so since the previous excerpt, Yumi's first task is to renegotiate the participant framework so that she can re-enter the talk. She waits until a lapse in the talk between Yoh and Emil at line 7, then restarts the prior talk by marking it as such in line 8 with an upward-intoned incomplete TCU and waiting for Emil to acknowledge it. She then continues in line 10 by offering the Japanese word she has just searched for in the dictionary. In line 11 Yoh repeats this and shifts his gaze to Yumi, demonstrating that he is also aligning himself as a relevant recipient to whatever telling Yumi is projecting. Rather than attempting to pronounce the word humidity, however, in line 12 Yumi uses gestures and a simple English phrase to ask Emil to repeat the English word he said earlier, which he does in line 13 leading Yumi to then confirm that this is the word that she has found online. During the subsequent laughter, Yumi also produces the original trouble source *shikke* (l. 17) as well as multiple instances of the synonym *shitsudo*, indicating that she has looked up both of them and found that *humidity* is an adequate English equivalent for either. The sequence ends in line 23 as Yoh re-orients to his primary task of shampooing Emil's hair, but this brief exchange demonstrates that both parties have undergone a change in their lexical understanding and that Emil now has at least passive knowledge of noticed word *shikke* and the lexical equivalent that it occasioned.

Finally, in Excerpt (5.3), we will consider a reoccurrence of this focal item, which takes place about 14 min later. Here the original word *shikke* again appears in a separate part of the conversation and Yoh marks it as a newly acquired word for Emil. By this time Emil and Yoh are back in the styling chair and have been comparing the two cities of Kobe and Kyoto.

Excerpt 5.3: Yoh Flags the Target Word as Just Learned

```
01 Emil      demo (0.8) if- (0.9) for (.) living?
             but
02           (0.9) I think kobe is (.) °better°
03                 (0.6)
04 Yoh       a:::h (.) so:h des ne.
             CoS       that CP  IP
             Yes, it is, isn't it?
05 Emil      yes
06 Yoh       ha:i kyo:to (0.3) heh hah
             yes
07 Emil      kyoto is (0.6)
08 Yoh    →  heheh (1.4) kyoto wa: (0.5)
                         Kyoto TP
09           sakki  no hanashi des kedo,
             before LK talk    CP  but
10 Emil      n[:
             RT
             yeah
11 Yoh        [shikke  des ne.
               moisture CP IP
             With Kyoto, getting back to what we were saying before,
             it's the shikke (moisture in the air).
12                 (0.6)
13 Emil   →  a:h |yes °sh[ikke]°
                 |((smiling))
14 Yoh                   [ha:i]
                           yes
15                 (0.5)
16 Yoh       totemo ooi  des hehe[hehehe
             very   much CP
             There's so much of it.
17 Yumi                          [heheheh
18                 (0.4)
19 Yoh       $totemo ooi  des yo:$
              very   much CP  IP
             There's so much of it!
20           (6.5)
```

In line 8, Yoh produces a sentence that is essentially the same as the one that originally caused the trouble for Emil: *Kyoto wa shikke ga totemo ooi des* (Kyoto has quite a lot of humidity). Recall that the turn that contained the original trouble source in Excerpt (5.1) was (*nihon wa*) *shikke ga oi des kara* (because Japan has a lot of humidity). The subject is different, but apart from an intensifier and a causal connective, the formulation is basically the same. However, notice that in line 9 Yoh inserts a parenthetical segment into the turn-in-progress (*sakki no hanashi des kedo*/'as we said earlier'), which receives uptake from Emil in line 10. This serves to flag Yoh's production of the target word *shikke* in next turn (l. 11), and this re-indexing of the item as "just learnt" is in itself a form of expert speaker-initiated noticing (see Eskildsen this volume). Emil gives an uptake token in line 13 and repeats the newly acquired word, indicating that he now recognizes the word and has perhaps learned it, at least in the short term. This allows Yoh to complete his turn-in-progress in line 16, but also shows their joint-orientation to the earlier sequences in which they arrived at mutual understanding through a prolonged process of interactional repair. This flagging then is also a sort of noticing, this time by Yoh, who notices that the word he is about to use is one that is new to Emil, and therefore may need extra time to process. As Brouwer and Wagner (2004) have shown, such cross-episodic comparisons of language use can prove beneficial in demonstrating development of interaction over time.

4 Concluding Discussion

Language learning is situated and attentionally gated (The Douglas Fir Group 2016), meaning that it takes place in a given sequential and social context and it is predicated on the learner noticing new language forms. This study has examined instances of mundane L2 talk in which the participants orient to language learning via the interactional practices of noticing. Such sequences are initiated when one speaker pays attention to an instance of language use, whether it is present in the just-prior talk or via some form of environmentally available target word. The learner's noticing typically involves a repetition of the target lexical item which topicalizes it for the other participants. This can lead to further talk of the sort that is regularly seen in language classrooms, including explanations, alternative formulations and intersubjective repair (see Waring et al. 2013). The multi-modal analysis has examined the layered manner in which a variety of elements such as intonation, gaze, gesture, language choice, proxemics and physical artifacts co-occur with the talk to accomplish the noticing as an orientation to language learning. Epistemic asymmetries were temporally resolved, enabling novice learners to gain access to the lexical resources they require and locally ascribing the expert speaker with teacher-like qualities.

In the first instance, we witnessed how the novice language speaker noticed an unfamiliar word being applied to a particular object (a piece of pizza) and was able to infer the relevance of its distinguishing feature (its thinness) to the descriptor that was used. His articulated noticing made public his personal hypothesis about its meaning and led to further explanations of other usages of the same word that were delivered in relation to the sequential and physical environment. This suggests some of the ways in which language learning in the wild might differ from that in the classroom, where opportunities to make inferences about incidental language use in relation to descriptions of environmental objects can be limited or at best, artificial. It is worth recalling that both the expert and the novice treated the novice user's noticing as an opportunity for language learning, implicitly (the expert) by responding with teacher-like explanations and explicitly (the novice) by saying *I'm learning* (Excerpt 4.2, l. 21 and Excerpt 4.3, l. 36).

In the second episode the noticing was also occasioned by the expert speaker's use of a word that was unknown to the novice, but in this case it was not linked to any environmentally available object. As in the first case, the articulation of noticing was treated as an initiation of repair, and the expert speakers used a range of linguistic and non-verbal resources to enact repair. In addition to gestures, gaze and same-medium explanations through the use of Japanese synonyms, they also took advantage of known English words and eventually confirmed the meaning via the use of an online dictionary. This suggests that the original noticing leads to language exchange, not just one-sided teaching—Yumi and Yoh learned the word *humidity* while teaching Emil *shikke* and *shitsudo*—a situation derived from the multilingual competences they used to address the interactional trouble. Moreover, this language exchange later led one of the speakers to interactionally flag the word as newly learned when it appeared in subsequent conversation.

Finally, the analysis has shown that articulated noticing is an integral element of socially-distributed cognition, suggesting that a good deal of what goes on when we think, hypothesize and learn takes place outside the mind and within the process of interaction. Even though the noticing itself may have been initiated by one of the parties, once articulated publically it results in joint attention and is co-constructively resolved.

Appendix: Transcript Conventions

The talk has been transcribed with standard Jeffersonian conventions (Jefferson 2004a). Japanese talk has been translated based on the three-tier system used by Greer, Ishida and Tateyama (2017):

First tier: `original talk` (plain text in Courier)
Second tier: *`gloss translation`* (Courier italics)
Third tier: *prose rendering* (Times New Roman italics)

Embodied elements of the interaction are noted in gray font and the onset of the action is indicated in the talk via a vertical bar. Where the physical action does not coincide with talk, the silence is timed and appears on the same line as the description, separated by a forward slash. Abbreviations used for Japanese morphemes in the word-by-word gloss tier are as follows:

CP copula (e.g., *da, desu*)
H hesitation marker (e.g., *e::, ano*)
IP interactional particle (e.g., *ne*, *sa*, *no, yo, na*)
LK linking particle (*no*)
N nominalizer (*no, n*)
O object marker (*o*)
Q question marker (*ka* and its variants)
S subject marker (*ga*)
TP topic marker (*wa*)
CS change of state token (*ah*)
RT receipt token
NG negative (−*nai*)
POL polite form

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Part III
Designing Infrastructures for Learning in the Wild: Bridges Between Classroom and Real-Life Social Activities

How Wild Can It Get? Managing Language Learning Tasks in Real Life Service Encounters

Arja Piirainen-Marsh and Niina Lilja

Abstract This chapter explores how experientially based pedagogical activities that involve participation in real life service encounters provide occasions for developing L2 interactional competence. The data comprises novice L2 students' self-recorded interactions in service settings and videorecordings of classroom planning activities and de-briefing discussions, where the students reflect on their experiences. The analysis traces what kinds of occasions for learning arise as the students move between the classroom and the real-world service settings. The findings show that the different phases of the task complement each other in supporting the development of interactional competence. The preparation phase enables students to plan initiating actions, but does not prepare them for contingencies of interaction in the wild. When carrying out the task in real world circumstances, occasions for learning can arise as students adapt to the interactional contingencies of the encounter and put their repertoire to use in interaction with others in the full ecology of the activity. Retrospective discussions enable detailed analysis of experiences as well as focused learning activity, whereby the participants develop an experientially based understanding of the interactional tasks, language practices, actions, organization and communicative norms pertaining to the social activity.

Keywords Task · Service encounters · Learning project · Action · Interactional practices · Contingencies

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1 Introduction

This chapter explores second language learners' situated practices of carrying out teacher-assigned learning tasks that aim to connect classroom learning to everyday social interactions outside the classroom. Previous studies clearly show that the learning potentials of pedagogic tasks arise from the way that the participants interpret the task, exploit it for their current needs and purposes, and manage its accomplishment with others (e.g. Mori 2002; Kasper 2004; Hellermann 2008; Hellermann and Pekarek Doehler 2010). In this chapter, we discuss the interactional accomplishment and learning potential of tasks based on L2 learners' language use experiences outside the classroom. More specifically, we analyze how the trajectory of a teacher-assigned task – including the preparation and debriefing phases in the classroom - creates occasions for developing interactional competence through adaptation, practice and analysis of language practices embedded in their social and material ecologies.

A growing number of CA-inspired studies of L2 interaction in the wild describe how language learning is grounded in the methods through which participants interactively accomplish social actions in different settings (Firth and Wagner 2007; Pekarek Doehler 2010; Lee and Hellermann 2014; Wagner 2015). To competently manage social activities, participants must collectively organize their actions through configurations of interactional methods related for instance to turn-taking and action sequences, and be able to fit their actions to the local contingencies and material ecologies of interaction (e.g. Nguyen 2016; Kurhila and Kotilainen 2017). Against this backdrop, the target of L2 learning is best captured in the notion of interactional competence, i.e. the ability to configure one's linguistic and other semiotic resources in and for accomplishing action, and the ability to coordinate social interaction in a context-sensitive way (Hall et al. 2011; Pekarek Doehler and Pochon-Berger 2015). The development of such competence-for-action poses a challenge for language teaching: how can teaching best support the development of L2 learners' repertoire of methods for context-sensitive interactional conduct and thus enable them to gain better access to membership in the community in which they interact? In this chapter, we explore the potential of everyday tasks integrated into the curriculum of L2 courses for novice and intermediate learners.

As previous studies show, mundane interactions can be co-constructed as learning environments: L2 speakers initiate and sustain learning activity by actively focusing on linguistic and interactional practices as objects of learning (Theodórsdóttir 2011a, b; Eskildsen and Theodórsdóttir 2017; Kasper and Burch 2016). Recently, this research perspective has started to make an impact on language pedagogy. Departing from traditional task-based approaches in which tasks are defined in terms of what learners do in class, experientially-based pedagogical initiatives have developed social infrastructures for learning, for instance by making arrangements with local businesses, recruiting members of the community to act as "language coaches"

and designing tangible materials that can be used to facilitate learners' participation in interaction (see e.g. Clark and Lindemalm 2011; Thorne 2013; Wagner 2015).

This study analyses interactions that were collected during one such initiative, launched with the aim of developing instructional practices in courses of conversational Finnish intended for learners at beginning or intermediate levels of proficiency. The courses were designed to give priority to learners' language use experiences outside the classroom. The aim was to help students recognize the potentials of everyday interactions for language learning and offer new opportunities for putting their interactional repertoires to use in natural settings. To this end, tasks designed around authentic service encounters were integrated in the course curriculum. Drawing on students' self-recorded interactions in service settings as well as preparatory and debriefing discussions in the classroom, this chapter investigates how the teacher-assigned task is interpreted by different participants, how it is interactionally managed in actual encounters with service providers, and what kinds of occasions the task creates for learning-in-action as the participants move from the classroom to real life service settings and back again. In investigating these questions, we pay close attention to the way that the different social and material settings feature in task accomplishment.

The analysis demonstrates that while the participants interpret the task in different ways, occasions for learning arise at different phases of the task. Collectively, the analyses of interactions at different phases of the task illustrate how opportunities for interaction-based language practice, analysis and reflection of one's L2 use experiences complement each other and can support the development of interactional competence.

2 Task Accomplishment as an Interactional Process

Tasks that are designed to prepare learners for real-life interaction through purposeful and meaningful language use have long been at the center of language pedagogy. A whole program of research has evolved to investigate the relationship between pedagogical tasks, task performance and language learning (Skehan 2003; Bygate et al. 2001; Samuda and Bygate 2008; Gonzales Lloret and Ortega 2014; Bygate 2015). While quasi-experimental studies have mainly investigated the relationship between task types, their implementation and performance by measuring learning outcomes (e.g. Crookes 1989; Foster and Skehan 1996), another line of research draws attention to the differences between tasks as 'workplans' (Breen 1989; Ellis 2003) and the learners' interpretation and performance of the task (e.g. Coughlan and Duff 1994; Ohta 2001).

This study is concerned with the situated and multifaceted nature of tasks and the processes through which the different stages of tasks are collaboratively achieved. Conversation analytic studies demonstrate that task preparation and accomplish-

ment involve complex, contingent interactional processes (e.g. Mori 2002; Kasper 2004; Seedhouse 2005; Mondada and Pekarek Doehler 2004; Hellermann and Pekarek Doehler 2010, see also Hellermann 2008; Markee and Kunitz 2013). Mori (2002), for example, analyzes how L2 learners of Japanese and their co-participants accomplish a group task: planning and conducting a 'discussion meeting' with invited native speakers. Her analysis reveals that in spite of the goal of fostering information flow and balanced participation, the task generated interaction similar to structured interviews. Hellermann and Pekarek Doehler's (2010) analysis of task interactions in small groups describes not only how the same task is performed in different ways by different participants, but also how different kinds of learning potentials may emerge even when the participants are performing the same or similar tasks. Thus the way that students perform teacher-assigned tasks and learn from them cannot be predicted as the contingent development of talk cannot be planned (see also Mori 2002). In fact, planning itself is a complex collaborative activity and achievement that involves coordination of diverse linguistic and embodied resources (Markee and Kunitz 2013; Kunitz and Skogmyr Marian 2017; Lee and Burch 2017).

Conversation analytic studies have been mainly concerned with documenting the practices through which tasks commonly used in task-based language teaching are planned and configured in the classroom. However, recently empirical investigations have extended to new kinds of settings involving the use of digital technologies. Chapters in Seedhouse (2017), for example, describe real-life cooking tasks in a "Digital kitchen", i.e. a kitchen adapted for language learning purposes using digital technology, as learning environments. Kurhila and Kotilainen (2017) show how the underlying authentic goal of preparing a meal motivates the participants' actions and creates opportunities for learning as the students actively use the available interactional and technological resources to resolve linguistic problems. So far only a handful of studies have examined how language learning tasks are configured in physical settings outside the classroom. Thorne et al. (2015) and Hellermann et al. (2017) analyze how small groups of English language learners accomplish game-like tasks using mobile digital technology (GPS-enabled iPhones) (see also Hellermann et al. this volume). These studies shed new light on the role of the digital resources and the physical environment in the accomplishment of the activity.

The development of L2 interactional competences involves adjusting interactional practices to perform actions in order to build social activity while responding to the local contingencies of situations of language use. The use of interactional practices in performing the task is also influenced by the complex contextual web of each setting (Nguyen 2016). For a better understanding of the ways in which the contextual specifics and interactional contingencies of tasks feature in L2 use and development, more research on L2 learners' participation in real life tasks in different situations, spaces and physical environments is needed. This chapter explores the potentials and occasions for learning that emerge as different groups of partici-

pants engage in the turn-by-turn accomplishment of teacher-assigned tasks that centered on the L2 speakers' participation in real life encounters in everyday business settings. Tracing the students' interactions across settings enables close analysis of how they interpret the task instructions and how they draw on and modify their repertoire of linguistic and interactional resources in the social and material ecologies of interaction in the classroom and in the wild. The analysis illustrates how the students' interactions in the wild and the classroom are interconnected and build on each other, contributing to a trajectory that supports the development of interactional competence.

3 Data

The data for this study was collected during three university courses of Finnish as L2 that aimed to support the development of novice learners' interactional repertoires by using real-life tasks. The participants were young adults with beginning and intermediate level of proficiency in Finnish. At the beginning of each course, the students' needs and experiences of the L2 community were discussed in the classroom using a mapping activity (Clark and Lindemalm 2011; Wagner 2015). After this the teachers and the researchers collaborated in planning out-of-classroom tasks that involved participating in service encounters in a local network of businesses[1] and videorecording the interactions. The service providers had given their consent for the recordings. Service encounters were chosen as the focal activity type because they were seen to offer novice learners opportunities for interaction that have real social and material outcomes for the participants. Although often routinized and structurally predictable (see e.g. Hasan 1985), service encounters are interactively accomplished (see e.g. Kidwell 2000) and involve challenges for L2 speakers (see e.g. Shively 2011). Service encounters typically involve script-relevant knowledge and understandings (Edwards 1994, 1997, cf. Schank and Abelson 1977), i.e. knowledge based on participants' expectations about typical event sequences, including actions, vocabulary and embodied conduct. Thus the participants could be expected to draw on their prior experience of service encounters in order to understand each other and to plan and carry out the relevant tasks. As the analysis will show, students also draw on such experientially-based knowledge and understandings in organizing their interactions at different phases of the task. The pedagogical framework for the task involved three steps: in the pre-task phase, the

[1] The network of service providers included cafés at the University, a paper shop, a restaurant, a bicycle repair shop, hairdressers and a tourist information office. The idea for creating the network was based on earlier pedagogical initiatives, in particular *Språkskap* in Sweden (Clark and Lindemalm 2011) and *The Icelandic Village* hosted by the University of Iceland (Wagner 2015).

students prepared for the interactions 'in the wild' by discussing patterns of language use in service encounters and planning how to go about the task. Next, the students participated in the service interactions in pairs and videorecorded them with their own mobile devices. Third, back in the classroom, the students watched the videos and discussed their experiences in small groups.

The data for this study is drawn from a collection of 41 service encounters recorded by students and altogether approximately 21 h of group discussions conducted in the classroom. The task assigned by the teacher instructed the students to extend ordinary service encounters by asking one or two questions in addition to conducting their business. The analysis focuses on the detailed ways in which the L2 speakers initiate and manage the task in specific situations; in particular how they adapt their interactional repertoires and respond to the dynamic contingencies of the interaction.

The data has been transcribed according to the conventions for transcribing multimodal interaction developed by Mondada (2012, 2014). The embodied conduct of the speaker is described in the line below the translation line in italics. Different symbols indicate the timing and duration of a participant's bodily or material actions.

In the following, we analyze interactions by four different participants at different stages of the task. We trace the participants' situated practices as they prepare for the service encounters and discuss them retrospectively in the classroom. The excerpts presented below illustrate the diversity of situations encountered by the students and the contingent ways in which occasions for learning arise and are acted on through the trajectory of the task.

4 Analysis

Among the challenges that the students faced in planning and carrying out the task was the need to work out how to conduct the learning task while attending to the real world business in the service encounter. In the preparation phase the students discussed the content and linguistic aspects of the questions they wanted to ask and also rehearsed them. However, conducting a task in a context-sensitive way also involves consideration of the overall structural organization of the encounter and the material ecology of the setting (see also Nguyen 2012, 2016). Thus asking questions – even in such routinized and often highly constrained interactions as service encounters – involves multiple challenges for L2 speakers. In addition to choosing

appropriate vocabulary and morphosyntax to formulate a turn that is recognizable as a question, the L2 speaker has to adjust these in such a way that the turn fits the real world circumstances of the encounter and the sequential organization of the encounter where verbal and bodily actions intertwine. Meaningful questions also need to show consideration for the relevant categorical identities – customer and service provider – and their relative epistemic status (Heritage 2012: 7). This involves considering what participants know about the specific situation, or what can be inferred on the basis of general knowledge (Stivers 2011), as well as adapting to the contextual contingencies.

In the analysis to follow, we show how the task was interpreted and carried out by different students and how the different phases of the pedagogical task provide different affordances for learning. Excerpt 1 shows a case in which the actual service encounter is carried out in a pre-planned manner. The retrospective peer-discussion in the classroom, however, makes it relevant to revisit and clarify some of the linguistic constructions used in the situation, which motivates learning-relevant activity. Excerpts 3, 4, and 5 exemplify how a student pursues a personal learning project that is oriented to throughout all the phases of the pedagogical task. This project deals with a grammatical issue (comparative forms of adjectives) that is practiced, repaired and repeated many times during the task. The consequentiality of real life interactions is exemplified in Excerpts 6, 7, 8, 9, and 10. In these cases the students experience trouble and face unforeseen interactional needs arising from the contingencies of the interaction. This leads to elaborate discussions back in the classroom, in which the students identify and analyze both the service provider's and their own interactional conduct in detail in an attempt to make sense of and account for their experiences.

4.1 From Preplanned Interactional Conduct to Learning Activity

Excerpt 1 illustrates how the task is carried out in a preplanned way, resulting in an interview-like situation (cf. Mori 2002): the interaction unfolds through question-answer sequences. Here Ella is visiting a university shop. She asks two questions that she had planned in the classroom (Fig. a).

Excerpt 1[2]: Ella in the University Shop

```
01 Ell:    ja m(h)oi eh he
           and h(h)i eh he

02 Cle:    +mo:i
            hi
           +smiles, nods

03 Ell:    eh minulla on kysymys:
           eh I have a question

04 Cle:    +jo[o
            yes
           +nods

05 Ell:       [*aa: mitä te *myyt?
               aa: what do you sell
               *smiles      *moves head forward towards clerk

06         (.)

07 Cle:    meillä on myynnissä kirjoja,
           we sell books

08 Ell:    joo
           yes

09         (.)

10 Cle:    kyniä, *(.) opiskelutarvikkeita, *(.)
           pens        study materials
   Ell:           *nods                     *nods

11         postikortteja, *(.) postimerkkejä, *(.)
           post cards          stamps
   Ell:                   *nods               *nods

12         yliopistotuotteita, *(.) ja sittel lahjatarvikkeita
           university products      and then gift products
   Ell:                        *nods, smiles

13 Ell:    *joo-o hyvä.
            yeah good
           *nods twice

14         (.)
```

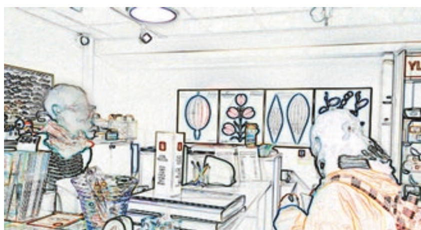

Fig. 1

[2] The starting and ending points of Ella's embodied conduct in Excerpts 1 and 2 are indicated by the sign ∗. The embodied conduct of the co-participants (the clerk in Excerpt 1 and Alan in Excerpt 2) is indicated by the sign +.

```
15 Ell:   *eh mikä on, *(.) (ek ih) *(.) mikä on suosittu matka:
           eh what is                   what is a popular souve:
          *points upwards with LF index finger
                       *turns head right towards paper in right hand (fig.1)
                                    *turns gaze back to clerk

16        *(0.4) (egh) eh (.) mikä on suosittu *matkamuisto?
                              what is a popular souvenir
          *turns gaze towards paper            *gaze back to clerk

17        (.)

18 Cle:   aika moni tykkää ostaa näitä <edullisia tuotteita>.
          quite many (customers) like to buy these inexpensive products
```

Ella opens the interaction with a greeting ‘ja moi’ (‘and hi’), which is produced with laughter. After the greeting sequence, she initiates a pre-sequence (ll. 3–4) which establishes an interactional space for asking the questions she has prepared in class. This sets up an interview-like participation framework, where Ella adopts the role of interviewer and the clerk is positioned as interviewee. The clerk’s alignment with this arrangement is seen in her response (the particle ‘joo’ accompanied with nodding, l. 4). Ella’s turn in line 5 is recognizable as a question: it makes relevant the service provider’s epistemic status and addresses items on sale in the shop. However, it does not show consideration for what Ella herself as the customer can be expected to know on the basis of prior experience of book shop encounters and also on the basis of what is visibly available in the material surround. This clearly departs from a routine service encounter in a shop. The clerk answers Ella’s question through a list-construction naming items that are for sale (ll. 7, 10–12). Ella co-participates through verbal and embodied recipient activity: a continuer (l. 8), nodding (ll. 11–12) and smiling (l. 12). When the clerk reaches completion of her extended turn (l. 12), Ella produces a sequence-closing evaluative response that does not acknowledge the possible newsworthiness of the clerk’s answer. Instead, it resembles a teacher’s third turn in a teacher-initiated IRE sequence.

After this Ella initiates another question-answer sequence by asking about popular souvenirs (ll. 15–16). Before verbally formulating her question she directs her gaze away from the clerk, projects continuation of her turn with a pointing gesture (Mondada 2007) and then visibly orients to a piece of paper with her notes, while also displaying trouble through speech perturbations and embodied activity. She then shifts her gaze and attempts to formulate the question she has prepared (l. 15), but has trouble remembering the lexical item for souvenir. At this point she turns her attention to the piece of paper once again and having checked the lexical item, manages to produce the question in its grammatically appropriate form (l. 16). Overall the interaction shows Ella’s orientation to the task as language practice: recalling and reproducing the lexical items for formulating the questions that she had planned beforehand. Her conduct shows limited ability to adjust to the real-world circumstances of the service encounter. Yet with the support of her notes, she is able to perform recognizable questions and solicit answers from her co-participant.

The following retrospective reporting of this interaction in the classroom creates an occasion for further practice via language-focused activity (Kasper and Burch

2016) initiated by another student. Alan draws attention to one of the questions that Ella is reporting. This opens up a possibility for Ella to show her linguistic expertise.

Excerpt 2: Ella Reporting in the Classroom

```
10 Ell:    *öö me: kysymme: *(0.4)
                   we ask (0.4)
           *points towards the paper on the table with LH index finger
                             *touches the paper with LH index finger

11         ää mitä te: (.) myyt, (.)
           what do you (.) sell


12        *ja (.) mikä on: (.)
           and (.) what is (.)
          *moves hands away from table to lap

13        *>mikä on< (.) <suosittu> (.) matka +(.) muisto? (.)
           what is  (.)  a popular  (.) souvenir
          *handles the papers on the table
    Ala:                                         +points to paper

14        [ja:
           and

15 Ala:   [+*m- m- mikä on suosittu
                   what is popular
           +moves RH on the paper and points to it -->
   Ell:     *points towards the paper with LH index finger above the paper -->

16         (.)

17 Ell:    suo- [suosit[tu
           po-  popular

18 Ala:         [ma-   [matu- (.)
                so-     souveno-

19 Ell:   mat(u)[ka]muisto eh heh*
             souvenir       eh heh
                          Ell--> *
20 Ala:          [ka]

21 Ala:   [ta- matukamuisto+
           so- souvenir
                    Ala--->+

22 Ell:    [°eh heh heh° joo heheh
           °eh heh heh° yeah heheh

23 Ala:    +mi- mi- mitä mitä se on *suosittu
                     what what is it popular
           +moves hand away from above the paper
   Ell:                              *points towards the paper with LF index


24 Ell:    ee: (.) suosittu om *>popu+lar<
                   popular is   'popular'
                             * turns gaze towards Alan
   Ala:                            +gaze towards Ella

25         (.)
```

```
26 Ala:    [+>sorry<
            +leans to Ella; gaze down to paper

27 Ell:    [popu-  >popular< (0.4) popular

28 Ala:    popular (.) [+joo.
           popular (.) yea
                        +nods

29 Ell:                [joo
                        yea

30         (.)

31 Ell:    *ja a- matokamuisto (.) on (.) sou*venir +(.) >souvenir<
            and a souvenir  (.)    is  (.)'souvenir' (.)'souvenir'
           *points towards the paper        *gaze toward Alan
   Ala:                                                +gaze towards Ella

32 Ala:    som:

33 Ell:    sou[venir]

34 Ala:       [so-so] souvenir?

35 Ell:    >joo joo joo >>joo jo<<
            yeah yeah yeah yeah yea-

36         (.) ((BOTH TURN GAZE BACK TO PAPER))
```

In telling about her interaction, Ella again draws on her notes. She places the notes between herself and Alan on the desk, points towards the papers and even touches them as she starts to report the questions she asked in the shop (l. 10). Both participants then orient to the notes through their gaze and body and further pointing gestures. When Ella reports the second question, Alan points at the notes (l. 13) and then partially repeats the question (l. 15). This initiates a joint reading activity (Hellermann et al. 2017): Ella also points towards the paper and repeats the adjective *popular* (l. 17), while Alan continues by attempting to reproduce the word *souvenir* (l. 18, see also ll. 20, 21). Alan seems to orient to the whole noun phrase as a trouble source. However, Ella's response – a repetition of the noun (l. 19) – addresses the problem as one of word recognition. Ella's pronunciation departs from the standard, but she does not show any orientation to a linguistic problem. Next Alan repeats the noun in the same form (l. 21), while Ella laughs and accepts the word ('joo'; l. 22)

In line 23 Alan initiates a new sequence requesting clarification of the meaning of the adjective and Ella responds by offering an English translation ('popular', l. 24). However, her pronunciation causes trouble for Alan, who initiates repair in English (l. 26). After further repetition by Ella (l. 27), Alan recognizes the word and accepts it (l. 28). In line 31 Ella continues the activity by clarifying the meaning of the noun, again by translating it into English. She also repeats the word twice to ensure that it is recognizable for Alan. Alan then produces a try-marked repetition (l. 34), which Ella accepts with repeated affirmative tokens (l. 35).

During this language-focused sequence Alan orients to Ella as the knowing participant. This opens up an opportunity for Ella to show her linguistic expertise on the vocabulary items that she has used during the interaction in the shop and to share this expertise with Alan. Importantly, however, it is her partner, who initiates the language-focused activity. Alan's active participation shows his orientation to learning the relevant vocabulary and enables Ella to adopt a position of epistemic authority. In addition, the written notes compiled during the preparation phase provide crucial material resources that support participation both in the service encounter and the retrospective discussion. The fact that the relevant linguistic information is distributed among the material and human resources in the situation enables the participants to initiate and sustain a focus on lexico-grammatical practices for interaction. These excerpts illustrate that interactions outside the classroom provide occasions for practicing linguistic resources for interactional conduct and may engender future learning activity.

4.2 Pursuing a Learning Project

The following excerpts illustrate how the participants draw on embodied conduct, the physical environment and experientially based knowledge when rehearsing their planned interaction, and how they adjust their conduct to the real-life circumstances of the service encounter. In addition, Excerpts 3, 4, and 5 illustrate how a learning project is constructed and sustained as the participants move from the classroom to a real-life service setting and back to the classroom. The notion of project comes from Levinson (2013: 122), who uses it to describe a plan of action that at least one participant is pursuing in interaction. In Excerpts 3, 4, and 5 the project becomes visible in the practices through which the participants orient to morphological features in Finnish when practicing, acting out and retrospectively discussing the interactional task of asking an information-seeking question in a university café.

Finnish is an inflectional language and learners have been shown to orient to the difficulty of finding accurate inflectional elements in their repair practices, in particular word-search sequences (see Kurhila 2006). The focal student in the next excerpt, Alan, shows a similar orientation through sustaining focus on inflectional forms of adjectives while planning and formulating a question at different phases of the task. Excerpt 3 comes from the pre-task phase in the classroom, where Alan is rehearsing his planned interaction in a café with Mike. In line 1 Alan practices a question he intends to ask in a café he plans to visit: are the two coffees available equally strong. Formulating the question makes relevant knowledge of the inflection of the adjective 'vahva', in this case the plural partitive case 'vahvoja'. In the excerpt to follow, also the comparative form ('vahvempi', stronger) becomes relevant[3].

[3] The comparative forms of adjectives in Finnish are formed through morphosyntactic means: in singular the appropriate forms in nominative case are vahva (strong) – vahvempi (stronger) – vahvin (strongest).

Excerpt 3[4]: Alan Practicing

Fig. 2

Fig. 3

```
01 Ala:    +onko kahvi- (.) onko +nämä kahvit
            are the coffe- (.) are these coffees
           +gazes at paper on the table
                                 +points at two distinct points in space
                                  (fig. 2 & 3)

02          yh- yhtä vahvai- vahvoja, (.)
                             strong-PL-PAR
            equally stro- strong

03          onko nämä kahvit yhtä vah+voja
                                  strong-PL-PAR
            are these coffees equally strong
                                     +turns gaze towards Mike

04          (.)

05 Mik:     mmm (.) ei (.) ^tämä kahvia on: eeh ^(0.4) more:
                                 coffee-PAR
            mmm (.) no (.)  this coffee is: eeh   (0.4) more:
                           ^points forwards with RH (fig. 4)
                                                ^ circular gesture with
                                                  both hands

06 Ala:     vah[vampi °eh heh he he°
            strong-COMP
            stronger

07 Mik:        [lisää (.) vahvampi
                          strong-COMP
                more (.)  stronger

08 Ala:     ehheh

09 Mik:     aah which one (do) you prefer
```

[4] In Excerpts 3, 4, and 5 the sign + is used to indicate the duration of Alan's embodied conduct. The co-participant's (Mike in Excerpt 3 and the clerk in Excerpt 4) embodied conduct is indicated by the sign ^.

In this excerpt the participants use the adjective *strong* in different inflectional forms. In the first lines Alan searches for the plural partitive form of the word in his attempt to inquire whether the available coffees are equally strong. The structuring of his question turn (ll. 1–3) is closely tied to the written notes that he has in front of him, as can be seen in his bodily orientation and gaze. When referring to the coffees (l. 1), Alan uses a pen to point to two distinct points in space in front of him (see Figs. f and g). However, speech perturbations show that he has some trouble in finding the appropriate form of the adjective (l. 2). After glancing at his notes, Alan is able to self-repair and produce a lexico-grammatically appropriate question (l. 3). One possibility for answering the question in a relevant way is to identify one of the coffees as stronger than the other, and this is what Mike attempts to do. However, he has trouble in producing the comparative form of the adjective, as is indicated by the pauses and by the language switch (l. 5). The use of the qualifier 'more:' creates a space for Alan to offer a solution to the word search. The two participants complete the utterance jointly, albeit in slightly different ways: Alan offers his version of the adjective 'strong' in comparative form (l. 6) while Mike uses a Finnish adverb ('lisää', more) and then accepts the adjective offered by Alan by repeating it (l. 7).

The way that the participants act out the Q–A sequence shows that they pay close attention to morphological details in order to produce a grammatically well-formed question and answer. Similarly to Excerpt 2, the written notes provide crucial resources for formulating the targeted verbal forms and the participants orient to these resources through gaze and orientation of their bodies (for similar observations on the role of embodied conduct in planning activity, see Markee and Kunitz 2013). However, the enactment of the planned interaction in the café also displays experientially based script-relevant knowledge (Edwards 1994, 1997) about the physical and material setting to be visited. This is visible in the use of pointing gestures that are carefully coordinated with the deictic references in the rehearsed sequence. Alan's pointing with a pen targets two distinct points in front of him. Similarly, Mike does a pointing gesture in his response as he refers to 'this coffee'. The imagined space structured by the gestures closely corresponds to the material set up in the café, where two different coffee pots are placed on the counter within reach of the customers. Also Alan's question presupposes that there are different coffees available. This knowledge contributes to the askability of the question (Stivers 2011) in the actual service encounter: it enables the use of deictic pronouns to refer to the different types of coffee and makes the rehearsed interaction appear well-fitted to the setting and the relative epistemic status of the customer and the clerk. Excerpt 4 shows how the planned sequence is configured in the café. Alan has just paid for a coffee and shifts his gaze to the two coffee pots on the counter in preparation for his next action[5].

[5] This is a self-service café, where the organization of the service encounter typically involves the customer picking up a cup, choosing the food items and beverages and then paying for them. In this café the coffee pots were placed on the counter in such a way that customers had to pay for the coffee before choosing the coffee and helping themselves.

Excerpt 4: Alan Buying Coffee

```
01 Ala:    uhm (.) +onko nämä kahvit yhtä (.) vahvoja?
                   are these coffees equally (.) strong
                   +gaze towards the clerk, points towards the coffee pots
```

Fig. 4

```
02 Cle:   mmm: (0.4)^+tää on vahvempaa
                     this is strong-COMP-PAR
                     this is stronger
                    ^touches one of the coffee pots --> (fig. 4)
   Ala:              +gaze towards the coffee pots and the clerk's hand

03        +(.)
   Ala:   +gaze back to clerk --> until the end of extract
   Cle:   ^gaze to Alan (fig. 5) --> until the end of extract
```

Fig. 5

```
04 Ala:   tämä on::
          this is

05 Cle:   vah[vempaa
          strong-COMP-PAR
          stronger

06 Ala:      [vahvem
              stronG-COMP
              stronge-

07        okei (.) joo kiitos=
          ok (.) yeah thanks
```

In the café Alan produces his question in a grammatically appropriate way, including the inflected form (plural partitive) of the adjective that he had trouble with when practicing. The question is well-fitted in the larger activity and its material ecology. It initiates a new sequence at a juncture where the preceding activity (payment sequence) is complete. Through embodied activity (shift of gaze and body orientation) Alan shows readiness for the next activity in the encounter: choosing

one of the coffee pots placed on the counter in front of him and pouring himself a cup. The question thus addresses an issue that is consequential for the choice that Alan is about to make.

In her answer to Alan's question, the clerk uses the comparative form of the adjective that Alan and Mike had rehearsed in class. As she answers, she also touches one of the coffee pots (Fig. i). In the next turn, Alan initiates repair by producing a hanging repeat: he repeats part of the trouble source turn (l. 4) as a way to prompt the recipient to "fill in the rest" (Rossi 2015: 274, see also Kendrick 2015). Hanging repeats are often related to problems in hearing the previous turn and the possibility of a hearing problem cannot be ruled out here. However, the turn seems to do more than that. Adjusted to the contingencies of the interaction, the hanging repeat enables Alan to focus on the inflection of the target form and request for completion from the clerk. Interestingly, although the clerk's bodily orientation and visually prominent touching gesture invite Alan to focus on the coffee pots, he directs his gaze towards the clerk in anticipation of her verbal response (Fig. j). As can be expected, the clerk responds by repeating the comparative form in full. In partial overlap with her turn, Alan also partially repeats the form and thereby confirms that the word produced by the clerk was what he expected to hear. From the point of view of the service sequence in progress, the repetition seems redundant. However, it indicates Alan's orientation to the linguistic form he had recently practiced. Further, the fact that he does not reproduce the adjective in its complete form, suggests that he has not yet mastered it and the repeat is done for the purpose of practicing and memorizing the item as an object of learning. After this Alan quickly returns to the main business by acknowledging the answer and thanking (l. 7).

When Alan reports on the interaction in group discussion in the classroom, the inflected forms of the adjective *strong* again emerge as the focus of attention.

Excerpt 5: Alan Reporting

```
01 Ala:    ähm: (.) joo (.) ja mä kysyin ähm (0.4)
           ehm  (.)    yes (.) and I asked   (0.4)

02         ähm (0.4) onko: kaikki: (.) kahvit nämä
           ehm (0.4) are all these (.) coffees these

03         (.) uhm vahvoja.
                   strong-PL-PAR
           (.) uhm strong

04         (0.4)

05 Jac:    °vahvoja°
            strong-PL-PAR
            strong

06 Ala:    vahvoja vahva=
           strong-PL-PAR strong
           strong strong

07 Lis:    =aah (the) strong [(.) strength

08 Ala:                      [°joo°
                              yea

09 Ala:    jaa: se oli ähm tosi helppo koska:
           and it was ehm really easy because

10         >hän< +joo tämä on [(0.4) >helppo< eh vahvoin
                                                 strong-SUP
           she   yes this is (0.4)    easy eh strongest
                 +points towards papers on table

11 ?:                          [hm

12         (2.0) ((Jack, Lisa and teacher nod))
```

Although the speech perturbations and pauses in Alan's reporting show signs of trouble, he uses the plural partitive form fluently (l. 1–3). Another student then repeats the partitive form (l. 5), which is now established as the focus of talk. In the next turn Alan repeats the same inflected form and then provides the base form. With this Alan sustains the interactional focus on the adjective. Providing the base form also makes the word more recognizable for the recipients, and in line 7 another student, Lisa, shows recognition of the word by translating it into English. After this Alan evaluates the interaction he had at the cafe (ll. 9–10) and re-enacts the clerk's response using a pointing gesture and the superlative form of the same adjective.

Excerpts 3, 4, and 5 illustrate how the participants draw on the material organization of a café in practicing and acting out a question that is contextually and sequentially well fitted to the real-life service encounter. The excerpts also demonstrate how reporting of out-of-classroom interactions generates language-focused activity (Kasper and Burch 2016) in the classroom discussions. Further, they make visible a student's learning project that focuses on a grammatical feature, i.e. the inflection of the adjective *strong* (in plural partitive and in the comparison forms) as part of turn design, and that is sustained across situations. Orientation to this learning project is visible in the student's behavior in planning the task, in the way he attends to the object of learning in the real-life service encounter and in the way that Alan sustains focus on the inflected forms in the retrospective discussion in the classroom. Overall the analysis lends support to recent studies that show how learning, even when it deals with acquiring new forms, is contingent, incremental and distributed across interactional situations.

4.3 Unpacking Unforeseen Interactional Trouble

In our data the interactions outside the classroom that generated the liveliest discussions were those in which something unforeseen happened. As previous research shows (e.g. Mori 2002, see also Wagner 2015), the preparation phase of tasks enables the students to plan sequence initiating actions, but does not prepare them for the contingencies of situated interaction. When something unforeseen happens in the interaction, this may be observable already in the service encounter or it may become visible retrospectively through the participants' orientations to the experienced events in the classroom (Lilja and Piirainen-Marsh 2019). Excerpts 6 and 7 illustrate how an unexpected response by the clerk has consequences for the unfolding of the service encounter. In the moments prior to Excerpt 6, Claire has approached the self-service counter in the university café. After a short interlude where Claire and her student partner (Sally) prepare for recording the interaction, Claire initiates a pre-sequence.

Excerpt 6[6]: Claire Buying Coffee

```
03 Cla:   +eh HEH (.) aah (.)onko teillä:
                             do you have
          +gaze towards the clerk --> l.14

04        sokerittomia leivonnaisia
          sugar-free pastries

05        (.)

06 Cle:   uhm ^löytyy (.) ^(ihan) pieni hetki (.) kysyn
              we have (.) just a moment (.) I'll ask
              ^nods       ^gestures with RH; starts to walk to kitchen

07          ((~25 SECONDS, Clerk in the kitchen))


08 Cle:   ^löytyy (.) kyllä
            we do (.) yes
          ^walks back from kitchen, nods

09 Cla:   joo?
          yes?

10 Cle:   ^löytyy
           we do
          ^nods

11 Cla:   aah okay (.) ahm:
          aah ok

12 Cle:   haluaisitko
          want-COND-2-Q
          would you like

13        (0.8)

14 Cla:   joo mutta eh (0.4) aA:h +ss: ( - - ) +°°what ki:nd°°
          yes but
                                  +gaze down   +gaze back towards clerk

15 Sal:   so-

16 Cla:   [eh heh ((leans towards clerk))

17 Cle:   [( - - )

18 Cla:    AAH: (1.0) joo kyllä (.) kyllä mä ostan
                      yeah yes  (.)  yes I buy

19 Cle:   okei
```

Here Claire asks an information-seeking question concerning sugar-free products (ll. 3–4). The question is produced fluently and is sequentially well-fitted to the service encounter context: it occurs during the initial moments in the overall organization of the encounter and initiates a pre-sequence relevant to the activity of buying a coffee and a snack. In this sequential context, the polar Y/N question

[6] The embodied conduct of the clerk in Excerpts 6 and 7 is indicated with the sign ^, the embodied conduct of Claire in Excerpt 6 and Sally in Excerpt 7 with the sign +.

invites the clerk not just to produce an affirmative or negative response, but also to give information about what kinds of sugar-free products are available. The clerk's response turns in lines 6 and 8 align with the form of the polar question, but do not offer the relevant information. In lines 9 and 11 Claire offers the clerk further opportunities to elaborate on her response, but the clerk only nods and repeats the affirmative answer, after which she asks whether Claire would like to have such a product (l. 12). This question is unusual both in terms of its grammatical form (the valency of the verb *want* typically requires a grammatical object) and interactional import. It is sequentially problematic in that it requests Claire to place her order even though the information she sought for in the pre-sequence is not provided. Claire also orients to this in her actions: the delay before her response (l. 13) and the observable trouble in formulating the next action (l. 14), asking for more specific information about sugar-free products. Claire begins her turn with an affirmative particle (joo, l. 14) which is followed by the conjunction 'but', speech perturbations and a pause. At the end of the turn she whispers 'what kind'. The whispering and shift of gaze away from the clerk indicate that the question is not addressed directly to the clerk, but rather related to Claire's search for verbal resources for asking the question (see e.g. Goodwin and Goodwin 1986; Lerner 1996; Hayashi 2003; Koshik and Seo 2012). Nevertheless, it indicates visible trouble and makes relevant some interactional assistance from the co-participant without requesting it directly (see Kendrick and Drew 2016; Pekarek Doehler and Berger this volume). However, the action does not generate any reaction from the clerk. Finally, in line 18 Claire responds to the clerk's turn with an affirmative answer and ends up buying a sugar-free bun.

Claire's experience illustrates the consequentiality of language use situations in the wild: because of the unexpected conduct by the Clerk and her own trouble in dealing with it, Claire ends up buying a product without knowing what it is. Claire visited the café together with Sally who videorecorded her interaction. After Claire's service encounter Sally carried out her own task. Her situation unfolds in a similar way as Claire's: after a greeting sequence Sally initiates a pre-sequence by inquiring about gluten-free products. The same clerk answers her question in the same way.

Excerpt 7: Sally Buying Coffee

```
01 Sal:   moih
          hi

02 Cle:   moi
          hi

03        (.)

04 Sal:   umm

05        (.)

06 Cla:   ehheh

07        (.)

08 Sal:   onko teillä °glutee° (.) nittomia (.) leivonnaisia?
          do you have gluten-free              pastries

09 Cle:   kyllä
          yes

10 Sal:   kyllä
          yes

11 Cle:   kyllä (.) haluaisitko
                    want-COND-2-Q
          yes (.) would you like (to have)

12        (0.8)

13 Sal:   +mitä (tai)
           what (or)
          +moves both hands to sides, palms open

14        (.)

15 Cle:   umm (0.4) pullaa (.) muffinsia (.) (munkkia)
                    buns (.) muffins (.) donuts
16        (0.4)

17 Sal:   en halua
          no i don't want

18 Cla:   [ehheh

19 Cle:   [okei

20 Sal:   mä haluan (.) americano ja (.) yks kahvi
          I want an americano and (.) one coffee
```

Again, the question invites the clerk to give information about the products, but no such information is given. Instead the clerk produces a type-conforming positive response (Raymond 2003) followed by an offer of an unspecified product ('would you like'). Sally's conduct (the repetition of the affirmative answer, l. 10 and the delay in responding, l. 12) indicate that she treats the clerk's actions as problematic. However, unlike Claire in the previous excerpt, Sally is able to ask a follow-up question: 'mitä' (what). In Finnish the question word 'mitä' is often used as an open class repair initiator, but here it also deals with the problem of missing information in the clerk's turn. As she articulates the question word, Sally also gestures with her hands and nods. The embodied production of the question both displays her confusion and pursues a response from the clerk. In line 15 the clerk answers her question and lists several gluten-free products. After this Sally is in a better position to decide that she does not want to buy any such product. After a short delay, Sally rejects the offer (l. 17) and places a different order (l. 20). Both Claire and Sally's experience show how unforeseen interactional needs, in this case the need to expand on a pre-request by asking for more information about products, can arise in interactions outside the classroom and how L2 speakers struggle to find appropriate methods for dealing with these needs.

Back in the classroom, Claire and Sally's experiences generate a lot of discussion in which the participants pay explicit attention to the practice of inquiring for more information on something. The following excerpts illustrate how this is addressed in Claire and Sally's reporting of their interactions. In Excerpt 8 Claire engages in a word search and completes it with the target phrase "what kind" in English (line 31).

Excerpt 8: Claire Reporting

```
17 Cla:   mutta: eh (.) tilanne on
          but  (.)  the situation is

18 ?      °eh heh heh°

19 Cla:   >tilanne< tilanne oli ( - ) mm: huo↑no
          situation situation was bad

20 Tea:   aha?

21 Cla:   koska: a: (0.4) en  muista (0.8) aa: ee: (1.0)
          because         I don't remember

22        en muista: (1.6) °how do you say°
          I don't remember

23        (1.8)

24 Cla:   ah:

25 Mar:   °muista is remem[ber°

26 Cla:                   [en muista:
                           I don't remember

27        (0.6)

28 Tea:   mitä (.) sanoja?
          what (.) words

29 Cla:   mitä sanoja:
          what words

30 Tea:   okei

31 Cla:   are (.) what kind?

32 Tea:   ahaa=

33 Mar:   =minkälainen
            what kind

34 Tea:   okei=

35 Cla:   =minkälainen
           what kind
```

Claire characterizes the situation as ‘bad’ (l. 19) and accounts for this by referring to her trouble with remembering the Finnish words needed to ask ‘what kind’. The target of the word search is not immediately clear to the others and two people attempt to assist in the search: Mark offers a translation of the word ‘remember’ (l. 25) and the teacher suggests a translation for ‘words’ (l. 28), which Claire repeats. After Claire clarifies the target (l. 31), a fellow student, Mark, offers the sought for question word ‘minkälainen’ (l. 33), which Claire accepts by repeating it.

Sally's report (Excerpt 9), on the other hand, shows how she managed the situation without knowing the appropriate language for asking the question. She simply used the word 'mitä', which was enough for her to get the missing information from the clerk. Accordingly, she managed to avoid the problematic situation of buying a product she didn't want.

Excerpt 9: Sally Reporting

```
11 Cla:   then Sally went ( - - )
12        I tell you yeah >say this say this say this say this< (.)
13        and then e [heh heh (.)
14 Sal:              [eh heh heh
15 Cla:   and then hers was good
16 Sal:   when I ((laughter)) when I was supposed to say like (.) I a- (.)
17        >because< I said onko (.) teillä gluteenittoma leivonnaisia
                           do you (.) have gluten-free pastries
18 Tea:   hm
19 Mar:   joo
20 Sal:   they were like joo and I'm like (.) what
21        kind (.) >and [I don't know> >I'm like< MITÄ
                                                 WHAT
22 Tea:                 [hm
23 Mar:   eH heh heh ehh:
24 Cla:   ja oi jo-
          and oh
25 Sal:   and then she actually said what kind and and,
26        >I didn't want any< and I am like @En haluan@
                                          I don't want
27 Mar:   eeh: [eh heh heh
28 Sal:        [eh heh he
29 Cla:        [eh heh heh
30 Sal:   and then I ordered the coffee for her and me
```

In her reporting Claire accounts for Sally's success by referring to her own instructions to her (ll. 11–13, 15). Sally then narrates her interaction with the clerk (ll. 16–26). Although she refers to the linguistic trouble she experienced (ll. 20–21), she describes how her action was successful in soliciting a more elaborate response and led to a more successful outcome (ll. 25–26). The interaction between Claire and Sally thus occasioned an environmentally occasioned noticing of trouble (Keisanen 2012; Goodwin and Goodwin 2012, see also Schmidt 1990) that enabled Sally to adjust her conduct and express an interactional need that arose in the contingencies of the situation.

All in all, the experiences of Claire and Sally lead to an elaborate discussion about real-life interactions that may involve unexpected conduct and the need for learners to prepare for such occasions. The final excerpt shows how the participants in class discussion make sense of these problems by means of script formulations (Edwards 1994), i.e. formulating the nature of the interaction with the service provider as exceptional, compared to routine service encounters of a similar type in their own culture.

Excerpt 10: Sally Reflecting

01 Tea: ja esimerkiks (.) sä: (.) huomasit
and for example (.) you (.) noticed

02 että: (.) vaikka sä et muistanut mikä on minkälaista
that (.) even though you didn't remember what is what kind

03 (.)

04 Mar: njooh
yeah

05 Cla: [joo
yeah

06 Tea: [niin sä sanoit mitä ja se oli myös ok
you said what and it was also ok

07 Mar: joo

08 Sal: [mm

09 Tea: [joo

10 Mar: joo

11 Tea: eli,
so,

12 Sal: and I think it's because like (0.4) in the US
13 if [I was to say do you have like

14 Tea: [hm

15 Sal: gluten-free whatever (.) >they would be like<

16 yes we have and they would name it

17 Tea: hmm

18 Sal: like everytime

19 Tea: niin niin (.) joo
right right yeah

20 Sal: so I don't think I'd have to ask [what kind

21 Tea [hmm

22 Tea: joo **↑joo eli se on (.) ehkä kulttuuri °ero°**
yeah yeah it is (.) maybe a cultural difference

In this excerpt the teacher builds on Sally's story and refers to it as an example of how a spontaneous linguistic choice can be acceptable in its context (ll. 1–3, 6). Sally then elaborates on her report and accounts for her trouble by referring to a cultural norm related to service encounters in her native country (ll. 12–18). She formulates the service encounter as exceptional by constructing a scripted cultural pattern of how the same interaction would unfold in the US. This is achieved by using reported speech to construct a hypothetical scenario, where the service provider responds to her request of information (ll. 13, 15) with an affirmative response followed by naming the product (l. 16). After the teacher's minimal response (l. 17), Sally upgrades her description with an extreme case formulation (l. 18), which elicits a more elaborate response from the teacher. She then brings the script formulation to completion with an upshot which refers to her own conduct (l. 20). As Edwards (1994) has shown, formulating events as exceptions to scripted patterns is related to issues of accountability and is used to construct the dispositional character of actors. Here the formulation of a culture-specific script contributes to portraying the clerk's conduct as exceptional and Sally's trouble as understandable. The sequence is brought to completion by the teacher, who formulates her understanding of the gist of Sally's account by referring to a cultural difference (l. 22).

5 Discussion

In this chapter we have described how a teacher-assigned real-life social task is carried out and interactionally accomplished by different participants. Similarly to studies of task accomplishment in classroom settings (Mori 2002; Hellermann and Pekarek Doehler 2010), the analysis revealed differences in the ways in which the teacher-assigned task is interpreted and configured by different students in their interactions outside the classroom. In some cases students' interactions with service providers unfold as interview-like question-answer sequences. Although this approach to the task enables students to make use of the pre-planned initiating actions and practiced scenarios, the data show that many students have difficulties in adjusting to the contingencies of interactions. Task-interactions like these can be seen as "taming the wild" (Wagner 2015; Eskildsen et al. this volume); i.e. constructing classroom-like conditions outside the classroom instead of making use of the wide array of resources that everyday social interactions outside the classroom offer.

However, in most cases in our data the students manage to configure the task in a contextually relevant way. The learners draw on sociocultural and experiential knowledge of service encounters already at the planning stage and adjust their conduct to the specific contextual features of the targeted encounters (see also Markee and Kunitz 2013). Close analysis of these students' interactions demonstrates how occasions for developing interactional competence arise and are oriented to by the participants as they move from the classroom to the wild and back again. For some learners the task provided occasions to pursue their own learning goals in interactions across the settings. We propose that the examples of Alan's interactions both

in the classroom and in the café show orientation to such a learning project which is manifested in language-focused activity (Kasper and Burch 2016) across the settings. The data show how a focus on inflectional forms of adjectives is established in Alan's interaction in the preparation phase (Excerpt 3), how he shows embodied orientation to the same forms in the real-world service encounter (Excerpt 4), and how he shares his expertise on these forms in the de-briefing interaction back in the classroom (Excerpt 5). Together the examples show some evidence of a learning outcome at the lexical level (new knowledge about how to formulate inflectional forms of the adjective), but more importantly, we see how Alan configures his interactional conduct while adjusting to the contingencies of the interaction outside the classroom. As previous research (e.g. Eskildsen and Theodórsdóttir 2017) has shown, outside the classroom the participants' main concern is with the progressivity of the business or social task, and occasions for learning are embedded in its sequential management. In Alan's case, initiation of repair enables a momentary shift of focus to a target word (inflected form of an adjective) as an object of learning and creates an opportunity for Alan to repeat the form, while also showing sensitivity to the interactional contingencies of the business encounter.

Overall, our data show that the different phases of the task complement each other in creating opportunities for language learning and can support the development of interactional competence. Group discussions in the preparation phase of the task provide a safe environment not only for language-focused activity, but also for embodied enactment of imagined encounters. Access to material resources also support the planning of interactional tasks. When participating in interactions in the service encounters, students are challenged by unpredictable interactional contingencies and unforeseen interactional needs. The post-implementation phase offers occasions for analyzing and making sense of these. The retrospective discussions in the classroom also turned out to offer rich occasions for learning activity. Retrospective tellings and reportings of the encounters create occasions for participants who initially show limited knowledge to display some level of linguistic and interactional expertise. This is visible in most of the cases analyzed and is made particularly explicit in the situations where the learner does word explanation or teaches a newly learned practice to peers (Excerpt 2). The examples also show how the need to manage unexpected situations and deal with the 'chaos' of the wild may lead to further learning-relevant activity (cf. Wagner 2015). Experiences of such situations can occasion noticing of learning objects and reflection that may support learning in the long term. Excerpts 6, 7, 8, 9, and 10 highlight how the students experience trouble caused by unexpected (and uncooperative) interactional conduct by the clerk in the service encounter. In the encounter the students work towards resolving the problem by engaging in a word search, code-switching (Excerpt 6) and by adapting a familiar verbal practice for local needs (Excerpt 7). In retrospective discussion in the classroom they report on the problem and analyze it on multiple levels. They focus on the linguistic form needed for asking for further information (Excerpt 8), discuss how an alternative method led to a successful outcome (Excerpt 9) and they account for their difficulties by constructing a script formulation (Edwards 1994) referring to cultural norms (Excerpt 10).

One aim of this chapter was to explore how the different sociomaterial environments in the classroom and real-life business settings feature in the way that the task is configured. The analysis illustrates how students' knowledge of the linguistic resources made relevant by the task was distributed in the social and embodied organization of action within the material ecologies of the different settings. Embodied and material resources were crucial for organizing action in all three phases of the task. Excerpts 1 and 2 show how a novice learner struggles with the task, but is able to construct linguistically coherent utterances in the service encounter with the help of her notes. Written notes also enable her to report on her task in the classroom discussion, where she emerges as the epistemic authority of the newly acquired language resources and shares her knowledge with the co-participant. Excerpt 3, on the other hand, shows how the students display knowledge of the physical and material environment of the service setting that one of them plans to visit in their embodied activity already in the preparation phase. This knowledge enabled them to plan their actions such that they were fitted to the contextual specifics of the target encounter, whilst also paying close attention to linguistic detail. Pointing gestures tied to deictic terms were used to locate items in both the imagined space (Excerpts 3 and 5) and the real physical environment where the service interaction took place (Excerpt 4). Our observations resonate with earlier studies that have shown how gestures are used as resources in embodied sense-making and remembering in L2 interaction (e.g. Eskildsen and Wagner 2013) and in group planning activity (Markee and Kunitz 2013).

The analysis underlines the need to develop pedagogic practices that create connections between the classroom and diverse social settings outside. We have shown how real-life tasks based on learners' needs enable learners to put their interactional repertoires to use and how de-briefing activities establish further opportunities for analyzing out-of-classroom language use experiences (see also Wagner 2015). In this study, tasks designed around language use experiences outside the classroom emerged as sites for developing interactional competence. They presented opportunities for language-focused activity generated by the learner's needs and provided for in-situ adaptation of language resources in contingent interaction in authentic settings. The trajectory of the task showed how learning grammatical resources for action is distributed across situations. Finally, the task presented opportunities for developing an experientially-based understanding of tasks, language practices, actions and sociocultural norms in the social situations.

Appendix 1: Glossing Symbols Used

PL	plural
PAR	partive (partitiveness)
COMP	comparative
SUP	superlative

COND conditional
2 2nd person ending
Q interrogative

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Building Socio-environmental Infrastructures for Learning

John Hellermann, Steven L. Thorne, and Jamalieh Haley

Abstract Language use, second-language development, and technology mediated human activity are complex processes situated in, and in some cases demonstrably interwoven with, specific material and social contexts. This study highlights the context embedded and context producing interactional practices of learning in the wild as participants in small groups notice visible aspects of their immediate environment. The groups are involved in mobile augmented reality (AR) game play and are walking across an urban university campus and adjacent environments. Video-recorded interactions from 15 groups of three participants from four languages (English, German, Hungarian, and Japanese) were observed and transcribed. Sequential, multimodal analysis revealed numerous instances of noticing environmental resources and we show how participants use coordinated gaze, gesture, and language to make relevant particular perceived objects from the built environment for accomplishing the groups' goal-directed activity as well as for co-constructing socio-environmental infrastructures for learning.

Keywords Augmented reality · Cognition · Semiotic fields · Place-based · Mobility

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1 Introduction

This chapter focuses on the relations that unite human perception, communicative action, and the material-semiotic world. Building upon recent ethnomethodological analyses of talk-in-interaction while walking (Haddington 2013; Mondada 2017), analyses of how communicative activity mediates our understanding of objects and environments (Latour 2005; Nevile et al. 2014), principles of extended and embodied cognition (Atkinson 2010), and existing research on the use of mobile place-based augmented reality (AR) techniques for language learning (Hellermann et al. 2017; Holden and Sykes 2011; Thorne 2013; Thorne et al. 2015), this paper investigates participants' contextually aware interactional practices as they carry out a mobile augmented reality (AR) activity. In response to the question of when and how action is explicitly situated in, or catalyzed by, particular aspects of the physical surround and how this might be relevant for language learning, we report on members' methods for making unplanned use of resources from their immediate physical context in order to co-construct actions of brainstorming to accomplish the AR game goals and establish these semiotic resources as potential objects of learning in the wild.

We report on the empirical examination of language learners engaged in playing an AR place-based mobile game which presents scenarios and prompts that encourage participants to expand beyond the traditional subject positions associated with that of 'student' or 'learner' (e.g., Firth and Wagner 1997). Unlike earlier desktop-based computer games (e.g., Gee 2007; Thorne et al. 2012), AR games take seriously experiential, situated, and critical pedagogy (Gruenewald 2003) by using the built and natural environments of cities as part of the game narrative. Squire (2009) describes it in this way:

> Although mobile media learning has mostly been framed as "anytime, anywhere" their more profound impact may be in the experience of place. Mobile media enables a multiplicity and hybridity of place that causes opportunities and challenges to learning and education. (p. 70)

Using GPS-enabled location aware mobile devices, AR activities connect game narratives (often on scientific, environmental, or historical themes (see http://arisgames.org/ for examples) to the world around players as they move through the environment. In this way, actual physical locations are augmented with narratives, images, video, or with historical or other information (e.g., Holden and Sykes 2011; Holden et al. 2015; Squire 2009; Thorne 2013). The process of playing an AR game can involve using the mobile device's map for navigation, displaying game-related information and directions, and recording video and images. The AR game used in this study, titled ChronoOps, focuses on seeking out five designated green technology sites on and around an urban university campus. Players are told that they are time travelers from the future (the year 2070), when planet Earth has been largely destroyed by environmental disasters, and that they have come back in time to redis-

cover the lost green technologies that could still help to save their dystopic ecology. In order to complete the game, players need to read instructions from the shared mobile phone, find the particular locations on the campus using maps on the game, then decide how to answer a prompt from the game in an audio or video recorded report. As the analysis will show, the place-based nature of the game provides possible semiotic fields (Goodwin 2000, 2013) that participants may make relevant for their talk-in-interaction around the game playing. We illustrate the deictic practices used around one particular environmental object commonly oriented to by the participants.

2 Framework for Investigating Cognition and Communication

This research is informed by a number of frameworks that theoretically and empirically redefine cognition as situated, embodied, enacted, extended and distributed (Atkinson 2010; Bucholtz and Hall 2016; Clark 2008; Hutto and Myin 2013; Hutchins 1995). Distributed and enacted cognition (related terms include extended and social cognition) refer to a framework for understanding human action, such as thinking and communicating, as processes that are fundamentally supra-individual and which include, but importantly are seen to extend beyond, neuronal activity of the brain. The term 'distribution' is meant to highlight the idea that thinking and doing involve the body and coordination between human as well as non-human artifacts and environments. In this sense, neither the brain nor the individual are the exclusive loci of cognition; rather, the focus is on understanding the organization of systems, or "cognition in the wild" (Hutchins 1995), which presumes an ecological view of cognitive activity as organized by the interplay between persons and resources that are distributed across social and material environments.

Approaches to extended and distributed cognition posit that humans are open systems that function and develop within complex, historically formed, and dynamically changing social, symbolic, and material ecologies. When viewed this way, human activity and development (including language learning) are seen to form an 'ensemble' process that plays out along a brain-body-world continuum (e.g., Spivey 2007). This understanding of human cognition as distributed includes a number of entailments, one of which is a focus on mediation—that objects and other people in the environment co-produce action and thinking in unison with individual human agents. Another is that cognition, action, and communication are processes that are inherently distributed across individuals, artifacts, environments, and through individual and collective memory, across time periods as well (e.g., Manzotti 2016; Wertsch 2002).

An important constraint is that the principle of distribution, applied to both cognition and communicative activity, is not meant to imply symmetry between indi-

vidual humans and other people, artifacts, or environments. Instead, the suggestion is that the density of cognitive and communicative activity can be distributed across brains, bodies, and a range of physical and representational media in the flow of activity (e.g., Cowley 2009; Thorne 2016; Thorne and Lantolf 2007). The notion of distribution suggests an additional entailment, namely that of units of analysis such as 'organism-environment systems' (e.g., Järvilehto 2009) or multi-semiotic gestalts (Maynard 2006; Mondada 2017), which describe how change within an organism is accompanied by change to the environment and a reorganization of organism-environment relations. In these ways, the development of communicative activity can be seen connected to the environment. Distributed, situated, and extended approaches to cognition suggest that human action and development are fundamentally interwoven with temporal, social, and material conditions. In this sense, it is not only what various aspects of context are perceptible or potentially relevant, but what they do or catalyze in terms of interactions with human agents. The multimodal analysis using multiple video cameras allows us to see how gaze, gesture, mobility, and talk are coordinated to integrate the world around participants and their talk-in-interaction for learning.

2.1 Empirical Study of Phenomenologies of Perception

The conceptualization of language acquisition from several theoretical perspectives as process-oriented learning resists the dichotomy of text and context and refocuses empirical studies on contextualizing work as part of language learning (The Douglas Fir Group 2016; Lantolf and Thorne 2006; van Lier 2004). These theoretical perspectives align with Gumperz's investigations into contexualization cues and Goodwin's research on the influences of context on interaction and help us explore the relevance of the built and natural surroundings as essential features of the learning environment. The phrasing of our title is inspired by Wagner (2015) who reminds us that "becoming a second language speaker" means not simply mastering the structural aspects of a language. It is also "about building one's biography and … social infrastructures for second language learning" (pp. 90–91). Although historical, economic, political, and personal aspects are part of that biography and infrastructure, our investigations focus on micro-level, moment-by-moment contextualizing and semiotic work among participants' walking around a cityscape and urban college campus. In this way, our investigation shows how the built and natural environments in the participants surroundings may be oriented to and become catalysts for language learning via co-constructed interactional practices and in this way become their learning environment.

2.2 Language Use While Moving

The mobile aspect of the situation is central to the contextualizing and semiotic work in the context we describe. This is reflected in fluid and malleable contexts which become articulated in the talk-in-interaction among participants (De Stefani 2013, 2014; Laurier et al. 2016; Mondada 2014; Thorne et al. 2015). When contexts change for participants in mobile interactions with each block they drive or each step they take, participants enter a new spatial environment relevant to the organization of talk-in-interaction. Such contexts are malleable in the sense that when participants stop and interact in visually–rich environments, members change their orientation to the sensory stimuli to frame and catalyze their interactions (Jones 2015). We include Fig. 1, below, to illustrate what this looks like.

Figure 1 attempts to show how possibly relevant local features from the built and natural environment may appear to three game participants as they walk. In Fig. 1, the series of four screen grabs shows the group's location after they have moved forward in space about 10 steps.

The figure is a display of what we have called the hypercontextualized nature (Thorne et al. 2015) of small group interaction in mobile place-based AR activity. The mobility of the participants makes different objects in various perceptual fields relevant (we can only illustrate the visual field here) as they move forward. In panel T1, we see a truck and two people in the distance to the left of the visual field and a person wearing a hat in the right of the visual field. In T2, the truck and people are closer to the group. In T3, the people are closer yet, a sign to the left becomes readable, and bicycle racks to the right become visible. In T4, only one person is now visible and about to pass the group and the group is about to walk under a skybridge between two buildings.

The movement by participants and use of environmental semiotic resources are done for two purposes in accomplishing the AR activity. The first is for players to find destinations and the second is for players to make reports at their destinations. The wayfinding and the report making come about from the instructions given in the game. Game players are instructed to find green technology-related locations where they must make reports about the technology they find there. The wayfinding is done, in large part, through the use of the GPS-enabled map on the phone. However, for maps to make sense and be useful for mobile participants who are finding their way, a link from the GPS map to local landscape features must be made (Klein 1982; Liberman 2013).

The mobility of the small groups ('mobile withs': Jensen 2010) entails a physical alignment that is potentially quite different from face to face interaction (De Stefani 2014). Participants in the activity we describe move and stop (Jones 2015), walk and re-configure as a group in F-formation (Kendon 1990) as their visual focus shifts from the world around them, to the mobile device one participant holds, and to one another. As the participants walk, they may continue to talk but their visual

Fig. 1 Illustration of the changing context for mobile interactants moving from top image to bottom

focus is oriented more to their surroundings than to one another. The interactional work done to link the visual environment with the instructions and digital map on the phone is made public via language, gesture, and gaze while the groups maintain themselves as mobile withs. These practices are responsive to whether the participants are moving or stopped as well as to the ever-changing landscapes around the groups adding a layer of complexity to the local, emerging grammar of these practices (Fox 1999, 2001; Hopper 1998).

When the groups arrive to a destination at which they are to make a recorded report, they do some preparatory work immediately before recording. Part of the rehearsal takes the form of brainstorming or listing items to use in the report. As with the interaction with a GPS map, the rehearsal for the report is a detail-poor analogy to what it refers. In the case of wayfinding, the map is a detail-poor depiction of the landscape; in the case of the rehearsal, it is a detail-poor and less coherent version of the polished recorded report. After the preparation for the report, there are no written notes for the game players to refer to during their report-making. The players do, however, orient to and use visual artifacts and make them relevant to their group members via gaze and gesture (Kääntä 2014). The objects that are noticed may then act as affordances for the report making. Game participants notice and use a variety of semiotic resources from the environment in the coordinated co-construction of their interaction (Goodwin 1994, 1995, 2000) whether that be for finding their way or making a report. We argue that the game context makes available the use of multiple semiotic resources from the physical environment for the game that would not be available if the participants were doing this game activity in a classroom. Participants re-purpose different semiotic fields to intersubjectively contextualize ongoing talk. The interaction is improvisatory in the way participants use recognized culturally-codified language practices together with local, emerging human and non human, visual and audio resources.

2.3 The Co-construction of Relevant Semiotic Fields

Walking together as a small group presents participants with potentially infinite opportunities to refer to places immediately visible (Scollon and Scollon 2003; see also Schegloff 1972 on reference to places). In these situations, such references are accountable to the other group participants and actions of noticing (Schegloff 2007; Keisanen 2012) or perceptual deixis (Goodwin and Goodwin 2012) implicate types of sequential formulations; this public referencing is formatted for particular interactional work. Schegloff suggests, in fact, that there is a preference for noticing rather than explicitly stating. For example, ‘oh, it’s 10:30’ is formulated as a noticing when, in fact, it turns out to be a pre-exit move. In many circumstances, noticing the time is preferred to directly stating a next course of action such as ‘I would like to leave now’. That said, noticings can also be subsequent moves in an action trajectory that serve particular purposes.

In Keisanen's study of observations made while driving, drivers and passengers noticed a variety of environmental stimuli including the driving of others and landscape features. Drivers noticed when they were on a faulty path, they marked their noticings prosodically, and referred to past faulty action. In our data, the noticings around wayfinding are similar—they direct the group to a future destination but may also be marked prosodically and orient to faulty or difficult wayfinding.

Our data are similar to the driving context in that the referents are visible and work is done by participants to make those noticed things public at particular times and for particular actions. In our case, important aspects of the noticings are deictic gaze and gesture. When co-participants are interacting in the same location and oriented to the same visible objects, they refer to them with deixis rather than full semantic referential forms (Koschmann and Zemel 2014). Visible spaces in the physical environment encountered previously in the game may be oriented to but more often spaces and artifacts relevant at that time are accessed and pointed to ('presupposed gesture', Streeck 2009).

The analysis shows when and how the local, visible environmental objects are made relevant as semiotic resources for accomplishing the AR activity. One of the guiding questions we asked was: When did the orientation to environmental objects occur? But, perhaps it is not so important at what stage of the activity the mentioning occurs but that it occurs in so many different places because the environmental resources are in different places—they are seen and verbally attended to because they are at-that-time relevant to the task at hand. For language learning research, since Schmidt (1983), it has been clear that attention to and noticing of lexicogrammatical structures is crucial for learning those structures. We are uncovering when and how participants 'notice' different aspects of their physical environments and make such noticings public to their peers. The participants are accountable to their peers for their actions and when visible environmental resources are noticed and relevant for their work as part of a group, they make those noticings relevant for all. In this way, these public noticings coordinate interaction and facilitate the performance of the activity underway.

The time and place in which potential environmental sensory stimuli are noticed give them a particular meaning-making potential. They become particular semiotic fields (Goodwin 2000) in the context in which they are brought up and are made relevant for the interpretation of the particular time and place in their goal-oriented talk. The data we have observed remind us of the improvisatory and indexical interactional practices that are needed (Erickson 1982; van Lier 2002, 2004) to make sense of the shifting semiotic fields and how the timing and positioning are crucial for the interaction needed to accomplish the activity as mobile withs.

It turns out there are some commonalities in the practices for when different semiotic fields are available (gaze shift, gesture, talk), the purposes for which and the processes by which the fields are made relevant. In the contexts for these AR activities, learners are provided with opportunities for meaningful language use in

the form of reading instructions, discussing and interpreting those instructions, finding their way to destinations indicated in the instructions, and then rehearsing, formulating, and giving a report about green technology at each destination. These opportunities for negotiation of meaning occur when the groups read or hear and interpret instructions in the context of a map and the visual environment. The accomplishment of the AR activity is done collaboratively and is difficult to assess as anything other than collaborative work.

3 Data Collection and Analysis

Ethnomethodological conversation analysis (EMCA) has investigated the practices that participants use to make material and environmental objects relevant for both everyday meaning making (Goodwin 2000) and for instructional purposes (Hutchins 1995; Zemel and Koschmann 2014). This research describes how talk, gaze, gesture, and physical alignment form sequences of action that bring the environment into play in conversational interaction. Working from this tradition, our analyses describe interactional practices in which groups notice visible aspects of their immediate environment and make these noticings relevant for organizing their goal-directed actions. Small groups playing ChronoOps were recorded with three video cameras (two head-mounted cameras providing the first person perspective and one operated by a researcher capturing the entire group). For purposes of cross-linguistic comparisons, the database consists of recordings of 20 groups of three players playing in either English, French, German, Hungarian, Japanese, or Spanish. Many of the groups were formed from existing university language classes and would be described as novice speakers. Their game play was not part of the regular curriculum for their classes and was not high-stakes work assessed by their instructors. Some groups were mixed expert and novice speakers (some of the English, German, and Hungarian data) and some of the groups were all expert speakers (Japanese). All game interaction took place on the same college campus. For this study, we examined recordings from 15 of these groups.[1] Sequential, multimodal analysis revealed one context within the game activity where participants oriented to a particular feature from the physical environment.

We noted that more than half of all groups referred to various items from the built or natural environment at location four (including the water feature, streets, windows, and the sun). We saw also that a change of instruction in the game occurred at location four. The instructions for players at the first three locations for the game ask them to report on advantages and disadvantages for a particular green technology at each of the three sites: (1) bicycles, (2) solar panels, and (3) electric

[1] We thank the 503 design collective, David Aline, Simona Pekarek Doehler, and Leila Kääntä for their participation in the analysis sessions.

cars. At location four, the instructions ask players for a differently formatted report. Location four is next to a building (Student Academic and Recreation Center) that collects rainwater to use to flush toilets. After explaining this technology, the game prompts students to name "other uses of rainwater". Most of the groups orient to a water feature as a relevant resource for the report on other uses of rain water. The water feature, referred to by many of the groups as a *fountain*, is a stream of cascading water in several channels that provides water for a number of sedges and small trees.

We present four excerpts from three languages that show the way participants build their own semiotic environments for their goal-directed interaction that orient to the physical world around them. The excerpts show the coordination of the group's mobility, the print-based task instructions, and the water feature. In all cases, the instructions from the game are read aloud by one participant who holds the mobile phone. After the instructions are read, one participant orients to the water feature with gaze, gesture, before explicit verbalization. The water feature is then oriented to by the other participants. In the first two excerpts, groups speaking English are approaching the destination when they orient to and notice the feature. In the second, a group speaking Hungarian (one expert and two novices) is not moving but the same audible and visible environmental artifact is made relevant. The last, (interaction among German language learners) illustrates the import of the noticing of the environmental resource as members of the group begin leaving the vicinity.

3.1 Adding to an Ongoing List: Noticing While Moving

The first excerpts (from English language learners) show groups brainstorming as they approach the fourth destination. In each example, the groups have read the instructions for the game, including the prompt *what are other uses of rainwater*. Knowing the instructions, these two groups begin walking toward destination four. Their mobility becomes relevant in structuring at-that-time brainstorming work as they approach destination four. In Excerpt (1), the group members are called Rain, Cycle, and Air. One member has just completed reading the instructions aloud—the instructions to name other uses of collected rainwater (l. 8) and shortly thereafter, the group starts moving toward the location for making their report about possible uses of collected rainwater: destination four.

Excerpt (1)

```
03 Rai: (   ) hm:: "The toilets in academic and student
04        research center:, (.) flush with rain water"
05 Cyc: oh::
06 Rai: "collected from the roof."
07      (2.0)
08 Rai: "what are some other ways that rain water can be used."
09      (.)
10 Rai: rainwater.
11 Cyc: rainwater
((lines removed - group is walking toward destination 4))
20 Air: other- other ways that you cou- that use
21      rain water.
22      (3.0)
23 Air: think think (.) before we get there
24      (4.0)
25 Air: u:::[m
26 Rai:     [we we can use it fo:r (.) >like a drink¿<
27 Air: ↑really now eh[hih hah hah hah hah
28 Cyc:               [(          )
29 Rai:               [or not not drink maybe to wash like
30 Air: wash ha:nd[s
31 Rai:           [wash ha:nds
32 Air: or yeah you could boil and wash
33      dishes [with it maybe¿
34 Rai:        [yep
35      (1.0)
36 Cyc: or like ^(.5) there's a founta(h)in¿*
37 cyc         ^points eastward toward fountain (fig. 2)
38 rai                                    *gaze to fountain (figs. 3, 4)
```

Fig. 2

Fig. 3

Fig. 4

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39 Air:     yea(h) heh or a water fountain exa(h)ctly
40 Rai:     yeah
41 Cyc:     yeah
42 Air:     maybe the water fountain is just rain[water.
43 Rai:                                          [yeah
```

As they walk, the excerpt showed Air prompting a listing activity (ll. 20–23) and using a non lexical token (l. 25) to, possibly, perform thinking out loud. Rain orients to this and offers a hypothetical example of drinking (l. 26) which he corrects after Air orients to that use as improbable. His correction and then Air's suggestion of boiling the water are *or* prefaced, suggesting alternatives in a list. Cycle, gazing forward, then formulates her turn (l. 36) similarly to the previous listed items with an *or like* preface indicating another item, possibly an exemplar, is forthcoming. She points toward the now visible (though distant) water feature making this noticing public with that environmentally-coupled deictic gesture (Goodwin 2007) and the distal deictic expression *there*. Together, the gesture and lexical expression make a noticing public and locate that noticeable in space. Orientation of the other two participants to the fountain then occurs. Rain shifts his gaze following the visual trajectory (l. 38) which can be seen in the screen captures of two camera views shown in Figs. 2, 3 and 4. The water feature across the street from the group is highlighted with the broken-line circle. Air offers an agreement token and expands on Cycle's offer in line 39.

While the formulation of the start of Cycle's noticing turn (*or like*) in line 36 indicates an alternative or expansion on the brainstorming that came before, a new, noticed physical environment is also made relevant by the gaze, gesture, and the syntactic structure that Cycle uses in her formulation. It is different from the previous formulations in the list-making. The previous listing foregrounded the actions: *use it for, wash hands*, *boil and wash dishes*. Cycles turn makes the noticing relevant via the deictic and existential marker *there* to indicate that a fountain is available to use for the list. She also produces the noticing with embedded laughter commenting, perhaps, on the serendipitous nature of using a visible built environmental object as an item for the cultural task they are co-constructing—the list of uses of captured rainwater for their AR game activity.

Excerpt (2), also from a group using English, is very similar to Excerpt (1). The group (Rick, Red, and Sam) has read the instructions for the task at destination four and are walking eastward toward that destination. The first item suggested by Sam is a city drinking fountain (common around the city, but not within view of the group at that point) but he has a difficult time explaining that to his group. They then mention collecting the water from the roof and watering plants which Red summarizes as they continue walking to their destination (ll. 24 and 26).

Excerpt (2)

```
22 Red: uh:: yeah.
23       (2.5)
24 Red: we can collect it from the roof,
25 Sam: uh huh
26 Red: we can: uh::: use it for plants,
27 Sam: yeah plants, (roof), and ^that one.
28 sam                          ^points toward fountain (fig. 5)
```

Fig. 5

```
29       (0.5)
30 red   continues walking, crossing street against the light
31 ric   continues walking, crossing street against the light
32 Sam: >wai wai wai wait<
33       (0.5) ((Rick and Red stop walking))
34 Sam: just wait
35 Red: what one
36 Sam: ^that one. that.
37 sam  ^points toward fountain (fig. 6)
```

Fig. 6

```
38 Red: for just showing?
39 Sam: yeah
```

The water feature is now visible to the group and when Sam confirms (l. 27) the list Red is making, he adds *that one* to the end of this list while pointing at the water feature just across the street (Fig. 5). After Red and Rick move back out of the street, Red asks Sam for clarification of his reference to *that one* in line 35 with the syntactically-mirrored question *what one.* Sam points to the water feature again and Red orients to the feature as decorative (l. 38), or *just for showing*, which Sam confirms (l. 39) (Fig. 6).

These first two excerpts illustrate the intersection of printed task instructions on the mobile device, the mobility of the group, and the built environment as the two groups approach a water feature, see the water feature, and make that seeing public to the group as relevant for their task. They are to find other uses of rainwater

(besides flushing toilets) and they make the observed water feature relevant as one other such use.

3.2 *Starting a List: Noticing While Stationary and Public Noticing as an Accountable Action*

Unlike the previous two excerpts, in Excerpt (3), the group is not walking during the noticing. They had walked past the water feature (circled on the lower center of the photo) on their way to the place they stop to make their report (path indicated with the dotted line ending in the cross-hatched circle (Fig. 7).

The group members Tamás, Bea, and Attila are playing the Hungarian version of ChronoOps and have located destination four. Bea reads the instructions from the device ('The toilets in the academic student recreational center use rain water collected from the roof to flush. What are other possible uses of collected rain water?') and the group briefly discusses whether to go inside the building and look at the toilets (not included in the transcript excerpt). When the excerpt restarts, they have decided not to because, as Tamás says in lines 63, 65, and 67,

Fig. 7 The area of destination 4. The dashed line shows the participants' route to the destination and their location during Excerpt (3). The water feature is circled

they know how toilets function. Bea’s next action is to offer her interpretation of what is intended by the instructions (ll. 66 and 68). During her turn, at a slight gap after the adverbial *mas* (‘other’), Tamás shifts his gaze toward the nearby water feature (Figs. 8, 9 and 10). As Beá ends her turn, Tamás overlaps the end of her turn with an agreement token (l. 72) and explicitly highlights his turn as offering an exemplar with an environmentally-coupled gesture to the water feature (Fig. 11). The gesture becomes visible beyond Tamás’ body as he utters the word *példaul* (‘for example’). Attila orients to this gesture and shifts his gaze (l. 75, Fig. 12) to the water feature as Tamás offers the example of collected rain water being used to water plants, making relevant the fact that there are trees and sedges set in a stream of falling water. Beá’s response (l. 76) is interesting in that it suggests she had already oriented to that water feature as a contribution she would make to the discussion, her turn treating Tamás’ action of mentioning the water feature (l. 70–71) as pre-emptive and she too turns to look at the water feature in line 77 (Fig. 13).

Excerpt (3)[2]

50 Bea: “mas kép hogy lehet használni az esővízet?
other image how possible use(inf) the rainwater
what other possibilities can you image for this rainwater

51 (.5)

52 fejegyezel a választ a játéknak a füzetben”[1].
note(imp) the answer+ACC the game+DAT the notebook+INE
note the answer in the game’s notebook”

((lines missing –asking about looking at the toilets))

63 Tam: nem kell megnéz[ni mert tudjuk hog[y
neg need(3s)look at(inf) because know(1pl) how
we don’t have to look at them because we know how

64 Bea: [ja [ja
yeah ***yeah***

65 Tam: milyen a vécé [és hogy
what kind the toilet and how
what these toilets are like and how

66 Bea: [ja és [én ugy értem hogy az
yeah and I so understand(1s) how the
yeah and as I understand it (it’s about)

67 Tam: [lehuzje
flush(3s)
they flush

68 Bea: esővíz és mas (.) *a: dolgokra* is lehet
rainwater other the thing+pl+ALL also possible
that there are other uses for rainwater

---

[2] The phrase “the game’s notebook” refers to the metaphorical notebook, the place in the game app where the groups’ video or audio recordings are stored.

```
69 tam                  *looks toward a nearby fountain (fig. 8)
70 tam                              *gaze to B (fig. 9),to fountain (fig. 10)
```

Fig. 8

Fig. 9

Fig. 10

```
71      használn[i,
        use(inf)
        possible

72 Tam:         [igen *például
                 yes for example
73 tam             *points and then surveys the area (fig. 11)
```

Fig. 11

```
74 Tam:  %locsolni lehet a növénye[t,
         water(inf) possible the plant+ACC
         watering plants is possible
75 ati %gaze shift to water feature (fig. 12)
```

Fig. 12

```
76 Bea:                        [^igen azt akartam mondani
                                yes that+ACC want(1ppt) say(inf)
                                yes I wanted to say that
77 bea                          ^turns to survey area (fig. 13)
```

Fig. 13

```
78 Tam: szerinted  míre     lehet   hasznalni az  esővízet.
        think(2s) what+ALL possible use(inf) the rainwater+ACC
        what do you think what else can rainwater be used for.

79      még    míre.
        still  what+ALL
        what else
```

Excerpt (3) shows how the water feature becomes relevant for the task even though it is not at a point of the group's first sighting of the feature. It becomes relevant, however, at a particular point in the interaction. The sequence starts with two shifts of gaze by Tamás toward the item (Figs. 8 and 10) as a current speaker's (Bea's) turn summarizing the task prompt about naming other uses of rainwater nears its projected end. As Bea's turn ends, an agreement turn by Tamás (l. 72) is accompanied by a deictic gesture (Fig. 11) coupled with the talk to highlight the noticeable as an exemplar relevant to the use of rainwater. It is offered by Tamás as a second part of the action trajectory and to support Bea's candidate understanding of the task. Both Attila and Bea orient to it with their own gaze shifts. Even though the group remains in closed-group formation during this sequence, their gaze and posture shifts and deictic gesturing allow them to survey the area to find relevant environmental resources to bring into the pre-planning work for their report. Indeed, it is the gaze and gesture of Tamás that make a noticing public even before talk is used to make the noticeable relevant.

3.3 A Last Mentionable to Hold the Group and Start the List

In the last Excerpts (4a) and (4b) from a group of German speakers (Monica, Sylvia, and Bert), the water feature at location four, an exemplar for the activity, is oriented to as relevant and serves to clarify the instructions for the task. The noticing by one group member (Monica) also draws the other two group members back to original position after they moved away, prematurely.

Like the previous excerpts, one group member (Sylvia) reads the instructions from the phone. The group has stopped walking and is located adjacent to the water fountain as indicated by the cross-hatched circle in Fig. 14.

When Sylvia finishes reading those instructions (l. 19), Bert looks around the area, points toward and then moves toward the student recreation center building mentioned in the instructions (l. 28) and Sylvia follows him (l. 29, Fig. 16). Bert and Sylvia's movement show their mutual orientation to a building named in the instructions that is visible to them. When they begin walking northward, however, Monica orients to the water fountain just three meters in front of the group as one item the instructions asked the participants to collect: one possible source of rain water. Rather than following her co-participants, she remains facing eastward toward the water feature and makes her noticing of the water fountain public, uttering the non-lexical 'uh' (l. 30) which stops Sylvia and Bert momentarily (ll. 31, 32). Monica then points to the water feature (l. 34, Fig. 17) which draws the gaze of Bert (who has since moved back toward Monica) and asks (l. 35) – *ist das von de- uh Regenwasser* ('is that from rain water?'). This turn may be a question about the source of the water in the fountain, but given the task instruction (*what are further uses of rainwater*), it is also hearable as a suggestion for an answer to the task prompt. Monica's upgrade of the suggestion, interrogatively-formed in line 41 also provides evidence that she is wondering about the fountain being another use of rainwater. However, as Excerpt (4b) shows, it is not immediately oriented to as such by the group.

Fig. 14 The area of destination 4. The location of the group during Excerpts (4a) and (4b) is indicated by the cross-hatched circle near the bottom of the figure. The water feature is circled

Excerpt (4a)

```
15 Syl: °die toiletten im Ak- (2.3) werden mit regenwasser
        the toilets    in Ak         are    with rainwater
        the toilets in the Ak      are flushed with

16      gespült°
        rainwater

17 Mon: co↑ol.

18 Syl: °Das regenwasser wird vom Dach gesammelt.(.) was
        The rainwater    is  from roof collected     what
         Rainwater is collected from the roof.   What

19      [sind weiter benutzung von res- regenwasser.° (fig. 15)
         are further uses      of       rainwater°
20 Mon: [hmm
```

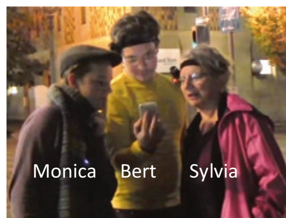

Fig. 15

```
21 Syl: ↑Okay. (.) regenwasser. ((steps out of f formation))
                    rainwater

22 Ber: U:hh (.) Okay?

23 Syl: ja?
        yes

24 Mon: kay.

25 Syl: *regenwasser
          Rainwater
26 syl  *takes two steps eastward and stops

27 Ber: ^ ah            ^*hier?
                          here
28 ber  ^looks around ^points north walks toward Rec Center
29 syl                  *walks toward Rec Center (fig. 16)
```

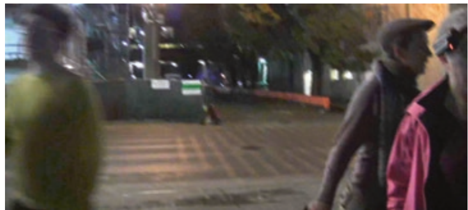

Fig. 16

```
30 Mon: uh:*: ^((M looking toward water fountain))
31 syl     *shifts gaze toward Monica but continues walking
32 ber        ^stops walking and moves back toward Monica
33        (4.5)
34 mon  points to fountain (fig. 17)
```

Fig. 17

```
35 Mon: ist das *von   de- uh Regenwasser?
        is   that from the     rainwater
36 syl          *walks toward fountain

37        (.5)
38 Ber: Uh:::: (.) fountain?
39 Mon: ja
        yes

40        (1.5)  ((group reforms f-formation))

41 Mon: ist [das ein andere benutzung
        is   that  another   use
42 Ber:     [uh:::::::::::

43 Ber: toiletten?
        toilets

44      (1.8)
```

In (4b), line 45, Sylvia orients to Monica's turn from line 35 as not relevant to the task and then in lines 47 and 49 repeats that the rain water comes from the roof, including in the second turn, a deictic gesture toward the roof of the focal building (l. 50). It may be that she had not heard Monica's second question in line 41. Monica claims epistemic access (l. 52) and then points to the phone (l. 53) as part of attempting to clarify the task instructions. Sylvia summarizes the instructions in lines 5v9 and 61 ('other uses of rainwater…besides toilets') to which Monica utters an agreement prefaced turn *vielleicht das* ('maybe that', l. 63) with a deictic gesture to the fountain (l. 64), a turn which, given its sequential placement just after Sylvia's summary of the instructions, is hearable now as 'perhaps that (the fountain) is one of the other uses or rainwater'. And Sylvia agrees with that proposal (l. 66). The group still has not uttered the German word for 'fountain' and the definition request soon follows, initiated by Bert and Monica.

Excerpt (4b)

```
41 Mon: ist [das ein andere benutzung
        is   that  another   use
42 Ber:     [uh:::::::::::

43 Ber: toiletten?
        toilets
44      (1.8)

45 Syl: es [sagt nichts wo] es gesammelt wird.
        it says   not  where it collected is
        it doesn't say where it is collected

46 Ber:    [nein     uh:::]
            no

47 Syl: vom vom dach vom dach
       from from roof from roof

48 Mon: ja
        yeah

49 Syl: vom *dach vom [dach
        from roof from roof
50 syl      *points toward roof

51 Ber:                [oh

52 Mon: Ja ich weiss
        yes I know

53 Mon: es es es  ((pointing to phone as she speaks))
         it it it

54     (1.5)

55 Mon: frage
         ask

56      (0.5)

57 Mon: e- es fragt
           it asks
```

```
58 Ber: die::
         the::

59 Syl: was was sind die an- andere benutzungen von Regenwasser
        what what are the     other  uses         of  rainwater

60 Mon: j[a
        yeah

61 Syl:  [a- außer toiletten toiletten und was noch. wenn [man-
            besides  toilets toilets   and what else when one

62 Mon:                                                    [Ja.
                                                            yes
63       %*vi- vielleicht das
                maybe    that
64 mon   %points to water feature
65 syl    *shifts gaze to water feature

66 Syl:  okay
```

In summary, at the start of excerpt series (4), at the end of the reading of the instructions for the task, Bert and Sylvia move toward a referent named in those instructions – the Student Recreation Center. Monica orients to that movement as misguided and makes suggestions to realign the other two with her preferred course of action by publicly orienting to the fountain. The movement by the other two away from this environmental resource is oriented to by Monica as being a possible last opportunity to make the fountain an item to use for the task, a last mentionable (Schegloff and Sacks 1973). She does this by remaining in place, shifting her gaze, and pointing to the fountain which draws the other two members of the group back to their f formation.

By remaining in the starting position of the group and making her noticing public, Monica is held accountable for that noticing by Sylvia who indicates that the fountain is not what was suggested by the instructions as a place for water to be collected. When Monica reorients the group to what the instructions indicate (ll. 53, 55, 57) and after Sylvia summarizes those instructions (l. 59), it becomes clear that Monica's noticeable was meant as a further example of the use of rainwater. Monica makes this noticing public even without the lexical referent for the item in the language being used for the activity.

4 Discussion and Conclusion

Although conversation analysts, ethnographers, and functional linguists have made language use the focus of their investigations, the study of the indexical properties of language has received less attention (Levinson 2004). Similarly, studies of language learning have focused on the acquisition of fully referential, symbolic forms rather than deictic practices for language use. Our analysis has shown the use of

deixis as part of the embodied interactional practices used by AR game players to make particular objects in surrounding semiotic fields relevant for their current task (making an oral report about a particular use of green technology). The deictic gestures and expressions together with their visible referents and task instructions on a phone are part of an interactional gestalt (Maynard 2006) that are attentional (Levinson 2004) – shifting the attention of group members to the relevant resource, providing insight into the meaning making during small group interaction. Our goal was to highlight that the participants make use of semiotic fields that unfold before them as a resource for their talk-in-interaction. In this way, a written instruction in the AR game on the mobile device, written in an L2 for many of the participants in our data, is understood by three participants with respect to a salient built environmental object, an understanding that is facilitated by gaze, gesture, and talk. Such sites of intersecting visible, audible, and cultural (including linguistic) resources provide a rich array of cues for meaning making. We argue, therefore, that such points in time and space become potential L2 learning environments.

Arising from our empirical analyses, we use the terms hypercontextualization and situated usage events to describe the intentional structuring of language learning opportunities that occur during a mobile place-based AR game. Multimodal analysis grounded in EMCA show the ways participants index and make relevant material resources in their immediate physical context. These findings support AR place-based task design as a way to foster participants' use of the immediate context and the physical environment as raw material for improvisationally and collaborative achieving the AR tasks. Additional findings in other of our AR research projects (e.g., Thorne et al. 2015; Hellermann et al. 2017) show that movement through the environment in small groups provides affordances for language use that illustrate the significance of context on the form and content of communication. As described recently in the enactivism literature,

> we hold that to understand phenomenal experience fully unavoidably requires attending to the original, environment-involving ways in which individuals engage with certain worldly offerings through bouts of extended sensorimotor interaction. (Hutto and Myin 2013, p. 8)

Through micro-interactional analysis of events related to pre-planning for a report, we show how gaze, gesture, and language are used in an orderly manner to co-construct and maintain intersubjectivity in a way that is enmeshed with, and contributed to by, physical contexts. This research shows how problems in understanding as well as moving next actions forward are made public via talk-in-interaction, which served to coordinate virtual-digital and sensory-visual information and which eventually led to successfully completing preparation for the report-making task. AR game participants did this by looking around, pointing, reading aloud, and audibly communicating what they could see (and to lesser degrees hear, touch, and smell) around them. Such actions illustrate the integrated, distributed nature of language (Cowley 2009; Harris 1981, 1998). From this perspective, multi-party co-action is not simply an artifact of embodied, purposeful, and coordinated languaging activity but is the languaging activity (Garfinkel 2002).

The focus of this research has been the empirical examination of language learners engaged in playing an augmented reality (AR) place-based mobile game for foreign language learning. Designing AR games to highlight and more fully appreciate the local context of specific places is a growing phenomenon, with theoretical grounding in situated learning theory, ethnomethodology, enactivism and distributed cognition, and critical pedagogy (Gruenewald 2003). In this sense, neither the brain nor the individual are the exclusive loci of cognition; rather, the focus is on understanding the organization of systems, or "cognition in the wild" (Hutchins 1995), which presumes an ecological view of cognitive activity as organized by the interplay between persons and resources that are distributed across social and material environments. This approach to cognition and communication suggests that human action and development show phenotypic plasticity in relation to specific temporal, social, and material contexts (Thorne 2016). Context is not a container for human activity. Rather, building in different ways upon Hutchins (1995) and Latour (2005), the proposal is that digital tools and environmentally situated human experience form complex ecologies.

We are not arguing that there is a balanced symmetry between humans and artifacts (see Kaptelinin and Nardi 2006), but we do suggest that catalysts for action can include brains, bodies and a range of material objects and virtual media. Drawing upon new materialism and extended and distributed approaches to cognition and communication, empirical research using multimodal conversation analysis is in a position to show how non-human entities, in their way, contribute to the structuring of talk-in-interaction. This position contests the dichotomization of artifacts, context, and humans as distinctly independent from one another. Rather, artifacts, context, and humans together create particular morphologies of action.

This theoretical perspective on language and interaction and the research and findings in this chapter also provide empirical support for a distributed, ecological perspective to better understand language learning in the wild (Wagner 2015). In fact, we might argue that the rich empirical data we are working with compel the analyst to find theory that re-considers more logocentric perspectives (Mondada 2016) of traditional language learning research.

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The Rally Course: Learners as Co-designers of Out-of-Classroom Language Learning Tasks

Niina Lilja, Arja Piirainen-Marsh, Brendon Clark, and Nicholas B. Torretta

Abstract This chapter introduces a "Rally Course" as a novel CA-inspired approach to teaching a second language. This approach builds on an understanding of language learning as a social process that is closely intertwined with L2 speakers' evolving membership in the surrounding community. It addresses the need to develop experiential pedagogies that widen learners' opportunities for interaction and support the socialisation process. Building on recent pedagogical initiatives supporting language learning in the wild, we illustrate the overall structure of the Rally Course, describe the main materials that were designed to support the learning objectives and present a case analysis of a student carrying out a pedagogical activity supported by the materials.

Keywords Interaction navigator · Journey map · Mapping activity · Photo journal · Rally Course

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1 Introduction

Contemporary societies are rapidly changing due to increased mobility of people and fast technologization impacting the ways people use languages and interact. This diversity of contemporary life (sometimes referred to as the era of superdiversity, Vertovec 2007; Thorne 2013; Douglas Fir Group 2016) makes it necessary to develop pedagogical practices that respond to the needs of today's language learners. Sustainable pedagogical practices in turn need to be founded on a research-based understanding of how second and additional languages are used in the complexity of social interactions and how these language use situations afford occasions for learning.

This chapter introduces a novel CA-inspired approach to teaching second languages, which integrates real-life social tasks into classroom learning and involves a participatory teaching process that allows second language (L2) learners to self-design their own learning journeys. The approach is grounded in an understanding of language learning as a social process that is inextricably tied to L2 speakers' evolving membership in the surrounding community. It addresses the need to develop experiential pedagogies that widen the learners' opportunities for interaction and support the socialisation process (e.g. Gardner and Wagner 2004; Hellermann 2008, 2011; Pekarek Doehler and Berger 2016, this volume; Eskildsen et al. this volume). Building on recent pedagogical initiatives supporting language learning in the wild (see e.g. Clark and Lindemalm 2011; Clark et al. 2011; Wagner 2015), we argue for experientially-based pedagogical practices that connect the language use environments in L2 users' life-worlds with classroom practices.

The use of authentic materials and the importance of learners' personal experiences in language learning have long been emphasized in task-based language teaching (see e.g. Samuda and Bygate 2008). However, the learning potentials of out-of-classroom social tasks remain to be explored (however, see Lilja and Piirainen-Marsh 2019; Eskildsen, this volume). Developing pedagogical tasks that move beyond the classroom extends the potential opportunities and spaces for learning into the unknown relationships and contingencies of interactions in the full ecology of socio-material resources that they are embedded in. Designing and carrying out such tasks, however, may pose challenges both for the teacher and for the learners. In this chapter, we identify some of these challenges and discuss how to create classroom spaces that scaffold learners in their language use and learning outside the classroom walls.

From an ethnomethodological perspective learning is grounded in the sense-making procedures and methods that enable members of a community to accomplish any social activity in different settings (Lee 2010). Language learning is thus closely intertwined with those interactional resources that speakers use to understand each other and to organize their social world. In this sense, learning is rooted in action and involves the development of a repertoire of linguistic and other semiotic resources for context-sensitive conduct; i.e. resources that enable L2 speakers

to participate in social activity in their life-world (see e.g. Hall et al. 2011; Kasper and Wagner 2011; Eskildsen and Wagner 2015).

Earlier work applying conversation analytic perspectives to L2 teaching has highlighted the importance of using authentic conversations in teaching in order to expose language learners to real-life language and to help them become aware of language use in interaction (Barraja-Rohan 2011; Betz and Huth 2014). As language learners work with transcribed excerpts of authentic interactions, they can learn to notice for example how turns at talk are organized as paired actions or how certain linguistic structures work differently in speech than in written format. The use of recordings enables learners to pay attention to the nuances of spoken language and opens up opportunities for participating in social interaction in culturally appropriate ways (Betz and Huth 2014; Taleghani-Nikazm 2016). Central to all CA-inspired pedagogical development is the conception of language as action. In interaction participants do not so much focus on monitoring the linguistic detail of each other's turns, but rather on finding out what the co-participants try to achieve by what they are saying, i.e. what they are doing by their turns-at-talk. This conception of language has – or it should have – radical consequences also for language teaching (cf. Eskildsen and Markee 2018).

The Rally Course is an outcome of an ongoing collaborative design process that combines action research and an empirically based understanding of the processes of L2 learning and teaching. The course was an outcome of collaborative work in a Nordic network of researchers, language teachers and designers that aimed to develop theoretically grounded and socially anchored pedagogic practices to facilitate newcomers' learning journey on their individual paths into a new language and the new society. The network has its roots in the pioneering work by Gudrun Theodórsdóttir and Johannes Wagner in developing the Icelandic Village in Reykjavik (see Wagner 2015). The Icelandic Village project has developed social infrastructures for supporting L2 learning in the local community. For example, teachers of Icelandic as L2 have created learning spaces beyond the classroom by establishing a network of service providers to interact with learners in Icelandic. This way learners can feel safe in using their second language in various everyday interactions (in a bookshop, bakery, swimming pool etc.) (see Theodórsdóttir 2011a, b, 2018; Theodórsdóttir and Eskildsen 2011). The pedagogical process in the Icelandic village involves preparing for the interactions outside the classroom, recording one's own interactions and reflecting on them back in the classroom (see Wagner 2015). Similar ideas have been put to use in the Swedish Språkskap-project (see Clark and Lindemalm 2011) and in Finland (Lilja and Piirainen-Marsh 2016, 2019; Piirainen-Marsh and Lilja, this volume), leading to the collaborative process through which the Rally Course was designed.

In the sections to follow, we introduce the theoretical underpinnings of the Rally Course, illustrate the overall structure of the course and describe the main materials that were designed to support the learning objectives. After that we present a case

analysis of one student carrying out a pedagogical activity supported by the materials. The analysis, informed by conversation analytic methodology, illustrates the possibilities for language use and learning that were afforded by the activity. We conclude by discussing the findings and outlining directions for future research and pedagogical development.

2 Theoretical Underpinnings

Underpinning the design of the Rally Course was the idea of a car rally: in the same way as a rally course involves navigating unknown terrain and adapting to changing conditions, language learning involves adaptation to continually changing environments and sociocultural landscapes through situated interaction.[1] One can prepare for a rally course but it is impossible to plan and prepare for every contingency. Important is also the idea of co-operation: a rally driver needs to rely on a co-pilot to navigate the course, and in a similar way, a language learner needs other people (e.g. fellow students and teachers, members of the community) to support her in language use and learning.

The metaphor of a car rally resonates with our understanding of language learning. Following previous CA-SLA studies, we view learning as *situated, occasioned* and *embodied* participation in social activities (see Firth and Wagner 1997, 2007; Markee 2008; Markee and Seo 2009; Kasper and Wagner 2011; Eskildsen and Wagner 2013, 2015). Language learning is also a continuous process: language use environments are in constant flux and a language user needs to be able to adapt to changing contexts. This has brought about the need to redefine the target of learning: learning a language means developing interactional competences to be able to accomplish meaningful social actions that are context-sensitive and recognizable to others (see e.g. Hall et al. 2011; Pekarek Doehler and Pochon-Berger 2015). Because of the situated and occasioned character of language use and learning, it is also important for a learner to gain access to many different kinds of language use situations that are relevant in his or her social environment. Participation in relevant interactions in different contexts makes it possible to develop rich interactional repertoires (Douglas Fir Group 2016, Pekarek Doehler and Pochon-Berger 2015; Wagner 2015; Eskildsen, this volume). From the viewpoint of language teaching, however, this can be a challenge since it is not possible for a teacher to know or estimate what the relevant language use environments for each individual student are and how to best support their participation in them. In the design of the Rally

[1] The metaphor of a race track is also used in the CARM-method (Conversation analytical Role-Play Method), developed by Elizabeth Stokoe, to refer to the unpredictable nature of the unfolding of authentic interactions (see CARM, Stokoe 2014). In our use of the car rally -metaphor we want to highlight both the idea of changing conditions of naturally occurring interaction and the importance of other people in supporting the achievement of intersubjectivity and the activities of learning.

Course, we address this challenge by guiding the students first to become more aware of the type of interactions that are relevant for their everyday life and then to observe the linguistic and interactional structures that are recurrent in these.

The Rally Course builds on an understanding of language as part of a larger ecology of action, and learning as a process of developing a repertoire of semiotic resources for acting in the social world (see Eskildsen et al. this volume). The aim was to develop tangible pedagogical materials and flexible practices that would augment the resources that learners have at their disposal and facilitate their participation in interactions in their lifeworld. Following the multimodal and embodied turn in research on language use and learning (see Nevile 2015), recent studies have demonstrated the central role of gestures and material resources in achieving and maintaining intersubjectivity in L2 interaction (see e.g. Majlesi and Broth 2012; Lilja 2014; Eskildsen and Wagner 2015, 2018). Eskildsen and Wagner (2015) demonstrate how certain types of gestures accompany certain linguistic structures repeatedly over time. This gesture-vocabulary-coupling suggests a strong link between gesture and L2 vocabulary learning. Lilja and Piirainen-Marsh (2019), on the other hand, illustrate how smart-phones as material objects create affordances for learning activity and structure learners' analysis of their language use experiences. However, more research is needed to understand what the material ecologies of language use environments outside classrooms afford for language use and learning (but see Kasper and Burch 2016; Greer, this volume; Hellermann et al. this volume; Piirainen-Marsh and Lilja, this volume).

The design of the Rally Course relies on the view that L2 learning is a process of identity work, and the identity of a learner is not the only identity relevant for a second language user (Firth and Wagner 1997, 2007; Douglas Fir Group 2016). A person may be a second language learner but also a mother, a wife, a professional dancer and a teacher at the same time, and these identities can be mobilized and treated as relevant for the interactional business in varying ways in different situations. Various identities shape learners' interactions and vice versa: the identity of a person may also develop through the experiences gained in interactions (see e.g. Norton 2013). Because of this, the Rally Course is based on a radically student-centred idea of teaching: the students are encouraged to assess their own interactional competences and identify the real-life language use situations they want to practice. They are also asked to reflect on their own goals, including linguistic features that they aim to understand better. Based on this self-assessment, the students choose what kinds of interactions they want to observe, participate in and learn from. In this way, the students may focus on interactions and learning targets that are relevant for them and continue building their language learning biographies and constructing their identities in situations of their own choice.

3 The Rally Course in Action

In this section we introduce the Rally Course and describe how it was implemented in Finland in teaching advanced students of Finnish. To date, the course has been taught twice at the Tampere University.[2] The participants were exchange students or international masters' students, with 13 participating in the first course and 9 in the second. They had all studied Finnish for several years either in their home universities (in the case of exchange students) or on other courses of Finnish in Finland. Their language proficiency level was assessed as part of the entrance examination for studies of Finnish. All participants were at least at the level of B1 in the Common European Framework of Reference for languages (CEFR). However, for most of the students, using spoken Finnish was a challenge. Some had not had many opportunities to speak Finnish in their own countries. Also for those learners who live in Finland, it is sometimes difficult to find opportunities to engage in conversations in Finnish because co-participants often switch to English (see also Wagner 2015; Eskildsen and Theodórsdóttir 2017). In addition, the written and spoken versions of Finnish differ considerably and learners commonly complain about having to learn two different languages at the same time.

The overall structure for the Rally Course and the pedagogical and material practices designed for the course were based on experiences that we gained when adapting the ideas of the Icelandic Village to teaching Finnish as L2. On courses of conversational Finnish for beginning learners, we established a network of service providers who agreed to interact with the students in Finnish and gave their consent to be videorecorded. The students planned excursions to selected service providers, participated in service encounters and videorecorded their own interactions, which they later analysed back in the classroom (see Piirainen-Marsh and Lilja, this volume). When analyzing data collected during these courses, we observed that some of the students' interactions did not show sensitivity to the ecology of the out-of-classroom settings. This brought about the need to tie the out-of-classroom activities more closely to the interests of the learners to make the activities more authentic and relevant for them. Secondly, we noticed the importance of the de-briefing phase where the students discussed their language use experiences as a space for observing and analyzing the interactions (Lilja and Piirainen-Marsh 2019, see also Wagner 2015). This highlighted the need to create more flexible spaces for reflection and to design materials to support it. To this end, we organised a workshop with teachers and interaction designers to develop an experientially-based language course that would center on the students' own needs and interests. The curriculum for the Rally Course is an outcome of a collaborative design process that was initiated in the workshop and continued throughout the first time the course was taught. Figure 1 shows the basic structure of the Rally Course.

[2] After the courses in Finland, the same course and material have been adapted to beginning learners of Icelandic in Iceland.

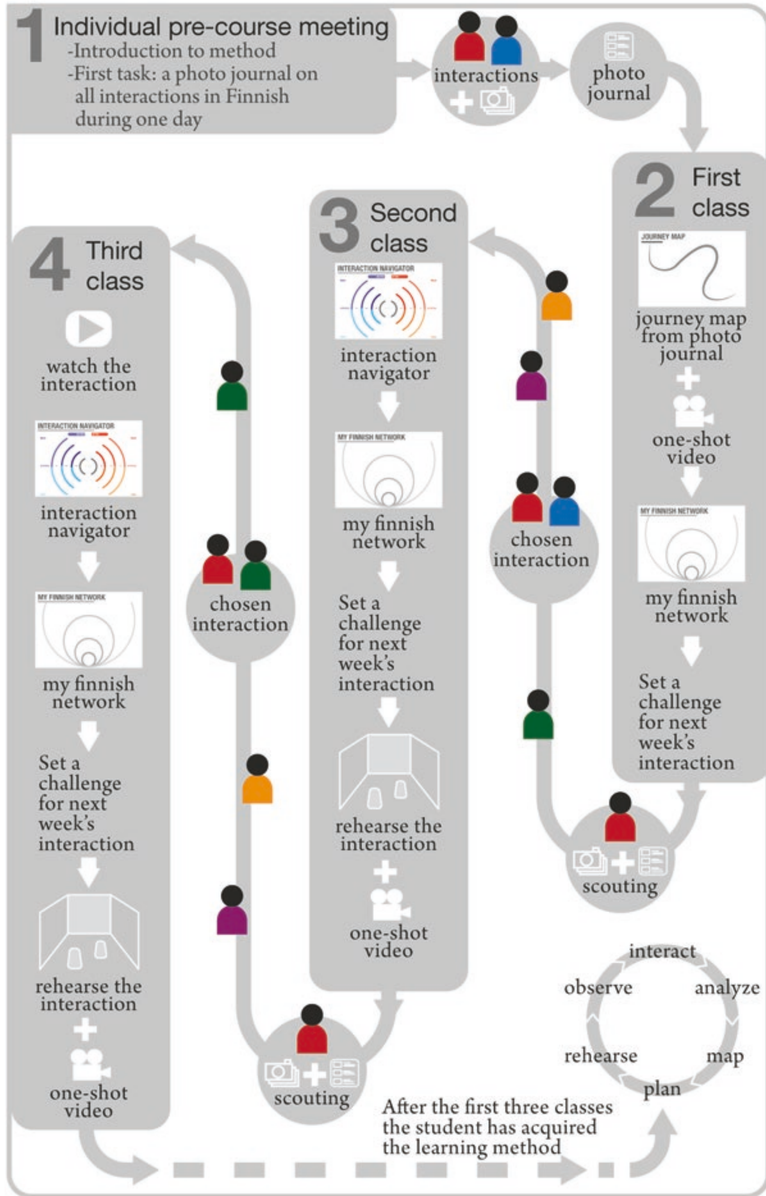

Fig. 1 The structure of the Rally Course

In order to make the learning activities relevant for the students, the teacher organized pre-course meetings with each individual student to get information about the student's learning goals and to gain understanding of their needs and future plans regarding the Finnish language. As Fig. 1 shows, the first three lessons of the course

Kun minä heräsin, minä menin kauppaan ostaakseni jotakin syötävää. Minä en puhunut suomea paljon. Minä vain kysyin myyjältä missä mehuja ovat. Sitten tietysti `kiitos`.

Parin tunnin päästä menin kirjakauppaan, koska tarvitsin vironkielinen kirja. Kysyin myyjältä onko heillä on jotakin minulle. Hän vastasi, että kaupassa ovat vain suomenkielisia ja englanninkielisia kirjoja.

Minulla oli nälkä. Siksi minun piti mennä syömään jotakin. Juvenes-ravintola oli hyvä paikka. Mutta siellä minä vain sanoin, että en tarvitse kuittia.

Fig. 2 An example of a Photo journal

introduced and repeated the same kind of learning activities (mapping activities, planning and rehearsing for interactions outside classroom, participating in interactions outside language classroom, and reflecting on these back in the class). The purpose was to familiarize the students with these activities so that they would be able to use the same methods in their everyday language use situations also beyond the course.

3.1 Raising Awareness of Language Use Situations Through Mapping Activities

The first learning activities in the course all aimed to raise the learners' awareness of where and with whom they use Finnish and of the potential places and interactions in which they do not yet use Finnish but could do so. These mapping activities included a photo journal, a journey map and 'My Finnish network' (about mapping activities see also Clark and Lindemalm 2011; Wagner 2015).

The *photo journal* assignment was given to the students before the course started. The students were instructed to take photos of all the situations in which they used Finnish during one typical day in their life and to write a little note about each situation. Figure 2 gives an example of a part of a photo journal.

In Fig. 2, a student presents photos of three typical encounters during his day.[3] In his comment about the photo of a supermarket (on the left) he reports that he did not use much Finnish there: he only asked about the whereabouts of juices and thanked

[3] The translations of the texts written by the student: (1) As I woke up I went to the supermarket to buy something to eat. I did not speak much in Finnish. I only asked the clerk where the juices are. And then of course 'thank you'. (2) After a couple of hours, I went to a book store because I needed a book in Estonian. I asked the clerk if they had something for me. He answered that in this shop they only have books in Finnish and in English. (3) I was hungry. Because of that I had to go and eat something. The Juvenes restaurant was a good place. But there I only said that I don't need the receipt.

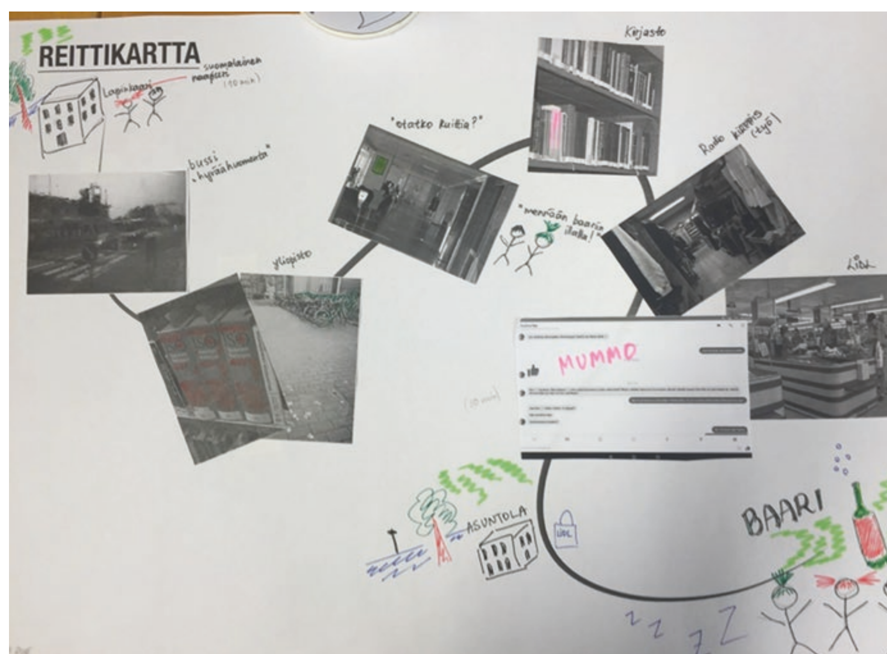

Fig. 3 An example of a journey map

the clerk who answered him. In a bookshop (the photo in the middle), he had enquired about a book written in Estonian and learned that the shop only sells books in Finnish and English. In a student restaurant (the photo on the right), the only thing he said was that he did not want the receipt.

The idea of a photo journal is to make the variety of everyday language use situations observable. For example, the journal illustrated in Fig. 2 shows that all the referred-to interactions are different types of basic service encounters, which do not afford much variation in interactional or linguistics structures. The journal also makes it easier to identify what is possibly missing from the daily interactions and to imagine the kinds of situations in which the students would like to use their L2 if possible.

The photo journals were also used as a basis for another mapping activity: *a journey map*. The pedagogical objective of this activity is similar to that of the photo journal: to help the students become aware of the typical language use situations they encounter during one day and to reflect on the variety of the situations. The journey maps were compiled on the basis of the photo journals: The students were instructed to compare their journals in small groups and to identify the language use situations that were similar and recurrent in their journals. Based on these, they abstracted the language use situations of a typical student during one day and drew a chronological illustration of these (see Fig. 3).

Figure 3 exemplifies a journey map that one group of students compiled based on their photo journals. Like the photo journal in Fig. 2, this journey map also demonstrates that the typical everyday encounters that the students identified are mostly service encounters, such as conversations with a bus driver or cashiers in a student restaurant and a supermar-

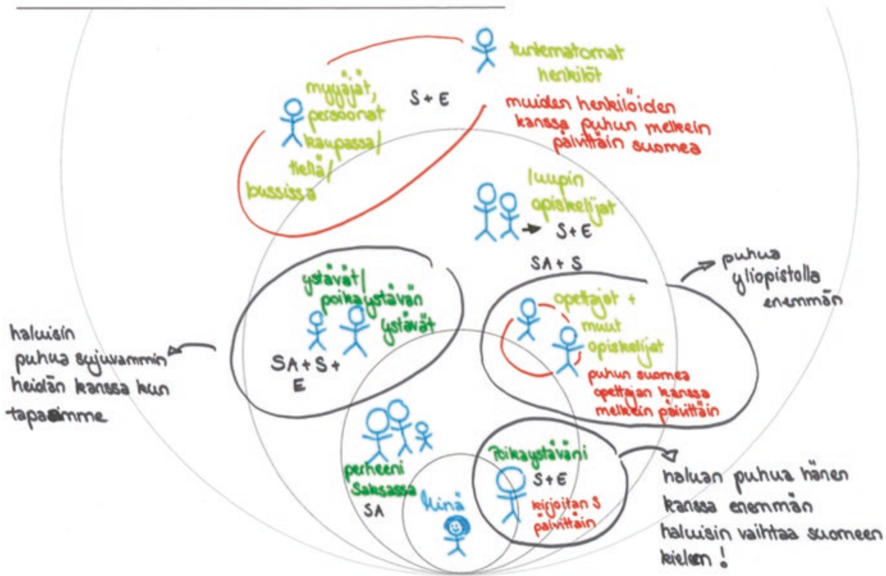

Fig. 4 My Finnish network

ket. In addition, the students also identified some other types of interactions, like a short 10-min conversation with a neighbor (presented in the upper left corner of the map) and a night out in a bar with a group of friends (see lower right corner). These more personal exchanges bring variation to the language use situations identified.

Another type of mapping activity used in the Rally Course was *My Finnish network*. In this activity, the students used a simple template (Fig. 4) to identify the persons with whom they use Finnish. They drew themselves in the centre of the template and added their network of people around themselves. In Fig. 4, a student has drawn her network of friends and acquaintances and indicated which language she uses with them. The abbreviation S refers to Finnish, SA to German and E to English. The drawing shows that this student uses Finnish with her boyfriend, with other students and teachers at the University and with service personnel. However, the student has also written that she would like to use more Finnish with her boyfriend (with whom she uses both Finnish and English) and that she would like to extend her Finnish language use situations at the University. The language network activity was repeated towards the end of the course in order to analyse whether the students' Finnish network had expanded during the course.

A homework routine for the students consisted of *scouting activities*. These involved visiting different physical places in which people interact, observing the material environments as well as language use practices visible and hearable in them, and documenting the observations by taking photos and making notes. The aim of the scouting activities was to sensitize the learners to noticing the linguistic and material resources available in their physical surroundings and to encourage them to pay attention to language use resources in their environment.

3.2 Material Practices for Planning and Rehearsing: Interaction Navigator and One-Shot-Video

Another material practice that structured and supported the learners' participation in everyday language use situations during the Rally Course was the Interaction Navigator. For a learner, the Interaction Navigator is a paper-based template with a simple structure for identifying a central interaction and for reflecting on what can or did take place before, during and after the interaction (see Fig. 5). During the course the navigator served as a tool for the learners to design their own learning journeys.

The Interaction Navigator was used together with the other pedagogical activities and material resources to support the students in preparing for interactions in the wild and in observing and sharing their experiences of these afterwards. The purpose was to create flexible spaces for noticing opportunities for learning in interactions outside the classroom and for reflecting on these both on site and later in the classroom.

Next, we will show how the Interaction Navigator was used on the course together with the other activities and materials in order to illustrate how the central ideas behind it can shape the students' interactions. Our focus is on one student, whom we call Silvia.[4] We noted that for some of the students it took more time to get used to the teaching and learning practices than for others. Silvia was selected as the focal participant because she exemplifies a student who appeared resistant in the beginning of the course, but then accommodated herself rather well to the study methods used in the course. However, she is not representative of all students who participated in the course. The examples to follow show how Silvia co-designs an out-of-classroom learning task to meet her own needs and interests with the support of the teacher and the pedagogical framework. The examples illustrate the preparation, participation and de-briefing phases of Silvia's first excursion into the wild in the Rally Course. The students chose what kind of interactions they wanted to participate in themselves, but they were encouraged to choose situations that were somehow relevant for them at the time. Silvia wanted to visit a bookstore because she was searching for a book for her mother as a gift. She went to the store with two other students and they planned the visit together.

A number of studies have shown that planning for L2 use situations is a complex task and may lead to learner behaviours that are not necessarily intended by task design(ers) or by the teacher (see e.g. Mori 2002, Hellermann and Pekarek Doehler 2010; Kunitz 2013). It has also been shown that as L2 speakers plan their future language use situations, they may focus on vocabulary and grammar (Markee and Kunitz 2013). While such focus on linguistic detail may sometimes be warranted, in the Rally Course we wanted to encourage the students to focus on interactional features, that is, to think about the overall structure of the interaction, about the participants' roles and the interactional and cultural expectations that these may bring about (see also Lee and Burch 2017) (Fig. 5).

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[4] 'Silvia' is a pseudonym for the focal student. All students and their co-participants in interactions gave written consent for the use of the recordings of these interactions for research purposes.

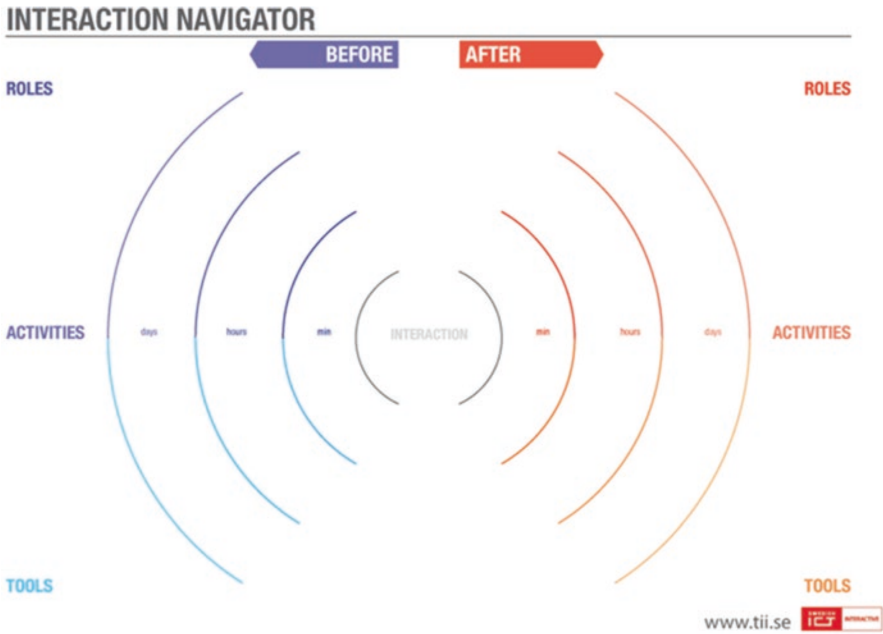

Fig. 5 The Interaction Navigator

Fig. 6 Recording one-shot-videos

The planning of the interactions was supported by different kinds of pedagogical and material practices. In the classroom, the students worked in groups in order to prepare for the interactions of their choice and rehearsed them using tangible materials: they built a scene for the interaction using a cardboard stage and acted out the interaction with the help of small paper-cup figures representing the participants (see Fig. 6). These rehearsals were recorded as one-shot-videos by the participants

themselves using their own mobile devices. A one-shot-video is a video recording that has not been edited and that lasts no more than 3 min. The idea is that the camera does not focus on the person speaking but rather on the materials that are used to support the activity at hand. This helps students focus on the planning and can reduce stress that might be experienced if the camera focused on the speaker.

The value of making one-shot-videos is that they make the students' plans publicly accessible for others, which can foster further planning and sharing of ideas. In addition, the visualization of the future interactions may help the students in envisioning the forthcoming interactions and enable them to notice something that may be relevant in preparing for the interaction (see Murphy 2004, 2005; Kunitz 2015). The video also makes participants aware of potential audiences that may be known or only imagined. The idea of an audience adds challenge to the situation and pushes the performers to do their best.

Excerpt 1 comes from a one-shot-video that captures how Silvia rehearses her planned interaction in the bookstore.

Excerpt 1

```
01 Sil:  okei joo (.) eli tässä (.) olen minä (.)
         okay yeah (.) so here (.) I am (.)

02       ja sitten ää menen kirjakaupalle (.)
         and then eh: I go to the book store (.)

03       ja pysähdyn vielä hetken kirjakaupan eteen
         and in front of the book store I stop

04       ja mietin vähän näitä kysymyksiä (.)
         and think about these questions (.)

05       joita haluaisi kysyä ja (.)
         that I would like to ask and (.)

06       sitten menen kirjakaupaan ja etsin myyjää? (.)
         then I enter the store and look for the clerk? (.)

07       ja ää kysyn sitten (.) tai ää (.)
         and eh ask then (.) or eh (.)

08       ensin selitän tilannettani ja
         first I explain my situation and
```

The excerpt shows that as Silvia talks about the imagined scenario in the bookshop, her focus is not on detailed linguistic aspects of the task: she does not report on the questions that she intends to ask, nor does she pay attention to the language she intends to use. Instead, she describes the preparatory phase and the beginning of the service encounter. After identifying herself as one the figures, she narrates what she plans to do before she enters the bookshop. She has prepared some questions beforehand and she plans to stop and think about the questions before walking in (l. 1–5). After that she describes what she anticipates will happen after she enters the book shop. The way she portrays the first moments in the bookshop shows awareness of the ecology and overall organisation of the interaction. Silvia's self-repair in lines 7–8 displays sensitivity to sequential features related to the task she has planned: she begins to describe asking a question as the first action (l. 7), but changes direction and describes how she will open the encounter with preliminaries instead (l. 8).

Previous research has shown that it is challenging for language learners to prepare for the unpredictability of the interactions outside of classroom (see Wagner 2015). Moreover, detailed preparation may turn the planned interactions into interview-like encounters in which the conversation does not unfold naturally but is based on consecutive question-answer sequences (Mori 2002). Excerpt 1 shows how material resources and pedagogical practices that support planning as a process can sensitize students to interactional features that might otherwise be difficult to prepare for. It shows that Silvia pays attention to the overall structure of the planned bookstore interaction. In addition, the extract demonstrates that Silvia is aware of the process-like nature of the planning. This shows in her expression about stopping before entering the store and thinking over the questions she is going to ask.

3.3 Interacting in the Wild: Silvia in the Book Store

An essential part of the Rally Course were the interactions outside of the classroom. The following excerpts from Silvia's visit to the bookstore demonstrate that the interaction is driven by Silvia's personal interest in finding the right book for her mother. This real need is addressed throughout the encounter as Silvia repeatedly refers to her mother and evaluates the suggestions made by the clerk from the point of view of her mother's needs. We join the conversation after Silvia has greeted the clerk and starts to explain what she is looking for. In its interactional context, this explanation works as a preparatory action that foreshadows Silvia's request for assistance. The explanation is quite extensive and well formulated (l. 1–15).

Excerpt 2[5]

```
01 SIL:    öö mä mä etsin (.) öö joululahjaa mun
           eh I'm I'm looking (.) for a Christmas present for my

02         äidille?
           mother?

03 CLE:    juu?
           yes?

04 SIL:    ja siis ööö hän on kans saksalainen ja
           and so  ehh she is also german and

05         (.) hän ei os[aa
           (.) she does not know

06 CLE:                 [juu
                         yes

07 SIL:    vielä niin hyvin lukea suomea
           how to read Finnish so well yet

08         hän vasta (.) alkanut (.) opis[kella
           she has only (.) started (.) to study

09 CLE:                                  [°joo°
                                           yes

10 SIL:    mutta (.) mm (.) joo siis mä mietin
           but   (.) mm (.) yes so I was thinking

11         että (.) että mä voisin hankkia
           that (.) that I could get

12         hänelle sellaisen kirjan (.) josta
           her a kind of book  (.) that
```

[5] The clerks had been contacted before the visit and they knew that one of the purposes of this visit was to practice speaking Finnish.

```
13        (.) hän=hän voisi oppia joka (.)
          (.) she=she could learn from that (.)

14        olisi myös sellainen (.) motivaatio
          would also be a kind of (.) motivation

15        (.) hänelle [mutta
          for her  but

16 CLE:               [°mh°

17 SIL:   mä en tiedä onks (0.4) on- onks
          I don't know if  (0.4) th- there are if

18        sellaisia kirjoja olemassa (.)
          such books exist (.)

19        jotka voi (.)
          that could (.)

20 CLE:   nii englan[ninkielisellähän
          yeah in English language

21 SIL:             [°nii°
                      yes

22 CLE:   kieles- kielessä ku siellä on semmosia
          langua-  language there are such

23        helppolukuisia että kun alot[taa
          easily readable books available for you when you start

24 SIL:                               [mmh

25 CLE:   englannin kieltä [mutta
          learning English but
```

Silvia gives several reasons that motivate her search for a book: she wants to find a Christmas present for her mother and is considering a book that could be a source of motivation for her mother's Finnish studies. By detailing her reasons, including her mother's language skills, Silvia follows her own plan of explaining her situation prior to asking any questions (see Excerpt 1). She then solicits assistance from the clerk by making explicit her lack of knowledge about such books (l.17–19). The clerk treats the turn as a request for information on suitable books and explains that she is aware of English books that are written for learners of the language (l. 20, 22–23, 25), but that similar books are not available in Finnish. She then suggests that a children's book might be an option (Excerpt 3, l. 1–3). However, Silvia rejects the offer and makes a suggestion based on her own ideas.

Excerpt 3

```
01 CLE:   suomen kielessä ei sitten=oo
          in Finnish there are no such

02        (ne on sten) enemmän (.) semmosia (.)
          (they are then) more (.) like (.)

03        lastenkirjoja varmaan s[it niinku
          children's books I suppose then like

04 SIL:                          [mmm
                                  mmm

05 CLE:   mikkä on sellasia helppolukusempia
          that are like easier to read

06        ja tällasta (.) mutta (.) että voitas
          and like that (.) but (.) we could

07        ihan niinku aikuisten kirjaa sitten
          like an adult book then

08        kuiteskin (.) [°mut°
          anyway (.) but

09 SIL:                 [mmm (.) noo ehh siis
                        mmm (.) well ehh like
```

```
10          eh- ehkä niinku=niinku teemasta tää
            eh- maybe like=like about a theme this

11          lastenkirja ois vähän [(.) vähän
            a children's book might be a bit (.) a bit

12 CLE:                          [hehehe

13 SIL:     tyls[ä mutta=mutta
            dull    but=but

14 CLE:         [liian (.) £niin£
                too (.) yeah

15 SIL:     hän=hän ei pysty vielä (.) lukemaan
            she=she is not yet able (.) to read

16          (.) romaania (.) mmm (.) mut mää
            (.)  novel  (.) mmm (.) but  I

17          mietin kun tää (.) Mauri Kunnas
            was thinking that this (.) Mauri Kunnas

18 CLE:     joo
            yes

19 SIL:     [on aika paljon
            has quite a lot
```

```
20 CLE:   [aattelinkin sanoa justiin että joo ([°- -°)
          yes I was just going to say that  yeah

21 SIL:                                             [joo tää on aika paljon
                                                    yeah this has been quite a lot

22        käännetty saksaksi (.) ja: sitten mä
          translated into german (.) a:nd then I

23        mietin että onks teillä (.) niin kuin (.)
          was thinking that do you have (.) so that (.)

24        ku meillä kotona on=on tämä (.)
          like we have=have this at home (.)

25        ööö saksaksi tää öm: (.) vampyyri (.)
          ehh in german this em: (.) vampire (.)

26        Vampyyrivaarin (.) tarinoita (.)
          Grandpa vampire's (.) tales (.)

27        esimerkiksi (.) [ja hän
          for example  (.) and she
```

Silvia rejects the clerk's offer with an account commenting on children's books as possibly dull (l. 9–13) and by referring to her mother's limited language skills (l. 15–16). After that she produces an alternative suggestion by naming a well-known Finnish author (Mauri Kunnas) whose books have been translated into German (l. 17, 21–22). The clerk promptly displays recognition, and in partial overlap with Silvia, produces an aligning response that suggests that she had a similar alternative in mind (l. 19). However, Silvia continues (l. 21) to explain that she has one of the books of this author at home and then inquires whether the same book would also be available in Finnish (i.e. the original version).

The example shows how Silvia's own real-life project drives the interaction and enables her to draw on existing knowledge in formulating her turns. It also shows how her planning and rehearsing of the visit may have helped her to deal with the circumstances of the interaction. Silvia's turns clearly include elements that she had planned beforehand (e.g. details about her mother and about the book she had thought about). At the same time, her interactional conduct shows how she adapts to the contingencies of the interaction. Recall that in the previous example (Excerpt 2), Silvia's expression of lack of knowledge served to recruit the clerk's assistance. Instead of having to make a direct request, this solicited an offer of assistance and a proposal from the clerk that Silvia is able to reject on the basis of her first-hand-knowledge (i.e. the suitability of the suggested book for her mother). This enables Silvia to expand the interaction in collaboration with her co-participant: it presents an opportunity for Silvia to display relevant cultural knowledge and articulate her own ideas as an alternative which is based on her real-life needs. All this shows her interactional competence and establishes a more symmetrical relationship between her and the clerk.

Silvia's suggestion is taken up by the clerk and next they move close to a shelf where books by the author named by Silvia are on display. The clerk searches for the book but does not find it. Instead, she finds another book by the same author (Fig. 7) and hands it to Silvia. Holding the book in her hands, Silvia proceeds to evaluate it – again from her mother's perspective.

Fig. 7 Presenting a book for consideration

Excerpt 4

01 SIL: hm (.) joo mu- minusta tää on ehkä siinä mielessä hyvä

hm (.) yeah I th- I think this is maybe good

02 että (.) että hän >hän< on tosi kiinnostunut

because (.) because she is really interested in

03 niinku suomalaisessa kirjallisuudesta että

like Finnish literature so

04 CLE: hm

hm

05 SIL: että tästä olisi [aika helppo niinku

so that it would be quite easy to

06 CLE: [joo

yeah

07 SIL: ämm

emm

((23 omitted lines))

30 SIL: **hm?**

31 (~4.0) ((Silvia browses the book))

32 SIL: juu eh (.) ehkä (.) ehkä tästä minun

yeah eh (.) maybe (.) maybe I should

33 pitäisi antaa hänelle niinku vähä-vähän sanastoa (--)

give her some vocabulary of this (- -)

```
34          (.)

35 CLE:     °eh°
             eh

36 SIL:     tai jotenkin auttaa kääntämään mutta (1.0)
            or somehow help her to translate but (1.0)

37          no joo? (.)  se olis hyvä idea että (.)
            well yeah? (.) it would be a good idea to (.)

38          mutta mä mietin nyt (.) tätä vielä vähän
            but I will now think about (.) this for a while

39 CLE:     joo saatte miettiä [ihan rauhassa
            yeah you may think about it in peace

40 SIL:                        [ joo okei kiitos
                                 yeah okay thanks
```

The book is *The Canine Kalevala*, a simplified version of a well-known Finnish national epic. Silvia's evaluation of the book (l. 1–3) makes explicit her knowledge about the book and its cultural references. This assessment opens a space for the clerk to provide a second assessment and to promote the book. However, the clerk turns the focus of the conversation to the illustrations in the book and begins an elaborate explanation about them (l. 8–29, omitted). The illustrations are extraordinary, because they are canine versions of very well-known Finnish paintings that have been inspired by the national epic. In this way, the clerk's turns are designed for a recipient who already has relevant knowledge and has shown interest in Finnish arts and culture. Silvia, however, shows no real interest in the drawings. Instead, after the clerk's long explication of the paintings, she turns the focus back to language and contemplates that she would probably have to translate parts of the book for her mother (l. 32–36). Silvia's turn thus evokes her identity as a daughter and exhibits her knowledgeable position about the needs of her mother: the drawings in the book may be generally interesting, but for her the relevant issue is that her mother might need some extra support in understanding the vocabulary of the book. Here again, the real need of finding the right book for the mother's needs thus emerges as the driving force for the interaction: because of the real need, Silvia is

able to comment on the clerk's turns and ideas even if she does not go along with them.

Silvia's interaction in the bookshop illustrates how the task that she herself had co-designed is configured through emergent interaction in the socio-material environment of the bookshop. The excerpts illustrate how the interaction is driven by Silvia's real-life concerns that motivated her choice of setting and the activities that she planned beforehand. There is authenticity in what Silvia is doing: her turns-at-talk show sensitivity to the contingencies that arise in the interaction. For example, instead of simply asking information-seeking questions, she is able to solicit recommendations that enable her to expand the interaction further and to draw on her own first-hand knowledge in responding to the clerk's suggestions. This is visible also in the way that she rejects the clerk's attempt to draw her attention to pictures in the book and instead focuses on the language of the book.

3.4 Analysing and Reflecting

One of our aims in designing the pedagogical and material practices for the Rally Course was to make the process-like nature of both planning and reflection visible and more noticeable. Planning can start in the classroom and continue until the interaction starts (like in Silvia's case in which she planned to go through her questions before entering the book store). Similarly, reflection can start immediately after the interaction and continue later, for example as a collaborative activity in the classroom together fellow students and teachers. The Interaction Navigator template (Fig. 5) was one of the material resources designed to support the process of planning and reflecting on the interactions that the students participated in. Unfortunately we do not have recordings from the moments right after Silvia's interaction in the book shop. Neither did the students report on how they might have reflected on the interactions before coming back to classroom. However, back in the classroom the students were given the task of discussing and analysing their interactions in small groups. In this discussion Silvia pays attention to the important role of objects in organising interaction and to their potential for supporting understanding and learning.

Excerpt 5

01 SIL: niin siinä kirjakaupassa alussa siis ei ollu (.)

yeah in the book store at the beginning there was not (.)

02 mutta sitten kun hän ää näytti minulle sen kirjan (.)

but then as she showed me the book (.)

03 niin siinä on ai- aina hyvä jos on semmonen (.) niinku (.)

so it is al- always good if there is such (.) like (.)

04 sellanen objekti (.) >jo- jo- josta voi< voi puhua (.)

an object (.) th- th- that you can< can talk about (.)

05 eli sitten hän hän kertoi vähän siitä (.)

and then she she told a bit about it (.)

06 että ne kuvat siinä olivat niinkun vähän ää vähän vähän (.)

that the pictures there were like a little ee a little a little (.)

07 samallaisia kun ne olik se nyt aleksi Gallen-Kallelan=

similar to was it Aleksi Gallen-Kallela's=

08 TEA: =joo

=yeah

09 SIL: kuvat ja sitten on on helpompi ymmärtää (.)

paintings and then it is is easier to understand (.)

10 ja puhua siitä kun se on ihan (.) ihan silmien edessä

and talk about it when it is just (.) in front of your eyes

In Excerpt 5, Silvia reports how the clerk showed her a book and how this made available an object that could be talked about. Although the interaction in the bookshop does not show how the book may have facilitated understanding, here Silvia herself explicates that the pictures "just in front of your eyes" made it easier to understand and to extend the conversation. One of our aims in designing the Rally Course was to raise the students' awareness of the different situated material resources and ways in which these can be used to make the interactional spaces in the wild more comfortable and more secure to interact in. In this sense, Silvia's

comment about the material objects that support understanding and help them find topics to talk about is important.

At the end of the course, the students wrote a letter to future students of the Rally Course. They were asked to write about their experiences during the course and to give advice to future students for managing the course activities. The goals of this assignment were twofold. On the one hand, the letter gave the teacher feedback showing what the students thought about the pedagogical process and how they had felt about the activities. On the other hand, the letter also works as a form of reflection as the students had to verbalize their experiences and feelings and to guide the imagined future students.

In her letter, Silvia commented on the use of the pedagogical materials and how these changed her way of thinking about interactions.

Excerpt 6

"Minusta eri materiaalien käyttö oli alussa melko outo (vaikutti siltä, että se olisi ollut vain turhaan tarkoitukseen käytettyä paperia), mutta sitten huomasinkin, että se auttoi muotoilemaan ajatuksia. Opin tästä kurssista paljon, enkä tarkoita vain sanastoa vaan myös opetusmetodeja ja miten voisin käyttää niitä itseopiskelussa (esim. puheen nauhoittamisen)"

"At first I thought that the use of different materials was a bit weird (it seemed that it is just wasted paper) but then I noticed that it helped me to design my thoughts. I learned a lot in this course and I don't mean just vocabulary but also teaching methods and how I could use them for my self-study (e.g. recording speech)."

Silvia's comment highlights how her initial reservations about the use of different material resources were overcome when she noticed that it helped her to formulate or design her thoughts. We interpret this as referring to her own process of exploring, planning, experimenting and reflecting on her goals and language use at different phases of the task process. What is more, Silvia's case shows how the course helped her rethink learning as involving something more than 'just vocabulary' by making her aware of methods that she could use to support her learning in the future. The process of co-designing her own learning path drew Silvia's attention to her own responsibility for her learning process.

4 Concluding Remarks

In this chapter, we have introduced the Rally Course and illustrated the material and pedagogical practices that were designed to raise students' awareness of the language resources in their everyday language use environments and to support them in navigating interactions outside language classrooms. In addition, we have demonstrated how one focal student, Silvia, carried out an out-of-classroom learning task. While the experiential dimension of learning has long been recognized as important by language educators (e.g. Knutson 2003; Kohonen et al. 2011), it is still a challenge for language pedagogy to make use of language learners' own experiences for teaching and learning as these experiences are usually not straightforwardly available for reflection and analysis. The pedagogical and material practices that we have illustrated in this chapter exemplify one attempt to build on the learners' own experiences and needs in language teaching by guiding the students to identify them, to capture them (by videorecording) and then to analyse and reflect on them.

Our goal in designing the Rally Course was to make the language learning tasks authentic and meaningful by giving the students a lot of freedom in co-designing them. The students were encouraged to identify and observe the language use situations that are relevant and recurrent in their everyday life. Mapping activities were used to enhance students' awareness of their everyday language use environments. In our experience, especially the photo journal is a motivating activity for the students and helps them to see the variety (or the lack of variety) in their everyday interactions. Also the material support for planning and rehearsing for interactions in the wild works well in our experience. The one-shot-videos, in particular, are an effective method to capture the outcome of the planning and to practice speaking at the same time. An important aspect of one-shot-videos is that in making them, the focus is on the content that needs to be delivered succinctly (because of the time limit of 3 min) and not on linguistic structures. When watching and listening to the videos the students are often surprised by the fluency of their speech. In this way, the videos also work as a source of important feedback for the students. Reflection is a crucial part of learning (see e.g. Farrell 2007; Walsh and Mann 2015), and practices to support analysis and reflection are a key focus in our future work.

For the teacher, a design-based approach to teaching requires a change of position from being in control of planning and implementing tasks to facilitating collaborative experimenting with materials and pedagogical processes. The excerpts from Silvia's interactions showed how her participation in the different phases of the task was supported by her real-life need of finding a book for her mother. This authentic need made it possible for her to tailor her interactional conduct to the different phases of the task. In particular, in the bookstore, the real-life need made it possible for her to pursue the conversation and to react to the clerk's suggestions and question in a meaningful way. The focus was not so much on struggling with linguistic structures but on getting the business done. The role of the teacher in all this was minimal. The teacher's role was most explicit during the reflection phase as

she asked questions about the students' experiences in the interaction in the wild. In future it is important to develop materials that guide the students towards adopting reflective practices as a recurrent method for recognising and analysing language use situations that they want to learn something from.

The design of the curriculum for the Rally Course builds on the conversation analytical understanding of language use as action and existing research on second language learning in interactions outside classrooms (see e.g. Theodórsdóttir 2011a, b; Lilja 2014; Pekarek Doehler and Pochon-Berger 2015; Eskildsen and Theodórsdóttir 2017). The aim has been to guide the students to focus on the structures of interaction and on the language use practices that are relevant and recurrent in interactions in the students' everyday life-worlds. The learning target for many (if not most) second language learners is to be able to participate in the society through the new language. This requires an expanding repertoire of methods for accomplishing meaningful social actions. By developing more diversified and context-sensitive methods for social action (see Pekarek Doehler and Pochon-Berger 2015), a learner becomes able to act in socially appropriate ways in an increasing variety of social interactions in the community. Language pedagogies should be able to support this and to provide learners with learning methods and techniques that facilitate learning also after language courses and outside of the walls of language classrooms (see also Thorne 2013). We hope that the ideas presented in this chapter may inspire future teachers to explore novel ways of teaching and supporting their students in participating and becoming members of their new language communities.

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Part IV
Epilogue

Towards an Epistemology of Second Language Learning in the Wild

Johannes Wagner

Abstract This chapter argues that a new epistemology for the field of SLA, rooted in sociology rather than in psychology, is taking form with radical consequences for the organization of second language practices, including learning and teaching. Central elements in this new epistemology are the following elements to be discussed in the chapter:

1. Learning is bound to participation in the life world and therefore to the personal history of each learner.
2. Spoken language is the primordial mode of mundane social interaction.
3. Classrooms need to feed on the everyday practices of the students and to center on support students to establish life world relations.
4. In the social interactions in which language learners engage, trouble in the talk will often trigger repair practices through which new language material is offered by the co-participants.

The chapter outlines the argument and methodology that lie behind this new epistemology, drawing on Ethnomethodology (EM) and Conversation Analysis (CA), thereby reformulating second language learning as an embodied, sociological project. Finally, the chapter discusses the consequences of this sociological perspective on learning for conceptualizing second language teaching in the form of the development of resources for creating social infrastructures for learning.

Keywords Collection · Documentary method · Ecological validity · Embodiment · Language teaching epistemology · Social infrastructure

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1 Introduction: The Historically Shaped Epistemology of Second Language Teaching

Second and foreign language[1] teaching is a billion dollar industry. It is also an old industry with traditions and well established practices which lie close to its heart and are not easily re-thought and innovated. However, there is no agreement in the field about central concepts and priorities like 'knowledge (of a language)' or '(useful) practice', and a wide diversity in the understanding of these and other basic concepts has developed over the years.

Historically, foreign language teaching came first. Ancient languages (like Latin and Greek) were at the core of the emerging European school system, and these languages were not taught for communicative use but for cultural knowledge (Howatt and Smith 2014). Classrooms up to the beginning of the twentieth century excelled in the teaching of explicit grammar and reading and translation of culturally significant texts. The language of the classroom was the mother tongue of the students, while the foreign language was the intellectual object of study. The result was a bilingual classroom where the domains of the mother tongue and the target languages were clearly defined and distributed (Eder and Klippel 2017; McLelland and Smith 2018).

Modern language teaching with its focus on language use is historically related to the introduction of English into European schools in the mid nineteenth century (Risager et al. 1984). The modern secondary school (*Realschule)* catered to the needs of industrial modernization and was an instrument of economic internationalization. In turn, English became a central element of the modernization of the school system. Modern language teaching (primarily of English) became monolingual with the target language as both the object of study and the means of communication. The 'direct method' excelled in pronunciation training, meaningful classroom interaction and in preparing the students for the future use of the new language. The teaching of other foreign languages (e.g. German, French or Russian) kept, for the most part, the traditional model of language teaching.

The epistemology of language teaching has followed developments in linguistics and language studies: the teaching of ancient languages drew mainly on morphology. The 'direct method' was created by early modern linguistics with its focus on phonology (Jespersen 1904). Similarly, American structuralism formed the foundations of the audio-lingual method (Huebner 1959). The rise of communicative language teaching followed the 'pragmatic turn' of linguistics in the 1970ies where ordinary language philosophy and theories of discourse introduced speech acts and linguistic action (Ek and Alexander 1980; Littlewood 1981).

Linguistics and language studies have formed the epistemology of language teaching and left their traces in the common practices by which the craft is done and

[1] In this chapter, *mother tongue* will be used for language(s) learned during childhood. *Foreign languages* are taught in schools but not spoken in the life world of the students. Second languages refer to those languages that are regularly used in the life world of the students

its mission understood. Three epistemological pillars stand out as paramount: a bias towards written language (Linell 2005), the organization of learning in classrooms, and a Cartesian model of knowledge.

1. Even today, the written language bias is visible in each and every classroom with the paramount presence of texts, books, and other kinds of printed material.
2. The organization of language classrooms follows a didactic approach according to which controlled learning comes first, language use second. Schooling should prepare students for future situations in their life, for example their workplace. Knowledge acquired under classroom conditions should be relevant elsewhere.
3. The traditional understanding of what language learning is about is rooted in a rationalist view of language with a focus on the internal representation of knowledge. Knowledge of language, often used synonymously with grammar, drives practice.

The historically shaped epistemology of second language teaching has been challenged over the past two decades by a research paradigm that explores second language learning as a sociological phenomenon. A growing number of studies have examined the ways in which second language speakers organize their participation outside of the classroom, in their new life worlds, where another language than their first language is used (e.g. Firth and Wagner 1997, 2007; Gardner and Wagner 2004; Hall et al. 2011; Kurhila 2006; Nguyen and Kasper 2009; Pallotti and Wagner 2011; Wagner 2004; the contributions to this volume; for overviews cf. Kasper and Wagner 2011, 2014). These studies of second language interaction in *the wild* have shown how mundane resources are used by newcomers and their co-participants to make sense of the environment in which they act, doing whatever business they have set out to do (buying bread in a bakery, Theodórsdóttir 2011a, or chatting about bicycle repairs, Lilja 2014). While doing whatever they do in their second language speaking life world, participants at the same time figure out standard/normative ways of doing this: renting a place to live, register with the authorities, figuring out the notion of tax and public support – but equally how to cross the street in a busy town or what food to eat when and how, where you buy it and what it is called. When engaging in all these daily chores, the participants encounter hitherto unknown words and new ways of doing and saying things. The mundane life world, the *wild*, affords learning in many ways, and the interaction and learning about the world can become two sides of the same coin.

Investigating the ways in which the life world offers opportunities to encounter the second language blurs the distinction between a second language *learner* and a second language *speaker*. In a traditional understanding of these roles, language *learners* participate in language teaching. Second language *speakers,* however, need not necessarily take language classes. They use the language when and where they need to. When participation *in the wild* is understood as affording learning, participants take on a visible identity as language learner when they engage in language learning activities. Likewise, their co-participants take on identities as language

experts, though rarely as teachers (but see Theodórsdóttir 2018). In this chapter I will use *second language speaker* as the default term but sometimes refer to *second language learners* when participants visibly engage in language learning activities.

At least three lines of interest have crystallized in the study of second language interactions in the life world. One strain of research has looked at the ways in which second language speakers participate in interaction and, over time, slowly modify and expand their linguistic resources (Brouwer and Wagner 2004; Eskildsen 2011, 2018a; Eskildsen and Wagner 2013, 2015, 2018; Pekarek Doehler and Pochon-Berger 2015; Pekarek Doehler and Berger 2016; Berger and Pekarek Doehler 2018; Nguyen 2019).

Other studies have described participants' methods to make use of learning affordances in interactions in the life world. Brouwer (2003, 2004) has described how participants isolate elements of the talk as troublesome and make them available for repair practices (word searches, candidate formulations), hereby possibly creating them as learnables (Majlesi and Broth 2012; Eskildsen and Majlesi 2018; Eskildsen and Theodórsdóttir 2017; Kasper and Burch 2016; Svennevig 2017). Theodórsdóttir (2011b) has described how second language learners do more than the progressivity of action (Stivers and Robinson 2006) requires. For example, they may insist on completing turns in the second language even though their co-participant has already indicated understanding and moved on to the next action.

A third line of papers has shown how speakers in second language conversations may downplay possibilities for learning. Brouwer et al. (2004) have described repair practices where ways of saying things correctly were embedded in next actions and not isolated for further repair operations. Kurhila (2001) describes *en passant corrections* i.e. other correction of (often morphological) errors that are not designed to lead to extended repair sequences, but just to achieve understanding here and now.

These studies have revised the traditional understanding of second language learning. Drawing on sociological instead of psycholinguistic arguments, a new epistemology of the field is taking its form, and it has radical consequences for the organization of learning, practice, and teaching. Central in this new epistemology are the following elements:

1. The primordial mode of language in social interaction is spoken. A transfer into written language may happen during the pedagogical process, when linguistic elements from life world interactions are transformed to 'learnables' and fed into more standardized learning exercises.
2. Learning is bound to participation in the life world and therefore to the personal history of each learner. Second language learning is deeply personal and part of shaping a person's biography and identity in the new life world.

3. Classrooms need to feed on the everyday practices of the students. Classroom organization needs to have a close relevance for students' activities in the life world and accept the obligation to help students to establish life world relations.
4. Language material is offered as part of the social interactions in which the language learners engage, often through repair practices.

In this chapter, I will outline the epistemological argument and the methodology that lies behind the recent interest in second language interaction. This will form the theoretical basis for developing tools that prepare the second language user for participation in the second language life world (Clark and Lindemalm 2011; Clark et al. 2011; Theodórsdóttir 2011a; Wagner 2015). In Sect. 2, I will discuss two examples to illustrate the complexity of a mundane second language contact situation and its affordances for language learning activities. In Sect. 3, I will unfold a sociological understanding of second language learning and describe methods to understand what second language speakers are confronted with. The epistemological roots for this chapter will be in Ethnomethodology (EM) and Conversation Analysis (CA). In Sect. 4, I will reformulate second language learning as a sociological project and reflect on the role of embodiment and objects in interaction to attain a better understanding of the resources that are involved in making sense of the second language life world. The last section (Sect. 5) will point towards the consequences of a sociological perspective for conceptualizing second language teaching and learning.

2 What Is at Stake in a Second Language Life World

In this section I will discuss two extracts from interactions in the life world of second language speakers. They were collected as part of a longitudinal corpus of L2 Danish in the life world (Wagner 2006). One of the participants, Sandra, is an immigrant from Germany. When she started to record herself, she had already been living and working in Denmark for about a year. Both extracts are taken from the first months of her recording period. They illustrate how everyday encounters in the second language life world afford exposure to new language material.

In Extract 1 Sandra (SAN) has entered a bicycle shop to buy a bike pump. When she is done with her purchase, she is enquiring whether the shop can give her bicycle a check-up. The extract shows how Sandra's co-participant solves trouble in the interaction by combining linguistic material from Sandra's request with his own reformulation.

Extract 1: Bicycle

```
1    SAN  å jeg vil gerne: eh ha min cykel her fo:::r e::hm (.)
          and I would like to have my bike here for

2         kigger (0.4) om det hele er i orden↗
          look         whether everything is in order

3    CYC  >(det vil) sige< gå den igennem for dig→
          (that means)      go through it for you

4         (0.3)

5    SAN  ehm

6    CYC  ska vi gå den igennem for dig→
          should we go through it for you

7         (0.9)

8    SAN  e:::hm igennem: for dig↗
                 through for you

9         (0.7)

10   CYC  jaeh ska vi kigge cy⌈klen⌉ i⌈genn⌉em for dig↘
          yes  should we look the bike through for you

11   SAN                        ⌊ja: ⌋  ⌊ja:!↘⌋

12        ja↘

13   CYC  ja↗
```

Sandra's request in lines 1 and 2 is produced with delays and other speech perturbations. The turn has a fluently spoken and idiomatic beginning (*å jeg vil* gerne 'and I would like to') and ending (*om det hele er i orden* 'whether everything is all right'), while the production of the middle part is delayed, indicating trouble in the formulation of the activity Sandra wants the bicycle mechanic (CYC) to perform: *eh ha min cykel her fo::: e::ehm kigger* 'have my bike here for look'. The mechanic initiates repair of exactly this part of Sandra's turn in a fast-spoken candidate formulation (l. 3), *gå den igennem for dig* 'go through it for you'. Sandra's minimal response (ll. 4–5) indicates trouble with understanding the mechanic's formulation so he reformulates his candidate formulation anew, this time as a as a question (l. 6) *ska vi gå den igennem for dig*, 'should we go through it for you'. This does not seem to help since, after another, longer, delay, Sandra again initiates repair by repeating the last words of the mechanic's reformulations with rising intonation (*igennem: for dig?* 'through for you').

Partial repeat with rising intonation is a well known initiation technique for other-repair (Schegloff et al. 1977: 368) that indicates where the trouble is located. In this case, the mechanic treats Sandra's repeat as indicating her trouble understanding his previous turn and now builds his third attempt from both the material which Sandra had repeated and from her initial request in line 1 and 2 (*cykel* 'bike', *kigge* 'look'). He ends up suggesting *ska vi kigge cyklen igennem for dig* 'should we look the bike though for you' as a fitting reformulation of Sandra's request. It is worth noting how he recipient-designs his talk as he replaces his own idiomatic reformulation (*gå igennem* 'go through' with a more situated and perhaps more transparent version *kigge igennem* 'look through'). This time, he is successful and Sandra indicates her understanding (l. 11) and proceeds to find a time where she can bring in her bike (not shown here).

In extract 1, the progressivity of the talk is halted after Sandra's request. The mechanic formulates a candidate understanding of what Sandra might have wanted to say and "thereby invites that speaker to confirm (or disconfirm) the adequacy of that proposal" (Heritage 1984a: 319). After several attempts, the trouble in the talk is resolved and the mechanic receives the confirmation. But Sandra misses an opportunity: candidate formulations as in extract 1 are often spoken 'in the clear' and apart from eliciting confirmations also demonstrate a model for how Sandra might have formulated her question. This could have become a language learning opportunity for Sandra, but we note that Sandra is not engaging in any observable activity to appropriate the re-formulation of her troublesome formulation. By repeating it, she isolates linguistic material introduced by the mechanic, but, although he produces three versions of his candidate formulation, it does not lead to any further activity by which Sandra might appropriate the formulation. In this case – as in many other cases in my data – the second language speaker is not morphing into a second language learner.

In the next extract, Sandra is visiting what in the US would be called the Department of Motor Vehicles (DMV) to figure out whether it makes sense to import her car to Denmark. Currently, it has German license plates. After having talked about two possibilities for registering her car (as a private car or a company car), Sandra addresses another relevant issue for her decision: the different Danish road taxes for each type of registration.

Extract 2: Department of Motor Vehicles

```
175  SAN  det er også to fors::kellige e- skat::ter↘=
          there are also two different     taxes

176       for ⌈e-⌉ bi:::l s: ⌈kat↘
          for        car     tax

177  CL      ⌊ja⌋            ⌊jah
              yes            yes

178       (.)

179  SAN  d- eh (0.2) per ⌈anuum↘ hh⌉
                            a      year

180  CL                    ⌊ xx  vægt⌋afgift ja
                                  road   tax  yes

181       (0.2)

182  SAN  ja å d:et vil jeg også finder u::d
          yes and that I also want to find out

183       for det er ⌈n-⌉ det ⌈he:le     er  ⌉ regning
          coz  it  is           everything is   bill

184  CL              ⌊ja⌋     ⌊hvad der bedst⌋
                       yes      what is best

185  SAN  ja⌈:

186  CL     ⌊man ska lægg' det hele sammen
              one needs to add everything up

187       ⌈å se⌉ hvad det k' be⌈tal⌉ sig⌈
          and see what      pays    off

188  SAN  ⌊ja ⌋                ⌊ja⌋     ⌊okay↘ yes
```

Sandra's delivery speed slows down in the middle of line 175 when she is about to mention the registration tax and she uses the generic term *skat* 'taxes'. The falling intonation indicates a possible turn ending, but Sandra moves into a self-repair that specifies the type of tax she is talking about (*bi:::l s:kat. d- eh (0.2) per anuum*. 'car tax a year'). As in Extract 1, the delivery of this item is marked with slow speed and vowel lengthening.

The clerk (CL) comes in with two overlaps (l. 177). The first one, 'yes', acknowledges Sandra's turn in line 175. The next 'yes' acknowledges Sandra's repair of 'tax' to 'car tax'. Note that this overlap starts before Sandra has finished her word. In a third overlap ('road tax') the clerk reformulates Sandra's elaborate construction 'car tax … a year' with the Danish technical term *vægtafgift* (l. 180). Note again that the overlap starts before Sandra has finished what she was about to say. Jefferson (1983:12) describes these recognitional overlaps as actions where "a recipient/next

speaker seems to be orienting, not so much to completeness as to adequacy." Sandra's formulation is not adequate in terms of linguistic correctness, but adequate for the clerk to understand what Sandra is going for as seen in her en passant correction *vægtafgift*, in line 180. Sandra is acknowledging the repair at the beginning of her next turn (l. 182). As in extract 1, however, she makes no effort to isolate the word, to bring it out of the overlap, to repeat it or in other way appropriate it for herself (cf. Brouwer 2004).

In the remainder of line 182, Sandra announces her intention to figure out the different road taxes, because – as she says in line 183 – *for det er n- det he:le er regning*, 'everything is bill'. The Danish formulation is as un-idiomatic as the English translation. The clerk in line 184 overlaps again with what could be heard as a candidate completion of line 182 'what is best', hereby ignoring Sandra's account (l. 183).

Sandra's talk in overlap ('everything is bill') is reformulated by the clerk as *man ska lægg' det hele sammen å se hvad det k' betal sig,* 'one needs to add everything up and see what pays off*'* (ll. 186/7). For one, the clerk demonstrates for Sandra that she has heard Sandra's overlapped turn. She also formulates an unfolded and correct version of what Sandra might mean, since she has indicated financial aspects as crucial factors for her decision whether to import her car or not and provides her with a formulation to say this in Danish.

Although Sandra displays reasonable fluency in Danish, many of her contributions are marked by elements that indicate trouble: silences, lengthenings, *uhms* and *uhs*, translanguaging and marked, linguistically non-standard or unclear formulations. These speech perturbations in the delivery of talk can be observed when she talks about issues that have a technical term such as *vægtafgift* or idiomatic formulations '*you need to see what pays off.*'

In her quest for a mundane service, Sandra engages with a clerk who is cooperative and shows understanding of the difficulty in deciding what to do and who goes to great lengths to make sure that she is sure what Sandra is after and to reformulate it. By engaging in the interaction, the clerk formulates what Sandra is not able to formulate herself and provides her with a language model. While the talk is about the practicalities of importing a car to Denmark, it is at the same time about language. Further, it should be noted that Sandra indicates her own problems in speaking Danish, hereby making problematic sequences available for the co-participant to repair, in addition to making these non-standard features noticeable to herself.

Speakers can design their talk in ways by which they are able to receive linguistic material they do not yet have. They do this by marking segments of the talk as troubled by change of delivery speed, dysfluencies, repairs and other perturbations. The co-participants will often respond to this by reformulating, by repairing, or by other means of remedying the trouble.

In both extracts seen here, however, Sandra is oriented to the progressivity of the talk. She does not put the topical talk on hold to make linguistic material available for learning procedures, i.e. focus on incoming talk as a resource for reflection and possibly learning. Sandra does exactly that in other episodes where she uses the systematic ways through which second language speakers can 'ask' for and publicly notice linguistic resources to solve their trouble in the talk (Eskildsen, Greer this vol-

ume). And although these resources may become the focus for learning, this will not happen every time talk is dysfluent, perturbed or repaired. In the extracts above, the second language speaker did not visibly become the second language learner – but the episodes are part and parcel of her second language biography.

3 Towards a New Epistemology for Second Language Learning: Studying Second Language Speakers in Their Life Worlds

The above mentioned studies draw heavily on Conversation Analysis (CA), and more indirectly on Ethnomethodology (EM) from which CA has developed, but studies of second language interactions have rarely been explicit with respect to their epistemology. In this section I intend to fill this void in the literature and to discuss epistemological aspects of second language interaction studies to clarify their theoretical potential, not only for contributing to new ways of understanding second language learning, but also for re-thinking teaching.

Section 3.1 discusses the role of social order as the core research interest of EM and CA. Section 3.2 describes the heuristic and methodological procedures that make EM and CA significantly different from the epistemology of other fields of SLA.

3.1 Social Order and Human Sense Making

Sociology is concerned with exploring how social order comes about (c.f. Mills 1959). Differently from the 'grand theories' of sociology, EM sees social order as an *achievement* of society's members and not as enforced by a social structure or system. Suchman (2007:81) describes EM's procedural understanding of human actions as follows:

> Garfinkel proposes that the stability of the social world is not the consequence of a 'cognitive consensus' or stable body of shared meanings but of our tacit use of the documentary method of interpretation to find the coherence of situations and actions. As a general process, the documentary method describes a search for uniformities that underlie appearances. Applied to the social world, it describes the process whereby actions are taken as evidence or 'document' of underlying plans or intent, which in turn fill in the sense of actions. (…) The documentary method describes an ability – the ascription of intent on the basis of evidence, and the interpretation of evidence on the basis of ascribed intent – that is as identifying of rationality as the ability to act rationally itself.

Newcomers apply the documentary method when they try to make sense of the ways the members have organized their life worlds, be it another country, another workplace or another family. The documentary method does not treat the actions of these newcomers as 'weird' but makes sense of it by re-constructing their 'underlying intent.'

The documentary method has been the backdrop for the argument in Sect. 1 that second language speakers learn to navigate in their new society while doing it, by figuring out the ways locals cross the street, do their taxes, prepare their food et cetera.

Orderly and therefore recognizable practices by members are necessary to make sense in interaction and in accomplishing social order. As Rawls formulates it in her introduction to Garfinkel (2002), the assumption is that "members of society must in fact, actually, really, have some shared methods for achieving social order that they use to mutually construct the meaningful orderliness of social situations" (Rawls 2002: 5). This is the research program for EM and CA: to study social order by engaging with consequential practices of real people in their life worlds, the point being that people use their knowledge of practices to understand what they encounter and to adapt their practices on the basis of what they encounter, i.e. the reflexivity of the documentary method. Heritage (1984b:126) gives a simple example for what this means:

> suppose there is a rule for greetings that runs to the effect: do not initiate greetings except with persons who are acquaintances. And suppose we witness a man greeting another who we know is not an acquaintance. We can either conclude that he broke the rule or we can infer that, *via the use of the rule*, he was seeking to treat the other *as* an acquaintance.

One of the central issues in the early studies of second language interaction was to show that like any other human interaction, second language interactions are built on common practices of interaction, and they are oderly accomplishments of new, still peripheral, members of a new society (Firth and Wagner 1997; Gardner and Wagner 2004). Even though second language speakers may not always follow all the grammatical rules, this does not mean that the resources and practices used by them in second language conversations are either different from interactions among monolinguals or faulty. These early studies have shown that second language speakers use many of the mundane resources and methods that are found in all human languages (Couper-Kuhlen and Selting 2018). The extracts in Sect. 2 show clearly that the participants are doing their business in the world and orienting to that. Jefferson referred to this as 'adequacy' in the above mentioned quote. The clerk at the DMV indicates her understanding of Sandra's attempts by reformulating her own understanding in her own terms – and at the same time delivering a model for how these things are said in standard Danish.

Members' methods (or resources) that came up in the analysis of second language interactions in Sect. 2 have been first described for first language, monolingual interactions: *repairs, candidate formulations, reformulation, word searches, repeats, requests, trouble markings,* and others. When Sandra's co-participants hear her trouble in formulating her requests, they provide candidate formulations to assure their own understanding. Word searches and troubled formulations are practices that are recognized by co-participants and often are responded to by providing repair of the second language speaker's talk. These resources in the extracts are commonly recognizable ways of repairing meaning and upholding the order of interaction in a wide variety of languages.

EM understands the role of members' practices (or 'methods') radically. They are not methods that members *can* apply. They *need* to apply them since the stability of the social order is dependent on it. Sacks (1984: 22) made this point very clear: "whatever humans do (…) can be examined to discover some way they do it, and that way will be stably describable. That is, we may alternatively take it that there is order at all points.".

CA has over several decades meticulously described the sequential formation of action in talk and its order at all points. CA's empirical findings have turned out to be robust, both across environments and across languages. This robustness of CA's findings comes about because participants build social actions in situ for their co-participants in stable and orderly ways. Practices do not change easily. Members' *methods/resources/practices* are normatively enforced ways to handle the world.

Being a second language speaker is recognized by others through the methods these speakers deploy to make sense. In line with Heritage's example above: the use of certain interactional resources – as we have seen in the case of Sandra – makes Sandra recognizable as a novice language speaker and allows her co-participants to engage in practices that support her participation. By doing what they do, second language speakers may have a 'license' to break certain normative rules. However, this 'license' can be revoked at any time. In our recordings, second language speakers deal mainly with supportive locals, but obviously they may face very different treatment, depending on who they are, where they are and to whom they talk.

Figure 1 sums up the differences between the conceptualization of second language learning in a psycholinguistic tradition and in a sociological tradition. In the next subsection, I will discuss the methodological principles of EM and CA studies where some of the crucial differences between both epistemologies are explained.

Concepts derived from psycholinguistic tradition	**Concepts derived from microsociology (EM and CA)**
speaking and writing	practical reasoning, locally supported sense making
structures, inventory of forms	action, activities, practices, members' methods
sentences, …	turns at talk
classrooms	life-worlds
learning grammar, words, pronunciation	practicing, participating, sense- making

Fig. 1 Two conceptualizations of second language learning

3.2 The Methodology of EM and CA Studies

For readers not acquainted with EM or CA, I will in this section sketch the methodologies by which EM and CA carry out their studies. This is necessary to understand the ways in which ethnomethodological thinking can be brought to bear on rethinking second language learning in the life world.

Lucy Suchman (2007:24) opened her influential study about the roles of plans in and for action with the following quote:

> Thomas Gladwin (1964) has written a brilliant article contrasting the method by which the Trukese navigate the open sea, with that by which Europeans navigate. He points out that the European navigator begins with a plan – a course – which he has charted according to certain universal principles, and he carries out his voyage by relating his every move to that plan. His effort throughout his voyage is directed to remaining 'on course.' If unexpected events occur, he must first alter the plan, then respond accordingly. The Trukese navigator begins with an objective rather than a plan. He sets off toward the objective and responds to conditions as they arise in an ad hoc fashion. He utilizes information provided by the wind, the waves, the tide and current, the fauna, the stars, the clouds, the sound of the water on the side of the boat, and he steers accordingly. His effort is directed to doing whatever is necessary to reach the objective. If asked, he can point to his objective at any moment, but he cannot describe his course.

Suchman is not constructing a simple antagonism between actions based on plans versus actions driven by local contingencies. Both the European and the Trukese navigators have an objective and draw on their knowledge to meet it. Suchman argues that the specific and unique exigencies in any situation inform the course of action and possibly impede on plans. The exigencies of a situation cannot be pre-assessed. Plans are unable to foresee the complexities of even simple everyday situations – that does not mean that plans are useless but they need to be responsive to the situation at hand. Suchman's argument is based on Garfinkel's observation on collecting evidence for social facts:

> Consider that the immortal ordinary society evidently, just in any actual case, is easily done and easily recognized with uniquely adequate competence, vulgar competence, by one and all. *Yet,* for all that, by one and all it is intractably hard to describe procedurally. Procedurally described just in any actual case it is elusive. Further, it is only discoverable. It is not imaginable. It cannot be imagined but is only actually found out, and just in any actual case. (Garfinkel 2002: 96)

Garfinkel's point is that the participants do not approach their everyday world as something complex and complicated. They have a clear understanding of the projects they are about to engage in, but it is impossible to foresee how action and practices will unfold in response to the mundane details and constraints in each 'actual case'.

Single instances of practices, i.e. single cases, are the point of departure for both EM and CA to find out the logic behind it – as Garfinkel's 'documentary method' suggests. Ethnomethodologists include extensive ethnographic studies in their work. I will give two examples: When working for Xerox PARC, Jack Whalen (e.g. Whalen et al. 1988) studied 911 calls to understand how callers and dispatchers

organized the fastest way to get help out. To understand the significance of the dispatchers' actions, Whalen himself was trained and employed as a dispatcher, hereby 'becoming the phenomenon' he was studying (c.f. Müller 2016). Ken Liberman (2013) studied the work of coffee tasters not by becoming a taster himself but by observing, participating, filming, interviewing and talking to tasters all around the world to understand how they transformed their individual phenomenological experience of taste into a public display when describing and judging coffees and objectifying the taste so that they can recognize later what they had been tasting.

CA has gone down a slightly different path. In order to study the social order Sacks was talking about, CA researchers have collected audio and later video recordings to study members' methods in talk (Sacks et al. 1974). Ethnography plays a humbler role in CA than in EM. But as in EM, single instances are starting points and test cases. Single cases are never exhaustive, and CA researchers collect as many instances of a phenomenon as possible. CA follows the documentary method as EM does, seeing the rule (practice) through the single case and the single case as an instance of a social practice.

CA-researchers typically start their research projects by transcribing 'interesting parts of interactions' and bring them to data sessions with other practitioners, where they listen to audio data or watch video recordings repeatedly to discover what is going on and to note phenomena that deserve further analysis. This is referred to as 'unmotivated looking'

> Psathas (1990) notes that unmotivated looking involved the analyst being open to discovering what is going on in the data rather than searching for a particular pre-identified or re-theorized phenomenon. Unmotivated looking allows for noticing of an action being done in the talk and the procedures through which the action is accomplished in the talk. (Liddicoat 2011:15).

From the thorough analysis of a single case where the contingencies of the situation are studied, CA researchers proceed to build a collection of similar cases by mining available databases. Basically, CA has a quantitative aim, to produce a description robust enough to cover any instance which can be found. A collection consists of single cases where the phenomenon in question is found and categorized. Every single case in the collection is then considered to formulate the practice lying behind it. Especially interesting are 'deviant cases' which do not seem to fit the current description of the practice. Deviant cases need to be explained with the contingencies of the situation in which they happen. If the contingencies do not explain their deviance from the norm, such examples serve to motivate a reformulation of the practice under investigation.

Figure 2 illustrates the research procedure for studies in conversation analysis.

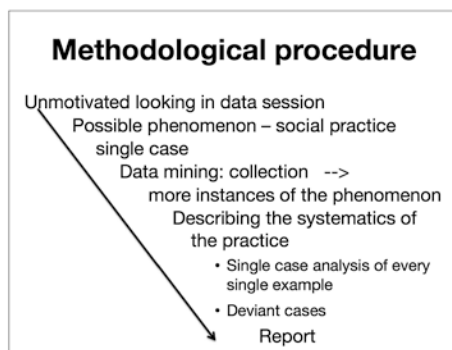

Fig. 2 The analytic procedures in undertaking a conversation analysis

4 Reformulating Second Language Learning as a Sociological Project

What is gained when rethinking second language teaching and learning in an EMCA perspective? What can a sociological foundation do differently from and possibly better than a psycholinguistic one? I will take my point of departure in a critique of traditional forms of second language teaching and secondly point at resources which the life world provides for language learning.

Communicative language teaching like any other modern language teaching method, intends to prepare students for future situations in the second language by providing dialogue examples for mundane situations. However, as argued above, real situations cannot be foreseen in detail. They will always run off differently from what a textbook might present and a textbook dialogue is rarely a model for interactions since no textbook can take stock of situational contingencies. Prescriptive situational models will need to be accommodated when they are applied as actual behavior.

A sociological approach to second language teaching and learning needs to support and organize participation in the life world as part of the process of learning, so life world experiences partly drive language learning. This does not mean that teaching is not necessary, but it should be related to life world experiences (c.f. Weinstein 2006). Second Language teaching needs to be planned in terms of social participation and needs to help second language speakers to participate in new areas of their second language life world.

The extracts discussed in Sect. 2 demonstrate that interactions in the life world afford linguistic and cultural material for the users and allow language users to turn into language learners. The argument made here is related to earlier debates about the relevance of ethnography for second language learning. Roberts et al. (2001) argued for the learner as an ethnographer and to introduce ethnographic practices as a way to learn language. While Roberts et al. argued for methods to be used in the context of classrooms with a clear focus on language, an EMCA based focus is on newcomers/learners in their life-world and all the resources which emerge in

interactions with the locals. These resources demonstrate for newcomers ways to navigate the life worlds, including the use of particular elements of language.

Since interactional material provided by co-participants will easily be lost after the interaction occurs, new pedagogical tools and practices are needed to enable the organization of learning in this re-orientation of the relation between classrooms and life worlds. As shown in Sect. 2, Sandra misses the opportunity to pick up repairs and reformulations provided by her co-participants. Since Sandra is in the bicycle shop/MDV for a purpose, taking on an identity of a language learner might derail her main business. But on the other hand, linguistic material encountered in the interaction will only stick if Sandra can apply language learning activities to remember and control these items. This is the major challenge when bringing the life world and the classroom together. Second language users need systematic ways of picking up their second language resources in the life world, but presently we have few methods which will help them. When building on linguistic elements that users encounter in their interactions in their life worlds, teaching has the chance to help them to build their social life. Learning a second language will always entail creating one's own social participation, identity and eventually biography (Eskildsen 2018b).

But it is not all about language. Studies of embodied action see language as part of a complex net of resources through which speakers organize their participation in their life-worlds. Language use is integrated in the use of the body, in the environment and in the ways in which the mobility of the speakers in an encounter is organized. Language is much less a static medium for transferring messages to a receiver than previously argued. Terms as *languaging* (Swain 2006) and *translanguaging* (Li 2018) point at the active role of language use as a factor in interaction, i.e. meaning as produced in the process of speaking together not only for the receiver but also for the speaker.

In three papers, Eskildsen and Wagner (2013, 2015, 2018) followed a Mexican learner of American English for an extended period of time. They demonstrate a strong affiliation between emerging linguistic forms and environmentally coupled gestures (Goodwin 2000, 2007) and show that these couplings survived over time until the gestures vanish. Specifically, they were able to show that spatial pronouns and even language constructions emerge from couplings between specific gestures and language forms and were used over time in different situations. The speakers reproduced the gestures partly to support their own insecure use of the linguistic items, but also to remember the language items. In other word, traces of embodied behavior that was afforded in specific interactions were found in the later use of the linguistic items. This shows that new items are not just words to be stored but that they keep the history of their emergence. These couplings can be re-enacted in later situations for example when their protagonist interacted with other participants who were not yet able to handle these items.

Another example is one of the key subjects in our early studies of second language speakers (Kasper and Wagner 2011). A Danish company employee, Jorgen Gade, was willing to provide us with audio recordings of his phone calls with European companies that he conducted in English and German. His rationale for

recording himself was that he needed to know what he actually had agreed to. We took this firstly as an indication of Gade's low proficiency and insecure understanding of what his co-participants had said, but it was rather his understanding that meaning – in his case about financial agreements – comes out of a process and is not just a number. So Gade needed the recordings to understand what he had agreed to and how it had come about.

5 Perspectives: Building Social Infrastructures for Second Language Learning in the Life World

Garfinkel & Sacks' dictum "the mastery of natural language is throughout and without relief an occasioned matter" (1970:344) is not only about language, but also about language learning. Participants in interaction can build new resources in specific environments for their here-and-now purposes if they do not have access to proper ones. For here and now these resources will work even though they might differ from standardized ways of talking and acting – but they indicate specific lacunae of knowledge where language teaching can intervene.

Sociologically based research opens up for a different understanding of the division of labor between classrooms and life world. As illustrated in Sect. 2, second language users' participation in the life world can lead to many situations, where interaction runs into trouble, but trouble in the talk affords repair processes and possibly new language elements for the second language speakers. It makes new linguistic elements available for the users and can lead to more ecologically valid resources for learning. However, the examples in Sect. 2 indicate that many possibilities for learning are not being taken up, since the participants may orient more to the progressivity of the interaction than to the linguistic performance.

The issue for second language teaching today is to make use of these opportunities. Access to the linguistic elements that the students encounter in their daily life has the potential to make language teaching more relevant for the students by connecting to their own experiences and needs.

The EM and CA studies of second language interaction indicate that second language teaching will gain from developing best practices and tools to 'harvest' knowledge about the learners' extracurricular activities and their interactional needs.

As a consequence, a social infrastructure for learning the local language outside of the classroom needs to be created (Wagner 2015) i.e. to support, stimulate and organize students' interactions in their life world. Second language speakers are newcomers and recognizable as such though they can make sense and participate in social interaction to a certain degree. They live in the society the language of which they attempt to learn and they engage every day in activities where they piece by piece assemble their understanding of their new life world and encounter new ways of organizing its order and sense. A crucial part of second language teaching is to

encourage the participation of students in their life outside the classroom and to establish links between life world and classroom so the planning of teaching can be grounded in many of the life situations which the students encounter. Social infrastructure, however, includes the locals and it takes planning and encouragement to make sure that they play along (Theodórsdóttir 2018).

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