

# 12 The L2 Inventory in Action: Conversation Analysis and Usage- Based Linguistics in SLA<sup>1</sup>

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## Introduction

This chapter finds itself at a junction in Second Language Acquisition (SLA) research. As an attempt at analyzing and describing the interplay between contextual factors (i.e., “the social language learner”) and individual psycholinguistic factors (i.e., “the cognitive language learner”), it follows, in some respects, an increasing tendency to view second language (L2) learning as both a social and a cognitive achievement (e.g., Atkinson, 2002; Block, 2003; de Bot, Lowie, & Verspoor, 2007; N. Ellis & Larsen-Freeman, 2006; Firth & Wagner, 1997; Kramsch, 2002; Lantolf, 2000; Lantolf & Thorne, 2006; Larsen-Freeman, 2007; Larsen-Freeman & Cameron, 2008; Watson-Gegeo, 2004; Zuengler & Miller, 2006). In other respects it has fewer parallels. As a longitudinal case study of a Mexican-Spanish speaking classroom learner of English, it tracks *both* linguistic and interactional development over a period of almost two years. As such, it finds its closest equivalents in similar longitudinal case studies of interactional competence development (e.g., Hellermann, 2007; Hellermann & Cole, 2009). However, it also breaks a new path as it attempts to combine analytical tools from conversation analysis (CA) with usage-based linguistics (UBL), a framework for investigating linguistic development in language learning (for L1, see e.g., Dabrowska & Lieven, 2005; Goldberg,

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2006; Lieven, 2009; Lieven & Tomasello, 2008; MacWhinney, 2004; Tomasello, 2000, 2003; for L2, see e.g., Bybee, 2008; N. Ellis, 2002; N. Ellis & Cadierno, 2009; Eskildsen, 2009; Eskildsen & Cadierno, 2007; Goldberg & Casenhiser, 2008). In so doing, it tries to capture the relationship between interactional environments and action sequences on the one hand, and the individual accumulation of linguistic resources in L2 learning on the other.

In order to investigate over time this emergent inventory of L2 resources as it is put to use, a performance-based model of language knowledge is needed as a frame of reference. Useful for capturing the fluidity of linguistic patterns as they emerge ontogenetically, the method and theory of the UBL tradition cover a number of functional-cognitive linguistic theories united in the rejection of certain dualisms in (applied) linguistics, among these the syntax-lexis distinction and the competence-performance distinction. UBL also assumes that language structure emerges from usage events, and that language learning is a bottom-up, usage-driven, and experiential process (e.g., N. Ellis, 2002; Langacker, 2000; Tomasello, 2000; Tummers, Heylen, & Geeraerts, 2005). This means that there is an important coupling between what language learners encounter in real life interactions and what they learn. The assumption that language knowledge and language use, interaction and cognition, and individuality and sociality are mutually constitutive makes UBL especially fruitful for the present endeavor in two ways: (a) it allows for a simultaneous focus on social aspects of use and individual aspects of cognition, and (b) it opens up towards a complementary methodological and theoretical relationship with CA.

In concrete linguistic terms, according to Tummers et al. (2005), UBL subscribes to a "maximalistic language model in which abstract grammatical patterns and the lexical instantiations of those patterns are jointly included, and which may consist of many different levels of schematic abstraction" (p. 228–229). Language knowledge is seen as a structured inventory of symbolic units, that is, form-meaning patterns (Langacker, 1987) of varying complexity stored on multiple levels of abstractness, ranging from fixed multi-word expressions (MWEs; e.g., *I dunno*) to partially schematized patterns or "utterance schemas" (Tomasello, 2000; e.g., *I don't Verb*) to fully abstract language knowledge (e.g., *NP AUX NEG VERB*; N. Ellis, 2002; Tomasello, 2003). Learning a language, then, is an item-based process (MacWhinney, 1975; Tomasello, 2000) of extracting regularities among linguistic patterns in a slow and piecemeal fashion along a trajectory of increasing schematicity of language knowledge from formulas via partially abstract patterns to fully abstract constructions.

In UBL, it is generally assumed that a profitable and empirically justifiable approach to language learning research, be it L1 or L2, should start from observing specific linguistic facts in action, primarily concrete MWEs and partially concrete utterance schemas. This methodology implies for L2 learning research that no reference should be made to an abstract

level of language knowledge unless it can be empirically substantiated to exist for the linguistic patterns and L2 users under investigation (Eskildsen, 2009; Eskildsen & Cadierno, 2007). This point of departure is reflected in the insight that linguistic knowledge is emergent in nature, constantly under construction, and in flux as usage environments change (e.g., Bates & MacWhinney, 1988; Hopper, 1998). In these changing environments, type and token frequencies are thought to determine matters of psycholinguistic entrenchment and schematicity of recurring expressions and constructions. In Tomasello's (2003) words, token frequency is frequency of a concrete expression which "in the language learner's experience tends to entrench that expression in terms of the concrete words and morphemes involved," whereas type frequency "of a class of expressions determines the abstractness or schematicity of the resulting construction" (p. 107). The maximalistic nature of the linguistic inventory, however, guarantees that what is learned as specific is not necessarily replaced over time by the more abstract constructional knowledge acquired; rather, abstract patterns and their specific instantiations may cohabit in the grammar, which implies that specific linguistic patterns co-exist psycholinguistically alongside more abstract schematizations of the same patterns (e.g., Achard, 2007; Langacker, 2000).

### Usage-Based Linguistics in SLA

UBL constitutes an important contribution to SLA because its holistic views on individuality and sociality are compatible with a view of language learning that potentially encompasses both social and cognitive perspectives on learning, an aspect that is becoming increasingly important within the SLA field (e.g., Larsen-Freeman, 2007). So far, however, the UBL trajectory of learning, from formulas towards increasing schematicity, suggested by N. Ellis (2002) as a default guide to investigating L2 development, has only been applied to SLA in few longitudinal studies. Bardovi-Harlig (2002), in a response to N. Ellis, examined future expression by 16 learners of English and found two phenomena indicating that the path is only partially valid for SLA: (a) the role of formulas in initial development was found to be limited; and (b) the use of formulas was found not to diminish ontogenetically. The first phenomenon, Bardovi-Harlig concedes, may be due to the fact that initial formulaic use is too brief to be detected in her corpus. In terms of the second finding, Bardovi-Harlig does not acknowledge that the existence of the formulas in advanced stages of learning in fact supports the validity of the suggested path of acquisition insofar as it is connected with the cohabitation in the grammar hypothesis. Bardovi-Harlig does conclude, however, that N. Ellis' proposed path of acquisition presents a richer view of SLA development than a starting point that excludes formulas.

Studying the development of *do-negation* by a Mexican-Spanish speaking learner of English, Eskildsen and Cadierno (2007) found positive evidence for the UBL path of acquisition, with the system emerging in acquisition characterized as the gradual abstraction of regularities that link expressions as constructions. *Do-negation* learning was found to be initially heavily reliant on one specific instantiation of the pattern, *I don't know*, with productivity gradually increasing as the underlying knowledge seemed to become increasingly abstract, as reflected in type and token frequencies. *I don't know* was also found to be stable throughout development suggesting its entrenchment as a MWE. These findings thus suggest that L2 learning is indeed item-based, that expression entrenchment is dependent on token frequency (as in the case of *I don't know*) and that more abstract pattern and construction learning is dependent on type frequency, as expected.

In a recent longitudinal study on the same student, this time focusing on *can*-patterns, Eskildsen (2009) found no conclusive evidence that L2 development implies reaching a level of fully schematic linguistic knowledge. The observed linguistic patterns were found to be interrelated in terms of partially concrete utterance schemas but could not be shown to be linked as fully abstract constructions in ontogenesis. Linguistic productivity, the study suggested, seems to be guaranteed by a rich inventory of linked utterance schemas rather than the learning of increasingly complex combinatorial rules or increasingly schematized linguistic knowledge. In other words, it might not be the case for all kinds of linguistic patterns that their learning is a matter of endlessly abstracting regularities. Initially in development, the focal student's *can*-utterances were found to be dominated by a few concrete interrelated patterns, MWEs such as *I can write* and *can you write*, rendering language learning item-based in accordance with UBL. Furthermore, the data revealed that these MWEs were inextricably linked with certain interactional contexts, suggesting a locally contextualized view of L2 learning, and showing interaction to be a constant source of cognitive reinforcement (i.e., entrenchment) and renewal for the MWEs and utterance schemas in the individual linguistic repertoire. In other words, the study, proposing an emergentist outlook on development, suggested that language learning is a process indistinguishable from language use.

### Outline of the chapter

Further exploring matters pertaining to the intersection of use and learning, this chapter will undertake a dual analysis of L2 interaction as it attempts to trace linguistic and interactional development in a Mexican L2 learner of English. First, I introduce the data and the linguistic inventory of the focal student, including the

MWE under investigation. The following two sections are then concerned with the interactional analysis in which I go through a set of extracts covering a time-span of approximately one year. After a discussion of the main findings, I move on to analyze the linguistic developmental issues in my focal student, using the UBL framework, before presenting my conclusions in the final section.

### Present study

#### Data

The data source for the study is the Multimedia Adult English Learner Corpus (MAELC),<sup>2</sup> which consists of audio-visual recordings of classroom interaction in an English as a Second Language (ESL) context. The classrooms in which the recordings were made were equipped with video cameras, and students were given wireless microphones on a rotational basis; the teacher also wore a microphone (Reder, 2005; Reder, Harris, & Setzler, 2003). Consisting of recordings from July 2003 through July 2005, this is a longitudinal case study of Valerio,<sup>3</sup> an adult Mexican male learner of English whose L1 is Spanish. The final database of the inquiry consists of transcripts from approximately 30 sessions (each consisting of three hours of recordings, not all of which has been transcribed) in which Valerio is either wearing a microphone or sitting next to someone wearing a microphone. This transcribed database has not been coded for linguistic category information, which means that only searches based on exact and concrete sequences of either letters or words are possible. The uses reported on in this chapter do not include uses that are being specifically practiced in grammar tasks in the classroom at the time of recording.

Taking cognitive portability of concrete linguistic patterns as its starting point, the present study investigates the interplay between interactional circumstances and L2 development by focusing on a recurrent linguistic pattern and its interactional deployment over time. The pattern under investigation is the *auxiliary do*-pattern, not including the *do-neg* pattern. An overview of Valerio's linguistic inventory, insofar far as *aux-do* is concerned, is presented in the appendix. The data displayed in the appendix are described and discussed further below; the important thing to note at this stage is the primary empirical observation that there seems to be an initially recurring formula, *what do you say*—a fixed multi word expression (MWE), here operationalized as *a recurring string of words used for a relatively coherent and constant communicative purpose* (Eskildsen, 2009; Eskildsen & Cadierno, 2007). The use of this MWE over time, and the notion that it may constitute the developmental seed of a more generic *aux-do* pattern, are investigated in turn in the following, starting from the point of tracing the MWE in action to show the co-emergence of interactional contingencies and specific features in the linguistic inventory of my focal student.

### Zooming in on the inventory in use

One way to get at these interactional contingencies is to put the data under the scrutiny of a conversation analysis (CA) inspired analysis to investigate issues pertaining to sequential placement. In the interest of clarity, it should be stressed that this investigation is not strictly CA; rather, some concepts often used in micro-analysis have been borrowed for the present purposes. The epistemological common-ground shared by the present research and proponents of micro-analysis for L2 studies (e.g., Firth & Wagner, 2007) is the conceptualization of language learning as emergent, constant, and never-ending. This shared epistemology between the present approach and a CA-inspired approach to L2 studies has informed the following investigation of whether "a micro-analysis of second language conversations can enhance our understanding of what it means to talk in another language, by broadening the focus beyond the sounds, structures and meanings of language to encompass action sequences, timing and interactivity" (Wagner & Gardner, 2004, p. 14). In other words, Schegloff and Sacks' (1973) insight that conversation is organized in action sequences, and the ensuing discovery that what people accomplish through language depends on the sequential positioning of linguistic items, is what makes micro-analysis relevant for the study of L2 interactional data.

So, in the analyses which follow, the target utterance is the MWE *what do you say*, the focus being on what it does and where it does it in terms of its sequential position and the orientations of the participants. An initial overview of the data reveals that the MWE, when viewed over time, is used to perform four different functions. In the order they appear chronologically in the data they are (a) *invitation for help*; (b) *display of doing thinking*; (c) *reference to a past interactional event*; and (d) *elicitation of opinion*. Table 1 presents an overview and reference point for the various MWE instantiations under investigation and extracts analyzed in the following. As Table 1 displays, the extracts are presented in an order which reflects both chronology and pragmatic function of the MWE.

**Table 1. MWEs by function, chronology, and extract representation**

MWE function	data appearance	extract representation
invitation for help	July–August 2003	1, 2, 4
display of doing thinking	July 2003–March 2004	2, 3, 5
reference to past action	August 2003–June 2005	6, 7, 8
elicitation of opinion	March–July 2004	9, 10, 11

The interest, then, lies in the interplay among the MWE, sequential organization, and social activity. On a more epistemological note, the current interest is also in the interplay between the social nature of the classroom interactions and the nature of the contributions of the individual participants in interaction,

the underlying assumption being that these co-develop in an equal partnership, as it were, in which none is given prominence over the other.

### The MWE as invitation for help or display of doing thinking?

Extract 1 below is from Valerio's very first day in ESL class. In the preceding discourse, a task in which participants talk about favorite holidays / days of the year, Valerio (Va) has been "interviewing" Angelica (An), who does not immediately begin to interview him back. Instead, Valerio now self-selects as the next speaker (line 1) to tell Angelica about his favorite day of the year, which turns out to be his wedding anniversary. Please note that intra-turn pauses marked in the transcripts are action-filled (e.g., the students are writing) unless otherwise noted in the analyses. In the transcripts, words between slashes are to be read phonetically, following IPA conventions.<sup>4</sup>

#### Extract 1, July 01, 2003

- 01 Va: ((writes)) xxx aih ((slaps himself on  
02 mouth)) uh .hh for me: December (1) eight  
03 An: ((writes)) December ((writes)) December?  
04 Va: eight (3) because (1) is (1) anniversary?  
05 An: ((writes)) uhuh ((looks up at Valerio))  
06 (2)  
07 Va: for the /mæriid/?  
08 (2)  
09 An: anniversary  
10 Va: for the /mæriid/?  
11 An: for is para ((waving hand))  
12 Va: for ((frowns)) (2) um:  
13 (5)  
14 An: xxx ((turns to her own desk, writes))  
15 Va: agh: ((leans over to see what An writes))  
16 -> (4) teacher what do you say for  
17 (2)  
18 An: anniversary[: and marry ((pointing at=  
19 Va: [for anniversary /mæriid/?  
20 An: =Valerio))  
21 Te: it's it's anniversary.  
22 Va: anni[versary?  
23 Te: [wedding anniversary  
24 An: wedding? ((picks up paper))  
25 Va: wed[ding?  
26 Te: [wedding (+) so let [me write it down=  
27 Va: [wedding (1) ah=  
28 Te: =for you ]  
29 Va: =yeah yeah]



- 30 Te: wedding [anniversary  
 31 Va: [wedding is here ((shuffles paper,  
 32 writes)) no (2) uhuh ((points to board,  
 33 looks at An)) wedding anniversary (1) is  
 34 wedding anniversary  
 35 An: ((writes))

In line 4, Valerio uses the term *anniversary* which, after a 3 second pause in which Angelica writes down Valerio's answer, is acknowledged by Angelica (line 5). Then there is a pause, indicating trouble (line 6), before Valerio goes on to add *for the /mæriɪd/?*. The rising intonation in this turn may suggest a certain tentativeness on Valerio's part as to how to express the term "wedding anniversary." Following another pause, Angelica repeats *anniversary* in line 9, which Valerio seems to treat as a repair initiation as he offers a repetition of *for the /mæriɪd/?* (line 10) as solution candidate. The immediate focus of Angelica's repair, however, seems to be Valerio's use of *for*, and she gives him the Spanish equivalent *para* in line 11. Valerio frowns, repeating *for* (line 12), and Angelica turns around to her own desk, seemingly leaving the problem unsolved (line 14).

Valerio then leans forward to see what Angelica is writing and summons the teacher, who is already approaching the pair (lines 15–16). Using the MWE *what do you say (for)*, Valerio explicitly invites the teacher to help solve the word search (Brouwer, 2003). The two students go on to co-construct the word search, indexing it as a joint problem (lines 18–20), and the teacher gives the target phrase, wedding anniversary (lines 21–28). The sequence is eventually closed down successfully as the students treat the teacher's repair as the item they were looking for (lines 27–35).

Below, in Extract 2, an interaction occurring 17 days later, Valerio uses the MWE twice for a related purpose, first with his partner in the task, next with another classmate in a brief side sequence requiring a summons (as was the case in the previous interaction in which Valerio summoned the teacher). In the task the students are instructed to talk about what they did the day before. Prior to the extract, Valerio has told Angelica that he went to the dentist. We enter the interaction as this sequence is closed by Valerio in line 1, as he, partly in Spanish, concludes that they are done talking about "yesterday," which he sums up in the utterance *he visit dents*. The third person usage, it should be noted, is task-specific; the students are supposed to collect information from each other so the third person probably comes from Angelica's writing.

#### Extract 2, July 18, 2003

- 01 Va: bueno yesterday ya. yes.. he visit dents.  
 02 (2) for evening?  
 03 (1)

- 04 An: (muchas) cosas hicistes? ("many things  
 05 you have done?")  
 06 Va: mhm estuve en la casa de xxx ("I was at  
 07 xxx's house")  
 08 An: xxx  
 09 Va: ah entonces es (("then it's")) I have (1) I  
 10 -> am ho:: (2) I hoh what do you say. ((looks  
 11 away)) ha:ve I'meh I brdrdrdr (1) in my  
 12 home (3) ((looks back)) the morning in my  
 13 home and visit dents ((points to An's  
 14 paper))  
 15 An: no es [next  
 16 Va: [visit dents  
 17 An: next del dentista  
 18 Va: no next fue visitar al dentista ("I  
 19 visited the dentist")  
 20 An: y luego ("and then")  
 21 Va: I visit ((writes))  
 22 An: ((writes)) and (2) in the morning (3) es  
 23 que xxx visit e: correcto? ("is visit  
 24 correct?")  
 25 Va: ((looks in electronic dictionary)) to be?  
 26 (1) qué es el verbo to be? ("what is the  
 27 verb 'to be'?) Estar?  
 28 An: uh:h  
 29 ((both look in electronic dictionary))  
 30 Va: estábamos no da ("we were' doesn't work")  
 31 hhm (17) ((looks in ED)) Lore ((makes eye  
 32 contact with Lorenza who sits across the  
 33 room)) what do you say estuvo  
 34 -> Lo: estuvo? (1) I went?  
 35 Va: I went?  
 36 Lo: uhuh  
 37 Va: alright thank you (1) ya más fácil ("very  
 38 easy")  
 39 Lo: si si sabe cómo se escribe? ("yes yes do  
 40 you know how to write it?")  
 41 Va: I went ((nods, looking at Lore))

Valerio then goes on to introduce the next topic, namely what he did in the evening (line 2). This Angelica responds to by further inquiring about Valerio's activities (lines 4–5). In the following turn, Valerio says in Spanish that he was at somebody's house (inaudible name), which Angelica responds to in another inaudible turn (lines 6–8). This is followed by Valerio refocusing on the task, also partly in Spanish, *entonces es I have* (line 9). The next part of the turn is marked by speech perturbations such as pauses and a stretched vowel sound in *I am ho:*, indicating trouble and initiation of self-repair (Schegloff, Jefferson, & Sacks,

1977). Valerio then uses the target expression *what do you say* pronounced with slightly falling intonation (line 10). As opposed to the previous interaction, however, this time the MWE is not used as an invitation for help, and it is not oriented to as such by the co-participant. Instead, Valerio here makes it public that he is "doing thinking," as Houtkoop-Stenstra (1994) called it (quoted in Brouwer, 2003, p. 538), while keeping the floor. This is achieved by means of the vowel stretching, a common pre-indicator of a word search (Schegloff, 1979), and by using the MWE, but also by means of other modalities, such as falling intonation and, especially, by avoiding eye contact (see also Mori & Hasegawa, 2009). In the previous turn exchange in Spanish, there was eye contact between the participants; however, as Valerio starts searching for the word, his gaze wanders off (line 10). Accordingly, Angelica does not intervene in Valerio's word search, and it seems he does not expect her to. The eye contact is re-established later in Valerio's turn, during the 3 seconds pause in line 12, at which stage the focus is no longer on the word search but back on the task itself. They then seem to be summarizing what information Angelica has retrieved from Valerio (lines 12–21), and then Angelica, lines 22–23, initiates a new search for a lexical item as she seems to express doubts that *visit* is the right verb; this turn, unfortunately, is partially inaudible. In lines 23–31, the students seem to be cooperating to find the right verb, but their lack of success in this eventually results in Valerio employing the MWE in a manner similar to Extract 1 above where he first summons the intended recipient, Lorenza, before asking for the specific lexical item (lines 31–33). The summons, which receives a non-verbal answer in that mutual gaze is established, and the MWE *What do you say* (line 33) open the side sequence in which Lorenza and Valerio agree on a solution to the lexical problem (lines 33–38). While the term given by Lorenza is not the English equivalent to *estuvo*—"he was" would be the most fitting term here—the function of the MWE is very clear to her. The sequence is eventually closed by Valerio appreciating Lorenza's help (line 37) and Valerio's nodding (line 41) in response to Lore's question in Spanish *sabe cómo se escribe?* [do you know how to write it?] in line 39.

At this stage, then, we have three instances of the MWE, two of which recur in comparable sequences where Valerio explicitly invites a co-participant to help carry out a lexical inquiry. The third instance also takes place in a lexical search environment, but it is carried out in a manner which is not invitational as Valerio uses it to display that he is "doing thinking."

In the next extract, recorded 1 month and 12 days after Extract 1, the MWE is used with *how* rather than *what*, which makes for a more native-like pattern. However, as this *how do you verb*-pattern is not found again in Valerio's data, it cannot be said to substitute the existing pattern, nor can I argue empirically that this interaction constitutes a first step towards a new emergent pattern in Valerio's inventory. Therefore, I do not, for the present purposes, distinguish between the two.

## Extract 3, August 12, 2003

- 1 Te: here is bread  
 2 Va: hm  
 3 Te: here is some bread ((showing them book))  
 4 (1)  
 5 Va: for  
 6 Ol: xxx ((looks in teacher's book, nods))  
 7 Te: mhm  
 8 Va: teacher  
 9 Ol: ((looks up from teacher's book))  
 10 Te: mhm  
 11 Va: here is bread (.) all debr all de:hm  
 12 Ol: ((looks down))  
 13 Va: .hhh in Mexico [is different names in:=  
 14 Ol: [((looks toward Valerio))  
 15 Va: =((points to teacher's book)) the brea:d or  
 16 for the: ((looks in Ol's direction)) nhah  
 17 -> ((slight laughter)) how do you say .hhh  
 18 -> ((looks down)) how do you say *panaderia*  
 19 ((looks up)) (2) for the make (1) bread?  
 20 Te: mhm a bakery

Leading up to this extract, the teacher has been assisting Valerio's partner Olivia (Ol) with a troubling word, *bread*. This item, part of a sentence which the students are asked to complete in the task, did not seem to present any problems to Valerio. As Olivia acknowledges the teacher's help (line 6), Valerio summons the teacher (line 8), gets a verbal response (line 10), and, perhaps recycling the teacher's turn in line 1, starts talking about different breads (line 11). At this stage, Olivia has reoriented as she shifted her gaze from the teacher's book towards Valerio (line 9), and an interactional space has been established in which the two students and the teacher co-participate. Olivia and the teacher are both potential recipients of Valerio's turn, Olivia as implied by her gaze, and the teacher as implied by her reciprocity token in line 10. Valerio's turn in line 11 contains the first trouble indicator as marked by a stretched vowel in *all de:hm*, at which point Olivia leaves the established interactional space, turning her gaze downwards. Valerio then restarts his turn *.hhh in Mexico is...*, line 13, following which Olivia realigns with Valerio as she turns her gaze towards him, seemingly moving from the status of non-addressee to that of potential addressee (line 14).

Following the next trouble indicator, the stretched vowel in *the:* (line 16), the MWE, used twice, sits mid-turn as a display of doing thinking (lines 17–18). It is difficult to tell if Valerio's head-turning towards Olivia (line 16) constitutes a search for support because it follows the trouble indicator but precedes the trouble, and because Valerio previously summoned the teacher (line 8) for a reason which is yet to be revealed. Following the "slight laughter" (lines 16–

17), the two consecutive MWEs are employed in a manner so as to suggest that, more than anything, Valerio is gradually withdrawing from the interactional space which he has shared with the teacher since the summons-and-answer pair in lines 8–10. The first MWE, in line 17, is uttered with a fast transition via in-breath and a shifting eye gaze away from the co-participants into the second instantiation of the MWE, suggesting that he is here signaling "more to come" (Schegloff, 1996). In that sense, given the lack of reaction from Olivia and the fast transition into the second instantiation of the MWE, the shifting gaze suggests that he is momentarily excluding primarily the teacher, but probably also Olivia, from reciprocity. Both are re-established as potential recipients as Valerio looks up immediately following the second MWE and co-occurring with the Spanish *panadería* (line 18). The teacher then gives her solution candidate (line 20) after Valerio has elaborated on what he is after (lines 18–19).

Extract 4, below, was recorded on the same day as Extract 3. It gives another example of the MWE as used as an invitation for help. The students are doing a task in which they have been instructed to add logical *but*-clauses to main clauses written on hand-outs. Previously in the interaction there has been some task-solving and a pause, following which Valerio now opens a new sequence as he begins to read from the task sheet.

#### Extract 4, August 12, 2003

- 01 Va: in this country ((reading in a whisper,  
02 leaned back))  
03 Ol: ((writes))  
04 -> Va: I no under[stand. .hhh what do you say.=  
05 Ol: [((increasingly orienting to=  
06 Va: =((sits up))]  
07 Ol: =Valerio)) ]  
08 ((mutual eye contact))  
09 Va: in this country ((looks down at paper,  
10 starts reading aloud))  
11 Ol: ((looks down at paper))  
12 Va: you can orden some (1) /ki:nds/?  
13 Ol: /ki:nds/  
14 Va: of food (1) by telephone /bu:t/ but  
15 Ol: ((reading)) but it's better cook in your  
16 house (1) *es mejor cocinar en tu casa?*  
17 humhumhum ((laughter))  
18 Va: ((moves shoulders up and down)) hmhm  
19 [((nods, taps paper with pen))]  
20 Ol: [order some xxx ]  
21 Va: .hhh order [some kind order]

- 22 Ol: [xxx ]  
23 Va: order [some /ki:nds/ ]  
24 Ol: [((leans towards Valerio))] yes?  
25 Va: order some /ki:nds/ what do you. order  
26 some /ki:nds/  
27 Ol: order [some  
28 Va: [bueno order. yes. some (/ki:nds/)  
29 Ol: [some ]  
30 some /ki:nds/ ((opens electronic dictionary))  
31 *no atrapé xxx* ("didn't catch xxx") (1)  
32 [some /ki:nds/. /ki:nds/? some /ki:nds/ xxx  
33 Va: [looks in electronic dictionary  
34 ((whispers))  
35 Ol: ((looking at Valerio)) xxx (2) ((looks  
36 down))  
37 Va: ((shows Olivia electronic dictionary))  
38 Ol: xxx  
39 Va: a:::::::::::hh (1) bu:[::::  
40 Ol: [xxx ((writes, looks  
41 at Valerio's paper, puts down pencil))  
42 Va: bu:: alright ((erases, hits table with  
43 side of hand 4 times, writes *I don't like  
44 because it has different taste*))

At first, leaning back, Valerio reads in a whisper (lines 1–2; *in this country*) while Olivia is busy writing (line 3). Then Valerio gradually changes posture as he starts to sit up straight while simultaneously saying *I no understand*. *hhh what do you say* (line 4). Olivia reacts to *I no understand* and Valerio's changing posture by increasingly, and in overlap with Valerio's body movements, orienting to him (line 5). The two students' changing postures eventually result in physical alignment, and a mutual interactional space has been established, as displayed by the mutual eye contact (line 8). Valerio then begins to read aloud from what appears to be the troubling sentence on the task sheet (line 9). As Valerio thus reorients towards the written sheet, Olivia follows suit and orients to *her* task sheet (line 11). The actual reading starts in line 12, the task sentence being "(in this country) you can order some kinds of food by telephone, but...". Valerio mispronounces both "order" (*orden*) and "kinds" (*/ki:nds/*) but, perhaps reacting to the 1-second pause and Valerio's rising intonation on */ki:nds/*, Olivia seemingly ignores *orden* and repeats */ki:nds/*, perhaps indexing it here as a potential trouble source (line 13). At this point in the interaction, however, the students do not orient further to this item. Instead, when Valerio has finished reading the sentence aloud (line 14), Olivia offers her solution to the task (lines 15–17) by proposing a way to complete the 'but'-clause. After 3 seconds of pondering over Olivia's solution (marked by the

shoulder movements), Valerio accepts it (acknowledgment token *hmhm* and *nodding* in line 18).

Having thus produced a solution to the task, the students reorient to the task wording, *order some kind* (lines 20–23). Even though in line 21, Valerio pronounces *kind* correctly, it would seem that /ki:nds/ is being established as a troubling item as both Valerio and Olivia increasingly orient to this specific item, with Valerio reading from the text and Olivia eventually leaning into his physical space (lines 23–26). In line 25, Valerio seems to almost employ the MWE as he utters *what do you*. in-between repetitions of the task text, *order some /ki:nds/*. Olivia then repeats *order some* (line 27), which Valerio, in line 28, overlaps with *bueno order. yes.* followed by another mispronunciation of 'kinds' in *some /ki:nds/*. This turn seems to act as a specification that *order* is not the problem while bringing *some /ki:nds/* further into focus by way of Valerio's repeating it from his previous turn. In the following turn, Olivia repeats *some /ki:nds/*, following which she looks in her electronic dictionary and expresses, in Spanish, "not having caught" something (line 31; partially inaudible). This "something" would seem to be /ki:nds/ as Olivia is very focused on this item in line 32. The students have thus collaboratively 'unframed' /ki:nds/ from its original context in the task sentence, as they have brought it into focus (Brouwer, 2004).

In lines 33–37, the students are concerned with dictionary use followed by Valerio's emphatic change of state token (*a:.....h*, line 39; Heritage, 1984) and his writing his task-solution, started by *bu::* (line 39; Valerio's default way of pronouncing 'but' is /bu:t/, as also seen in line 14), and continued by a repetition of *bu::* in line 42. Finally, Valerio completes the sentence, writing *but I don't like because it has different taste*. Even though the original lexical problem is not evidently solved, which Goodwin and Goodwin (1986) found to be an acceptable outcome of word searches, the increasingly co-constructed focus on /ki:nds/ throughout the interaction followed by Valerio's change-of-state and production of a task-solution suggest that they achieve a form of agreement on the trouble-item. The students, then, after having agreed on Olivia's task-solution and co-identified /ki:nds/ as the trouble-source initially causing Valerio to invite Olivia to help him, end up with individual solution candidates. At this stage, the students do not share their sentences with the teacher, so an assessment remains elusive. The students themselves do not orient any further to this task.

The next extract, recorded 8 months and 9 days after Extract 1, shows that the MWE as a tool to perform a private word search is retained over time. The students are involved in a task intended to elicit the short answer forms "yes I do" and "no I don't" as yielded by questions about likes and dislikes. We enter the interaction as Valerio asks his fellow classmate Danny, who is from China, about Mexican food (line 1).

## Extract 5, March 09, 2004

- 01 Va: d'you like m: eh food Mexican?  
 02 (2)  
 03 Da: maybe but I didn't uh ((starts making a  
 04 waving gesture with right hand)) but I do  
 05 not taste  
 06 Va: ((nods))  
 07 Da: maybe  
 08 -> Va: you ((nods briefly)) you::: ts (1) what do  
 09 you say. ((looks down)) (1) you eating mex  
 10 you eating food Mexican?  
 11 Da: no ((shakes head)) never

In lines 3–5, Danny offers a diplomatic *maybe but I do not taste* to Valerio's question. Valerio nods in acceptance (line 6), and Danny repeats the *maybe* (line 7). Then Valerio, after giving a brief nod in response to Danny's second *maybe*, embarks on what turns out to be an elaborative question containing our target expression (lines 8–10). In this extract, the MWE is yet again used by Valerio to display that he is doing thinking. The MWE again follows speech perturbations, it is uttered with falling intonation, and it is followed or accompanied by some kind of inward physical presence (he looks down). The co-participant does not interrupt; the MWE used as a display of doing thinking seems to waiver a transition relevant place.

So far, we have seen that the MWE is linked to certain sequential environments in which it performs certain activities and from which it derives its functions—these things hang together and they are what the participants primarily seem to be orienting to. The data have shown that the MWE may be used to ask for help (teacher/peer) or as a display of doing thinking, a public display of accountable behavior to inform co-participants that no help is explicitly requested. The explicit invitation for help is always pre-indexed by some kind of interactional work, either a summons, a gesture, or a gaze or any of these in combination. Keeping in mind the interactional preference for self-repair (Schegloff, Jefferson, & Sacks, 1977), the findings therefore tie in well with the co-participants not getting involved unless specifically summoned. It was found that if Valerio is physically disengaged from the current activity, either looking down/away or in other ways physically out of alignment with the task, there is a tendency that the MWE is self-oriented, but still displaying accountable behavior. This is sometimes, though not consistently, also reflected in falling intonation. It seems that the co-participants are more concentrated on bodily posture and aspects of eye gazing when dealing with Valerio's orientation in his lexical problem-solving activities. When it is other-oriented, the problem-solving initiated by the MWE may not always be



straightforward, but the problem-solving activity it instigates is fairly quickly agreed on collaboratively in all cases. What ties all usages of the target MWE together is that it works as a self-initiated repair in lexical inquiry situations—the solution may come out as an other-repair but only if specific interactional work has been carried out to accomplish this.

### The MWE as reference to past action

In the following extract analyses, we shall see that the MWE increasingly performs other functions, although they still retain traces of previous usage. Extracts 1–4 above documented that Valerio used the MWE in word search environments from the first day in class. Approximately seven weeks into Valerio's career as a language learner in this classroom, he starts using the phrase in a new environment where he uses the MWE to make a reference to an interactional contribution previously made by a co-participant.

Extract 6 below shows the first example of this usage in the data. Recorded in August 2003, it falls approximately seven weeks before Extract 5 above, so chronologically there is overlap between Valerio's different uses of the MWE. This is an important empirical observation. It suggests that the various instantiations of the MWE emerge from the same source, psycholinguistically, and hence it suggests that all the instantiations are one linguistic item that is carried across interactional barriers, rather than a series of unrelated, instantaneous interactional phenomena. I will return to this issue in the discussion below.

On the day of the recording of the interaction in Extract 6, one of the students brought her young daughter to the class. Prior to the extract, the students in the interaction—Olivia (Ol), José (Jo), and Valerio (Va)—have been doing some group work, and the teacher has come to their table to evaluate their work. During this evaluation, the teacher comments that the little girl is cute, which spawns questions about the word "cute" and what adjective to use about boys instead of girls. The teacher then explains that you can use the same word when talking about boys, but when the boys get older it may be more appropriate to use "handsome." This is line 1 in the extract.

### Extract 6, August 15, 2003

01 Te: pretty for a girl [and handsome for a boy  
 02 Va: [pretty. ((nodding))  
 03 Te: ((leaves to write on board))  
 04 Jo: xxx  
 05 Te: [bupbupbupbup ((to child in class))  
 06 Jo: [xxx  
 07 (1)  
 08 -> Va: what do you say for bo boy  
 09 (1)

10 Ol: [for boy?  
 11 Te: [handsome  
 12 Va: handsome?  
 13 Te: handsome mhm

In overlap with the teacher, Valerio attends to the word *pretty* by repeating it and nodding (line 2). The teacher leaves the students' table to go and write the new words on the board, and on her way she makes some babbling sounds to the child (line 5). In overlap with these two actions, José makes two unintelligible comments (lines 4 and 6). Following a pause, Valerio then deploys the MWE, in line 8, to display an orientation to what the teacher had said a few turns earlier. Another pause ensues, following which Olivia repeats the final part of Valerio's turn, *for boy*, with rising intonation, thus aligning with Valerio's orientation and indexing his inquiry as a joint problem (lines 9–10). In overlap with Olivia's turn, the teacher offers *handsome* as an appropriate answer to their inquiry (line 11). Valerio repeats the word with "try-marking" intonation (Sacks & Schegloff, 1979), and the teacher confirms by repeating *handsome*, followed by an acknowledgment token, in response (lines 12–13). Following the interaction, there is further work on the item *handsome*, but for the present purpose it suffices to note that Valerio successfully deploys the MWE in a new environment; he uses it to refer to an action carried out by a co-participant a few turns earlier in the interaction and his co-participants orient to his action as such.

While this use resembles an other-initiated repair inasmuch as it contributes to a problem-solving activity, the problem it solves is not a matter of failed mutual understanding or lacking intersubjectivity. The co-participants have already achieved mutual understanding—they all "know" that they are talking about adjectives that express 'cuteness' in relation to boys and girls—so this use of the MWE, rather than initiating an other-repair, primarily achieves the function of referring to a past event, in this case to a specific lexical item used in a prior turn. In this respect, resembling an explicit word search marker (Brouwer, 2003), this new use of the MWE also carries traces of the lexical search environments discussed in the previous section.

In the interaction in Extract 7 below, Valerio uses the MWE to orient to something which Iago, a class mate and task partner here, did earlier in the interaction. The students are solving a task concerned with the difference between *lend* and *borrow*. In the course material, the students are introduced to a range of different nouns which they are supposed to use as they practice lending/borrowing requests. Earlier in the interaction, the object of the borrowing/lending request had been "eggs." Iago seemed to find this amusing, and instead of practicing the request, Iago, laughing, asked if Valerio *had* eggs. Valerio's answer was *sure*, but instead of making requests

about borrowing or lending the eggs, they moved on to the next noun in the course material. Now, Valerio seems to be referring to this past interactional event concerning the eggs. One of the resources used to achieve this is the MWE (line 4).

#### Extract 7, November 04, 2003

- 01 Va: ah do you ask question for the eggs  
 02 ((points to book)) more (1) time  
 03 Ia: ((giggles))  
 04 -> Va: what do you say? ((points at Ian  
 05 throughout this turn and Ian's next turn))  
 06 Ia: okay uh u:h (1) can you lend me the: [heh]  
 07 Va: [no ]  
 08 is can you lend (1) is ((looks in book))  
 09 Ia: yeah  
 10 Va: can I borrow ((pointing at Ian))

In the first two lines in the extract, Valerio asks Iago to make the borrow/lend request with eggs as the object. Iago giggles (line 3) perhaps recalling the past event, which he seemed to find amusing, but he does not respond to Valerio's question. Then, in line 4, Valerio reformulates, using our focal expression accompanied by a finger-pointing gesture which suggests that not only is Valerio referring to a past event in the interaction; he seems to be holding Iago accountable for some previous action. As mentioned, when their interaction had first revolved around eggs, Iago did not make the actual request in accordance with the task activity. In this extract, Iago's response (line 6) is characterized by speech perturbations and pauses, suggesting trouble in delivering a relevant next action. Valerio keeps his finger pointed at Iago throughout Iago's turn, and does not terminate this gesture until he takes the floor again verbally as he, in lines 7–8, begins other-repairing Iago's *can you lend me the:*. In other words, Valerio deploys the MWE not only to orient to a previous utterance made by Iago, he seems to challenge (Koshik, 2003) the correctness or relevance of that previous utterance. This is displayed in the pointing gesture but also in expression of disagreement in the following turn (lines 7–8), in which he argues in favor of using *borrow* rather than *lend*. Following the extract, the interaction then seems to become a more principled discussion of the difference between *lend* and *borrow*, which is finally closed as Valerio acknowledges that Iago is right after all, apologizes, and thanks him for his help.

Recorded more than one year and a half later, Extract 8 below displays the long-term use of the MWE as a means to refer to a previous action by a co-participant. Valerio and his partner, Mary, are talking about things that have changed in their lives since moving to Portland. Mary has been telling Valerio

about her different jobs, both in a tea shop in Portland and in different contexts in her home country. Line 1 in the extract is the end of the turn in which she says that back home she worked in different places, but in Portland she has only worked in a tea shop.

#### Extract 8, June 30, 2005

- 01 Ma: I only work at this tea shop  
 02 Va: tea shop.  
 03 Ma: yeah  
 04 Va: tea shop i:s is eh (2) is the ehm (1) is eh  
 05 -> the what do you say before?  
 06 (1)  
 07 Ma: tseh it's like a: coffee shop?  
 08 Va: it's is a restaurant?  
 09 Ma: ((nods)) [yeah.  
 10 Va: [coffee shop?  
 11 Ma: yeah yeah yeah. it's kind of coffee shop.  
 12 you make drink? [(gestures pouring)] xxx  
 13 Va: [(nods)] the same the  
 14 same for the starbucks and [you can:=  
 15 Ma: [(points at  
 16 Va)) yeah like that

Valerio then repeats *tea shop* (line 2), which receives an acknowledgment token from Mary (line 3). Valerio's turn in lines 4–5, however, suggests that his previous turn might have been a first attempt at “unframing” the item to make it a matter of focus (Brouwer, 2004). The beginning of this turn is characterized by non-lexical speech perturbations and pauses. Simplified, Valerio makes three attempts to express something about the tea shop: *tea shop is () is the () is the* before using the MWE to ask for help by referring to an utterance previously made by Mary. This time Valerio adds *before*, making it very explicit that he is referring to a past event. After a 1.0 second pause, Mary explains that it is like a coffee shop, an utterance which aligns with Valerio's focus on the concept of ‘tea shop’ by way of proposing an explanation of the term, but at the same time the try-marking intonation suggests that she is not entirely sure what previous event Valerio is aiming at. Mary's turn is thus reminiscent of what Kurhila (2006, p. 155) calls a “candidate understanding” of a previous turn, “used to check the level of shared knowledge between the participants.” As such, it constitutes the first pair part of an adjacency pair, requiring confirmation or rejection. Valerio's next turn, however, does not seem to provide this. Instead, he proposes another explanation of the concept of “tea shop,” suggesting that it is a restaurant (line 8). Mary nods and says *yeah* in agreement (line 9), in overlap with which Valerio repeats



- 05 (1)  
 06 Sa: you know it has- it- these are these are  
 07 le learning mistakes. these are not right  
 08 ((pointing to paper))  
 09 (1)  
 10 Va: this is no right?  
 11 Sa: no at's right.  
 12 -> Va: and? (.) what do you say  
 13 Sa: what?  
 14 (1)  
 15 -> Va: what [do you say]  
 16 Sa: [I I just I] I ju- I just read these  
 17 sentence ((pointing to Va's paper))  
 18 -> Va: and what do you say  
 19 Sa: .hh I s I I think this would be listen (1)  
 20 you should listen to old genera[tion  
 21 Va: [yeah (1)  
 22 you should listen old generation or to old  
 23 generation

After reading the sentence, Sal looks up at Valerio (line 3), perhaps trying to elicit his thoughts on the sentence. Valerio, on the other hand, employs the MWE, perhaps trying to elicit Sal's opinion about the sentence. After a pause, indicating trouble, Sal embarks on an explanation concerning the sentences on their sheet and the task at hand (lines 6–8). It would seem that from Sal's perspective, intersubjectivity, that is, mutual understanding of the task at hand, is yet to be established. Another pause ensues, following which Valerio recycles parts of Sal's previous turn, *no(t) right*, to perform what Sal hears as a comprehension check, and Sal confirms his understanding (lines 9–11). In Sal's turn in line 11, it should be noted, the pronoun sounds like a "that" without the word-initial consonant (hence the transcription of the utterance as *at's right*). Valerio, in line 12, then repeats the MWE following a turn-initial *and* with rising intonation, suggesting that Valerio does know what the task is about and that he is trying to elicit Sal's opinion on the target sentence. Sal, however, initiates self-repair (line 13) and Valerio repeats the MWE as a candidate solution (line 15). Then, in lines 16–17, partially in overlap with Valerio's candidate solution, Sal again orients to the situation as a repair activity, as he seems to offer another explanation of the task and how to go about solving it as a candidate solution. In line 18, Valerio once more uses the MWE following a turn-initial *and*, and, displaying that intersubjectivity has been established, Sal gives his opinion on the grammaticality of the sentence, and Valerio agrees (lines 19–23).

In the extract below, the MWE is used for the same purpose. The students are discussing by how many individuals the world's elderly population is increasing on a monthly basis. This extract starts in the middle of a long interaction in which Iago has shown his reluctance to answer the question, saying to both the

teacher and Valerio that he does not know and that he is incapable of giving a sensible estimate. We enter the interaction at a point where Valerio proposes *maybe* as a means to initiate giving an estimate; at least that is how the co-participants respond to Valerio's *maybe* in line 1.

## Extract 11, May 14, 2004

- 01 Va: maybe ((pointing to paper))  
 02 Te: maybe okay that's a ge- that's a good  
 03 thank you[u  
 04 Ia: [oh maybe. [okay.  
 05 Te: [maybe: b[y:  
 06 Ia: [okay in my  
 07 opinion  
 08 Te: in my op yes:((reaches towards Ian))  
 09 Va: [yeah  
 10 Ia: [yes  
 11 Te: yes [xxx  
 12 Ia: [yeah in my opinion. [that  
 13 Va: [good! ((pointing  
 14 at Ian))  
 15 Ia: that's bee ((pointing to Valerio's paper))  
 16 Va: what is your opinion?  
 17 Ia: heh in my opihinion ((laughing voice))  
 18 Va: °what is your opinion°. three hundred  
 19 thou:sand?  
 20 Ia: it's u:h (.) the elderly population is  
 21 increasing b[y:  
 22 Va: [a month  
 23 Ia: by  
 24 Va: a month?  
 25 Ia: three [hundred  
 26 Va: [maybe three hundred  
 27 Ia: [thousand  
 28 -> Va: [what do you say? (1) three hundred  
 29 thousand?  
 30 Ia: I guess  
 31 Va: okay

The teacher supports Valerio (line 2) and Iago, in turn, changes his orientation to the task at hand in line 4, *oh maybe okay*, perhaps as a result of Valerio offering *maybe* as a way to initiate an expression containing an estimate or to express uncertainty; the change is evidenced by the *oh* token (Heritage, 1984). Iago then complies by offering *in my opinion* (lines 6–7) as a possible means to express his estimate, which receives positive assessments from both the teacher and Valerio (lines 8–14). In line 15, Iago actually gives his opinion on



the matter, namely that 'answer B' in the task is the most appropriate one. For some reason, Valerio does not orient to this and goes on to specifically ask for Iago's opinion (line 16, line 18) and later, using the MWE (line 28), repeats the request for Iago's opinion on the matter. Interestingly, Valerio performs the first request for Iago's opinion in line 16 by using the phrase *what is your opinion?*, which has been afforded by the interaction. He repeats the phrase in line 18 in a more quiet voice and with slightly falling intonation, implying that it might be private speech (Lantolf & Thorne, 2006). They eventually end up agreeing (lines 16–31) on the number 300,000 (which is one of three options given in the task). In line 28, Valerio again asks for Iago's opinion, this time using the MWE; the use of the MWE even here, in an interaction which previously afforded the useful native-like phrase *what is your opinion*, suggests its entrenchment as a means to ask a for a co-participant's opinion.<sup>5</sup>

## Discussion

Summing up, the MWE was initially used in lexical enquiry sequences. The orientation to the MWE in these cases by the co-participant was found to be dependent on whether or not it was accompanied by a summons or an active physical presence, primarily via eye gaze. If not, it was treated as a display of "doing thinking." These uses could be found in the data from July 03 through March 04 (Extracts 1–5). Seven weeks after the first use of the MWE as an invitation to help Valerio solve a lexical problem, a new use of the MWE emerges as Valerio starts using it to ask for, or even challenge (cf. Extract 7), something previously done or uttered by the co-participant. This form of usage is found in the data from August 2003 through July 2005 (Extracts 6, 7, and 8). Spring 2004 marks the emergence of the other form of other-oriented usage for which the MWE is used, as Valerio starts using it to ask for other people's thoughts or opinions on whatever task is at hand. This usage is found in the data from March through July 2004 (Extracts 9–11).

In accordance with the core assumption in UBL and emergentism that linguistic patterns are always traceable to previous usage, the different MWE uses overlap chronologically, just as they overlap in terms of their respective pragmatic functions, with later uses carrying residues of previous usage. The initial repeated use of the MWE in activities of asking for help was demonstrated in Extracts 1, 2, and 4. The second environment is similar to the initial one in so far as it carries traces of doing a lexical enquiry; however, the interactional load it carries changes substantially as Valerio uses it to display that he is doing thinking, performing a private word search. This usage was demonstrated in Extracts 2, 3, and 5. The third environment still carries traces of the lexical enquiry dimension, but instead of solving Valerio's production problems, this

usage primarily displays a focus on something previously uttered by a co-participant. This use was demonstrated in Extracts 6, 7, and 8. The example in Extract 8, however, showed that the function of *referring to a past action* might also work to solve a lexical problem, thus sharing some features with the function of *asking for help*. Likewise, the final use of the MWE, which was described as *elicitation of thoughts or opinion*, carries traces of the invitation for help to the extent that both uses work to elicit another person's cognition. This use was displayed in Extracts 9–11.

Each of these different contexts, then, has been shown to call upon the use of the "what do you say"-MWE. The recurrent activity of asking for help has been argued to play an important role in terms of initial routinization of the MWE. As such, the data have shown the need for a theory of L2 learning which embraces both social and cognitive processes. The social processes are seen in terms of the changing interactional environments as well as in the importance of how Valerio's co-participants orient to his different MWE usages. These social processes seem to be important for the initial entrenchment of the MWE. The use of the expression in new environments, on the other hand, is dependent on different processes, cognitive in nature, which allow interactional abilities to become individually portable, implying that some aspects of linguistic behavior are retained by the individual and carried across contextual barriers in acquisition (Larsen-Freeman, 2004). I argue that the psycholinguistic unitary status of the expression, and thus the likelihood of its being portable, is supported by the fact that there is chronological overlap among the various environments in which it is used. The expression's unitary status is further supported by the syntactic variety in two usages, not included in the transcribed extracts (cf. endnote 6), "I understand what do you say" and "I don't understand what do you say." This unitary status might be one of the reasons why Valerio uses it often and is capable of transporting it into new interactional environments. However, instances like *how do you say* and *what did you say* also show an incipient process of diversification, possibly leading to further generalization of the *aux-V* structure. In other words, although it can be hard to tell precisely when or where, as it is a gradual shift, the MWE, at some point, becomes more generally deployable, as the linguistic inventory of the focal student changes along with the changing nature of the locally occurring social interactions in the classroom.

These findings also resonate with some of the implications in Hellermann (2007), in which a classroom learner of L2 English was found to pick up from a peer and recycle the specific utterance *I talk to you* in identical sequence positioning in subsequent interaction. Hellermann's study constitutes a window onto the dual routinization of social activity and linguistic utterance (Kanagy, 1999), supporting a view of learning as situated in participation. In Hellermann's study *I talk to you* recurred in task openings, an activity inherent to the language classroom

as a community of practice. The MWE investigated here could also be seen as initiating an activity of the language classroom as community of practice, namely an invitation for help in a lexical search. In Valerio's case it would seem, then, that the initial entrenchment of the MWE was dependent on successful participation in a certain activity in the community of practice of the language classroom.

The parallels between Hellermann's results and those of the present study do not end here, however. Hellermann (2007) goes on to speculate that "strategies used and learned in one situation may be applicable to other situations" (p. 92), and this is precisely what the extracts presented here have shown. For the MWE *what do you say*, then, it seems that what was at one point routinized in one sequential environment of asking for help, a practice in the language classroom, later came to be employed in quite different situations—but situations carrying traces of previous usage. In the two initially occurring environments, it was used as a self-initiated repair that could potentially come out as an other-repair if additional interactional, multi-modal work had been carried out, but in later environments it was used first as a reference to a past action carried out by a co-participant and then as a means of eliciting a co-participant's opinion.

The data, then, show that the MWE in time becomes available to Valerio in more than one practice, ultimately pointing to the need for a chronological distinction between situated performance and generic linguistic productivity. The former is local and social; the latter need not be. Therefore, the performance-competence distinction might be viewed in terms of a time-scale where *performance* is always and everywhere situated in the here-and-now world of the speakers, and *competence* is emergent as ever-changing ontogenetic sediments of linguistic experience. In this context, the stuff of learning is thought to be that which is recycled over time and/or carried across contextual boundaries (Eskildsen, 2009; Larsen-Freeman, 2004, 2006). This allows for an investigative framework for L2 learning which acknowledges both social, co-constructed and individual experience to investigate how "grammar and social interaction organize one another" (Schegloff, Ochs, & Thompson, 1996, p. 33), and is in alignment with a view of language learning as centrally a matter of *interactional competence*, that is, L2 users'/learners' ability to employ (co-constructed) abilities (e.g., linguistic expressions and sequential routines) in interactional practices (see Hellermann, 2007, and references cited there). Language learning as interactional competence development can be conceived as doing things in a real world, using language in action, while gaining a more evolved inventory of resources which transcend the moment. This latter concept seems to be in agreement with Lantolf and Thorne (2006) who propose that "learning an additional language is about enhancing one's repertoire of fragments and patterns that enables participation in a wider array of communicative activities" (p. 17).

In the case of the present data, all uses of the MWE are instances of the linguistic inventory in action; however, as the initial use of the MWE is gradually

expanded, spilling over into other communicative activities, the pattern can no longer be said to be exclusively linked to a specific environment. It becomes deployable in a number of related environments instead. This calls for an elaboration of Larsen-Freeman's (2004) conceptualization of learning as that which is carried across contextual boundaries. *What do you say* is carried across contextual boundaries, time-wise, but only so to a certain extent content-wise; the usage of the MWE still seems to be restricted to the kinds of environment discussed here. However, the utterance schema that emerges from the MWE, namely the more general *do-schema*, while a sediment of those interactional contingencies, is much more generally applicable and not, in terms of use, dependent on a narrowly defined conversational setting. In other words, there seems to be a continuum of usability, from the very fixed one-to-one correlation between environment and expression (as displayed by the initial use of the MWE investigated here), via the usability of a MWE in related environments (as shown in the development of the MWE investigated here), to a more general applicability of more general utterance schemas (Eskildsen, 2009) which may be carried across both content-defined and time-defined contextual boundaries.

Development in terms of increased productivity as briefly outlined may be displayed in a more quantitative manner. Recalling the UBL methodology of type and token frequencies, Table 2 below presents an overview of type-token ratio development for the *aux do*-pattern under investigation here and, on the right hand side, a representation of the weight of the MWE *what do you say* in relation to the total number of tokens. Tokens are the total number of *aux-do* instantiations whatever the constituents. Types denote the different kinds of instantiations; in this table they are distinguished according to both pattern type, main verb, and tense. This means that *do you like* and *what do you like* are distinguished, as are *do you like* and *do you say*, and *do you say* and *did you say*. A high type-token ratio therefore represents a high degree of productivity across patterns.

Table 2. Overview of *aux do*-usage

period of recording	tokens	types	t/t ratio	number of instantiations of the MWE 'what do you say'
Summer 2003	17	7	0.41	8 (ratio: 0.47)
Autumn 2003	13	7	0.54	3 (ratio: 0.23)
Winter 2003-04	9	6	0.67	3 (ratio: 0.33)
Spring 2004	36	13	0.36	10 (ratio: 0.28)
Summer 2004	22	12	0.55	2 (ratio: 0.09)
Summer 2005	24	18	0.75	1 (ratio: 0.04)

The presence of the MWE is striking, representing the first three uses of the *aux do* pattern and 47% of all *aux do* usages in the first period of recording, the Summer of 2003. In that sense, it is reasonable to suggest that this is the pattern that sparks off the use/acquisition of more varied and productive *do*-patterns. It constitutes the seed of an emergent pattern. The role of the MWE in relation to the emergent pattern is depicted numerically in the column on the right.<sup>6</sup> The MWE displays a descending tendency of occurrence in the data from 47% of all *do* usage initially, via a fairly stable presence at around 25–30% during the next three recording periods, to a quite abrupt plunge to the brink of disappearance towards the end of the data collection period. Linguistic patterns go in and out of experience; an idea which is at the core of the emergentist assumption that interaction is a constant source of renewal for the individual linguistic inventory, this goes well with a locally contextualized notion of language knowledge in which linguistic expressions are seen as fundamentally tied to specific situations (i.e., interactionally contingent).

Two parallel developmental tendencies are evident, then: increasing type-token ratio suggesting increased productivity and, reflexive of this, relative decreasing MWE usage. These tendencies, however, are non-linear; fluctuation is the norm as the data confirm the waxing and waning of linguistic patterns as demanded by changing environments (e.g., Eskildsen, 2009; Hopper, 1988; Larsen-Freeman, 2006; Thelen & Bates, 2003). This is especially evident in the type-token ratios which suggest a lower degree of schematicity in Spring and Summer 2004 than in Winter 2003/2004. This unpredictability of linguistic behavior and development concurs with empirical findings and theoretical discussions in the SLA literature dating back to the late 1970s (e.g., Cancino, Rosansky, & Schumann, 1978; R. Ellis, 1990, 1994; Huebner, 1985; Meisel, Clahsen, & Pienemann, 1981; Tarone, 1983, 1990; Young, 1988). Thus supporting variability and non-linearity as empirical phenomena in L2 development, the present study argues that in terms of frames of reference it is fruitful to adopt an approach viewing such phenomena as core principles, namely UBL and emergentism (e.g., N. Ellis, 2007; Hopper, 1998; MacWhinney, 2006; Tomasello 2003). In so doing, the present research finds kinship in recent SLA research inspired by cognitive linguistics (N. Ellis & Cadierno, 2009; Robinson & Ellis, 2008), chaos/complexity theory (Larsen-Freeman, 1997; Larsen-Freeman & Cameron, 2008), and dynamic systems theory (De Bot, Lowie, & Verspoor, 2007; Larsen-Freeman, 2006; Thelen & Bates, 2003; Verspoor, Lowie, & van Dijk, 2008; see also N. Ellis & Larsen-Freeman, 2006; and MacWhinney, 1998 on the relationship between these frameworks).

Table 3 (Appendix) shows in more detail the emergent nature of *aux do*-pattern development. From Table 3, it is evident that the most advanced uses are traceable to previous experience; the linguistic inventory is constructed in

this stepping-stone fashion as the emergent individual grammar is called upon in a variety of usage events (Eskildsen, 2009; Langacker, 2000). Table 3 also displays the item-based nature of the learning trajectory from the MWE toward a richer inventory of interrelated linguistic expressions and patterns, perhaps increasingly schematic structures. It is beyond the scope of the present chapter to go into a detailed discussion concerning the degree of schematicity of the underlying language knowledge in the inventory, which is a vexing issue (Eskildsen, 2009; Lieven, Behrens, Speares, & Tomasello, 2003). For this particular pattern it seems that *do you Verb* is the kernel, an utterance schema, *do you* seemingly a totally fixed part for some time until the emergence of the past tense form and the expansion of the pattern in terms of the use of personal pronouns. This initial pattern development is seen in the first three recording periods, with past tense usage found in the data for the first time in Autumn 2003, and the personal pronoun expansion recorded for the first time with the use of *he* in Winter 2004. At the same time, the pattern is also used with an increasingly diversified inventory of *wh*-question markers and, in 2005, in a new syntactic variety, *what x do you like?*

In 2005, there are also two instantiations of a present tense third person usage of the auxiliary verb. However, this presents an uncertain issue insofar as these are the only recorded instances of this use, and Valerio does not conjugate the auxiliary verb. Interestingly, but outside the scope of this chapter, *(it) doesn't matter* also seems to be an entrenched, frequently employed MWE in Valerio's inventory, emerging in May 2004, but there does not seem to be any obvious link between the negated use of the third person form *does* and Valerio's potential for employing the same form, *does*, in non-negated contexts. This issue aside, the data have shown that for Valerio the utterance schema *do you verb* seems to emerge from the MWE *what do you say* and expand towards an increasingly schematized and diversified inventory of language knowledge, as new closely related patterns emerge. It may also be noted that the initially occurring patterns (e.g., *what do you say* and *do you like*) are retained and put to use on and off throughout development, alongside the use of the more differentiated structures, supporting the previously mentioned cohabitation in the grammar hypothesis.

*Aux-do* development, then, item-based in nature, seems to hinge on an initially highly recurring MWE.<sup>7</sup> Table 3 reveals the further existence of other potential MWE candidates, namely *what do you write*, *do you like*, *do you have*, which are temporally unstable; *what do you write*, *what/when do you use* recurred in Spring 2004; and *do you have* is the recurring expression making for the high number of tokens in Summer 2004 (cf. Table 2). This instability, or fluctuating nature of the MWEs, was also an issue in Eskildsen (2009), where it was found that Carlos's (another classroom student) *can*-pattern emergence was traceable to a few initially recurring MWEs—all of which eventually disappeared from the data. The explanation for this fluctuation was found in the recurrent classroom

activities in which the MWEs were deployed. When such activities were not on the agenda, the MWEs were seemingly discharged.

### Conclusions and perspectives

Recent CA-oriented classroom research has argued that recurring social actions serve as sites for the development of language for social practices (Hellermann & Cole, 2009). What we see here corroborates with and expands on that insight. We have an action sequence in which some social action is carried out (e.g., doing a lexical inquiry), coupled with a fixed expression. Over time, this fixed expression is extended to be used in other contexts, as the focal student, Valerio, improved his productivity based on activities in the social world of the classroom practices. The analysis has demonstrated how L2 learning research can benefit from a holistic view of L2 development which does not principally separate learning and use, taking into consideration participation in social interaction as well as psycholinguistic notions of cognitive portability of linguistic resources in terms of acquisition. On a speculative note one might pose the question if early learning is more characterized by a correlation between socio-interactive environments and linguistic expressions than advanced learning, but that is a point for future research. In fact, it will be necessary to undertake a closer scrutiny of the nature of the changing environments in which people expand on their linguistic resources and develop their linguistic inventories (Firth & Wagner, 2007).

Linguistic behavior may be social in nature, but sociality should not necessarily be given prominence over individuality. Rather, the two should be seen as mutually constitutive. These data do not support the idea that individual linguistic development is driven solely by social actions which afford new utterances and constructions, but show that (a) certain expressions at certain points in time sit in certain environments, with sociality and interactional requirements informing the nature of the language used, and that (b) reused linguistic material (recurrent MWEs) may act as guides in introducing the participant to new social actions. The microanalytic tools inspired by CA are immensely useful for teasing out situated interactional phenomena, but seem inadequate in terms of handling the usage-based emergence of schematically sanctioned linguistic productivity of the kind investigated here (but see, e.g., Forrester, 2008; Markee 2008; Wootton, 2006, for approaches to developmental CA studies). In order to investigate the portable nature of linguistic items, these being primarily MWEs and utterance schemas, other analytical methodologies and frameworks are necessary. I have proposed UBL as one such framework to complement the interactional research methodology, resulting in a promising way to investigate the emergent linguistic inventory in action.

### Notes

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- 2 MAELC was compiled and is maintained at The National Labsite for Adult ESOL (known locally as the Lab School). The Lab School was supported, in part, by grant R309B6002 from the Institute for Education Science, U.S. Dept. of Education, to the National Center for the Study of Adult Learning and Literacy (NCSALL) and was a partnership between Portland State University and Portland Community College. I thank Steve Reder and all the staff at the Lab School for granting me access to the data and helping me logistically. This research would not have been possible without their hospitality and assistance.
- 3 Valerio is a pseudonym.
- 4 I would like to thank Sylvie Cifuentes for assisting me with the Spanish translations. A few notes on the transcripts: Pauses are measured in full seconds only, because my access to the data does not allow for more precise timing. Methodologically, I am aware that from a CA perspective this seems to represent a serious flaw in the data, but for the analyses carried out in this chapter, increased precision of pause timing is not required. Spoken Spanish is written in *italics*, translations given in citation marked parentheses. All names are pseudonyms.
- 5 Another interesting observation in relation to Valerio's *what do you say* is that Ian actually, a few turns later, repeats it to ask for Valerio's opinion.
- 6 The number of MWE instantiations exceeds the number of MWEs analyzed in the previous section. The extracts investigated here are representative of all intelligible interactional uses of the MWE in the data, but in the interest of saving space the data have not been exhaustively extracted and analyzed here.
- 7 In fact, there might be one more MWE, namely *do you like np/V/ø*; so there may be two items from which the emergence of the pattern originates. The initial existence of two exemplar patterns does not change the view of development as item-based, however.

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