Functional Diversification and Progressive Routinization of a Multiword Expression in and for Social Interaction: A Longitudinal L2 Study

SIMONA PEKAREK DOEHLER[1] AND KLARA SKOGMYR MARIAN[2]
[1] *University of Neuchâtel, Institute of Language Sciences, Pierre-à-Mazel 7, Neuchâtel, 2000, Switzerland*
Email: simona.pekarek@unine.ch
[2] *University of Neuchâtel, Institute of Language Sciences, Pierre-à-Mazel 7, Neuchâtel, 2000, Switzerland*
Email: klara.skogmyr@unine.ch

In this article, we bring together conversation analysis and usage-based linguistics to investigate the second language (L2) developmental trajectory of a linguistic construction within the complex multimodal ecology of naturally occurring social interaction. We document how, over the course of 15 months, an L2 speaker's use of the French multiword expression *comment on dit* [how do you say] diversifies in both form and function. Two types of longitudinal change are observed: (a) The expression expands in its context of use: "Literal" uses are observed initially to request a candidate lexical item but are later also found in requests for confirmation, (b) these literal uses become proportionally less frequent, and the expression progressively routinizes as a marker-like element used for indexing cognitive search and floor-holding, and eventually also as a preface to self-correction. This routinization entails erosion in form and meaning, in concert with systematic change in co-occurring bodily-visual conduct, in particular gaze and gesture. By documenting change over time in the functional use and the multimodal delivery of the target construction, the findings evidence the longitudinal development of L2 grammar-for-interaction and showcase how linguistic and bodily resources may interface in L2 development. They also have important implications for language teaching and learning.

Keywords: L2 development; grammar; interaction; interactional competence; multimodality

THROUGHOUT THE PAST TWO DECADES, the field of second language acquisition (SLA) research has seen a significant shift of attention from the cognitive and linguistic properties of the individual learner to the effects of second language (L2) use and social interaction on L2 development (Douglas Fir Group, 2016; Ellis & Larsen–Freeman, 2006; Firth & Wagner, 2007). Within conversation analytic SLA (CA-SLA), the very object of L2 learning has been redefined as the ability to interact in an L2, that is, as interactional competence (Hall et al., 2011; Hellermann, 2008; Pekarek Doehler, 2010, 2018), relating to issues such as turn-taking, repairing trouble in production or understanding, and coordinating social actions (for an overview see Skogmyr Marian & Balaman, 2018). However, the precise linguistic resources that L2 speakers employ as constitutive elements of these procedures have remained largely unexplored so far. Usage-based

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approaches to SLA and other fields, in turn, have provided insights into developmental trajectories (e.g., Ellis, 2002; Ellis & Ferreira–Junior, 2009) of linguistic constructions and their sedimentation (Bybee, 2010) through repeated use. These studies have, however, been little concerned with how language works or develops within the dynamic unfolding of social interaction. An exception is interactional linguistics—a distinctly interactionally oriented strand of usage-based linguistics (see Mushin & Pekarek Doehler, 2021, for a recent overview)—which has prominently documented how speakers use grammar for social-interactional purposes, such as turn-taking or projecting and anticipating actions (Couper–Kuhlen & Selting, 2018; Ochs et al., 1996; see Schegloff, 1979, for the notion of syntax-for-interaction), but has not been concerned with how speakers develop such grammar.

In this article, we bring together CA-SLA and interactional linguistics to investigate how grammar-for-interaction develops over time in an L2. We use the term grammar to encompass both linguistic and prosodic means and explore how, in use, these become functional in concert with embodied resources such as gaze and gesture. We are hence concerned with tracing the development of L2 grammar-for-interaction (Pekarek Doehler, 2018), that is, patterns of language use that serve to build social actions and manage the organizational infrastructure of communicative interaction. We specifically follow the path taken by a small number of recent studies that pay close attention to how, in authentic social encounters, grammar interfaces with other semiotic resources (such as gaze, gesture, or posture) as part of L2 development (Eskildsen & Wagner, 2015, 2018; Skogmyr Marian & Pekarek Doehler, 2022).

Following these emerging developments, we track an L2 French speaker's use of the multiword expression *comment on dit* [how do you say] in the context of word searches over the course of 15 months. We show that the speaker progressively diversifies the expression's contexts of use, the purposes for which it is employed, and its multimodal realization. Two types of longitudinal change occur: (a) While initially (at upper-elementary proficiency level) the expression is deployed in its literal sense to request a candidate lexical item, this use later expands to another action-context—namely, as request for confirmation. Most notably, (b) interaction-organizational uses emerge, pertaining to the indexing of cognitive search so as to hold the floor and the prefacing of self-correction. These latter types of uses show features of routinization, including loss of semantic meaning and morphophonetic substance, suggesting an emergent functioning of *comment on dit* as a discourse marker. We document how the different uses typically occur as multimodal assemblies or "packages" (Goodwin, 2013; Hayashi, 2005) in which precise linguistic formats are coupled with recurrent bodily conduct for accomplishing precise interactional work. We argue that this development of L2 grammar-for-interaction is an integral part of L2 speakers' evolving L2 interactional competence and discuss implications of our findings for L2 education.

BACKGROUND

Recent developments in linguistics offer an empirically grounded understanding of language as contingent, temporal, and ever adaptive (e.g., Bybee, 2010; Hopper, 1998, 2011), and of language learning as a usage-driven process involving various degrees of schematicity of language knowledge (for first language [L1], see, e.g., Tomasello, 2003, but see already MacWhinney, 1975; for L2, see, e.g., Ellis, 2002, and the overview by Wulff & Ellis, 2018). As Ellis (2002) put it with regard to SLA: "The typical route of emergence of constructions is from formula through low scope pattern to construction" (p. 143). In this article, we tackle the other end of construction learning: We are concerned with how L2 speakers, over time, progressively diversify the usage contexts of patterns of language use, and how they expand the functional realm of these patterns for the precise purpose of dealing with generic organizational principles (Schegloff, 2007) of social interaction. Thereby, we stress the fact that language use is prototypically interactional in nature: Social interaction is the primary habitat of language, both phylogenetically and ontogenetically (Levinson, 2006; Tomasello, 2003) and, therefore, constructional development may imply the adaptation of constructions for interactional use—as resources for the production and the interpretation of mutual actions. This is what we highlight with the notion of L2 grammar-for-interaction (Pekarek Doehler, 2018).

As a resource for social interaction, grammar is part of interactional competence. Longitudinal research on L2 interactions shows that L2 interactional competence is not simply transferred from the first language, but it is recalibrated and readapted in the L2. Basically, over the course of time, L2 speakers diversify their methods for

turn-taking, disagreeing, story opening, and so forth (Hellermann, 2008; Pekarek Doehler & Berger, 2018; Skogmyr Marian, 2022) as part of the process of L2 interactional development. Yet the role of linguistic resources in that process has so far remained largely unexplored.

The first developmental studies concerned with the use of specific grammatical resources for coordinating L2 interaction focused on single-item discourse-marker-like elements. Kim (2009), comparing four L2 speakers of Korean of different proficiency levels, showed that the Korean connective *kuntey*—initially used as a contrastive connector similar to "but"—is over time also deployed as a back-linking device and disagreement marker. Ishida (2009) documented how an L2 Japanese speaker eventually developed interaction-organizational uses of the Japanese particle *ne* (comparable to the English tag "isn't it" or utterance-final "you know") in a study-abroad context. While these studies concur with other findings on the relative challenge for L2 speakers to acquire functional uses of discourse markers (see, e.g., Hancock, 2000, for French L2), they are among the rare SLA investigations highlighting the distinctly interactional workings of such markers (see also Schirm, 2021; Thörle, 2016).

In a different vein, Eskildsen (2011) drew on usage-based SLA and CA to examine the progressive diversification of action-contexts in which the multiword expression "what do you say" was used by an L2 speaker in an ESL classroom: The use of the expression evolved from initially occurring exclusively as a request for help in word-search sequences (in the sense of "how do you say *X*"), to subsequently being increasingly deployed as repetition request (in the sense of "what did you just say") and for soliciting recipient's opinion (in the sense of "what do YOU say / think").

Furthermore, there is some evidence for the routinization of multiword expressions into discourse-marker-like interaction-organizational resources over time. Pekarek Doehler (2018) showed how an L2 speaker's use of the French expression *je sais pas* [I don't know] changed over the course of 10 months, being first used in its literal sense as an epistemic disclaimer and later as an interaction-organizational device serving to exit a turn at talk. This latter use not only approximates what has been documented for L1 speakers (Pekarek Doehler, 2016), but also shows features of routinization (see Haiman, 1994), such as reduction in semantic meaning and morphophonologic substance, along with a shift in pragmatic significance and in grammatical constituency, suggesting that *je sais pas* undergoes, within the learner language, a similar path as has been documented for the emergence of discourse markers in language change (Brinton & Traugott, 2000).

The studies just discussed document developmental paths that pertain not to the acquisition of new linguistic forms (often, canonical forms were present from the onset of the studies) but to the emergence of new interactional purposes or contexts of use. In this article, we seek to provide further evidence for the developmental trajectory of L2 grammar-for-interaction in ways that converge with the basic tenet of usage-based linguistics—namely, that frequent combinations in use may lead to routinization and ultimately grammaticization of constructions (Bybee, 2010; Hopper, 1998, 2011; Hopper & Traugott, 2003).

We use the term routinization to stress the fact that we see language as the product of sociocommunicative routines—routines that are designed to resolve recurrent tasks or problems in talk. As prominently argued by Haiman (1994), grammaticization can be seen as a form of routinization of language. Our own argument in this regard is distinctly interactional in nature, relating to work which has suggested that grammatical routines may be motivated by social-interactional exigencies (Couper–Kuhlen, 2011) such as turn-taking (Detges & Waltereit, 2011), the maintenance of progressivity (Pekarek Doehler & Balaman, 2021), and, more generally, the sequencing of actions on a turn-by-turn basis (Pekarek Doehler, 2021) as well as interactants' negotiations of meaning (Hopper & Traugott, 2003). In a nutshell, the interactional view stresses that speakers' recurrent use of precise linguistic (and other) resources for accomplishing precise actions may lead to the routinization of frequent combinations of grammatical (and bodily) units, ultimately ensuing in the sedimentation of grammatical action formats designed to deal with recurrent interactional needs (Couper–Kuhlen, 2011; Pekarek Doehler, 2021).

We also draw on the growing body of research interested in how linguistic and bodily resources interface in communicative action, be it in the L1 or the L2 (e.g., Goodwin, 1981, 2013; Hayashi, 2005; Mondada, 2014). Most work on embodied conduct in L2 interaction has focused on gaze and gesture during word searches and moments of disfluency. There is evidence that, in such contexts, L2 speakers use depictive gestures—that is, gestures that represent the meaning of a target item (e.g., Streeck, 2009b)—more frequently than L1 speakers (Gullberg, 2011) and in a compensatory manner (Hayashi, 2003; Rydell, 2019); pragmatic gestures[1] that display the search itself

(Streeck, 2009a) may accompany word searches that are deployed as "solitary" searches (Skogmyr Marian & Pekarek Doehler, 2022), and such solitary searches typically involve the speaker's gaze aversion, while gaze toward recipient works to solicit help (Koshik & Seo, 2012; Skogmyr Marian & Pekarek Doehler, 2022; going back to Goodwin & Goodwin, 1986; see also Markee & Kunitz, 2013, on embodied conduct in both word and grammar searches). A few studies have investigated L2 speakers' use of embodied resources in concert with specific linguistic constructions. In two longitudinal studies of an ESL speaker's classroom interactions, Eskildsen & Wagner (2015, 2018) documented decreased use over time of referential gestures (see Kendon, 2004) that served to scaffold the production of precise linguistic items, such as "under" and "across." In the present study, we show how embodied conduct works together with linguistic and prosodic resources to forge the local functionality of a pattern of language use, and how, accordingly, embodiment changes over time and proficiency levels in parallel with change in the linguistic aspects of the target pattern (such as erosion of meaning and reduction of formal properties). This exemplifies how the functional use of constructions is inextricably intertwined with other resources for meaning-making in interaction, and opens a window into how language and body interface in L2 development.

DATA, PROCEDURE, AND THE FOCAL CONSTRUCTION

Drawing on the principles of longitudinal conversation analysis (Deppermann & Pekarek Doehler, 2021; Wagner et al., 2018) and an interactional line of usage-based linguistics, interactional linguistics (Couper–Kuhlen & Selting, 2018), we track one L2 speaker's (pseudonym: Malia) use of the French *comment on dit* [how do you say] over a period of 15 months (October 2016–December 2017). The construction we examine runs as follows.

EXAMPLE 1

comment on dit

how PRO.INDEF.N say.3SG

how do you say

The indefinite pronoun *on* corresponds to the English "one" or indefinite "you." In its canonical use, the construction carries a grammatical complement—*comment on dit X* [how do you say *X*]—and is typically employed as a question-word question, in our data most often for requesting a candidate item (*X*) within word searches. In spoken French, it is often amalgamated to /kɔmɑ̃di/, which we transcribe as *comment dit*. In what follows, we refer to the construction generically as "COD." To our knowledge, there is no existing study on the use of the construction in L1 interaction. It first captured our attention when we started to look at word searches in our data and it became centrally salient due to its frequency in these data (205 tokens in 16.2 hours of recordings, i.e., on average 12.8 tokens/hour or 1 token/4.7 minutes).

The data consist of video recordings, over the course of three semesters (15 months), of Malia's interactions with other university students in an L2 French conversation circle in the French-speaking part of Switzerland. The circle was designed to provide opportunities for L2 use and was organized as coffee-break conversations that took place every 2 weeks during the academic year. Malia was an upper-elementary speaker—approximately A2 according to the Common European Framework of Reference for Languages (CEFR) levels—when the recordings started (Semester 1) and reached the upper-intermediate (B2) level at the end of the recordings (Semester 3; level estimates based on combinations of course certificates, test scores, self-assessment). Malia, 30 years old, is a PhD student of Iranian origin. Besides her L1 (Farsi), she speaks advanced English. She arrived in the French-speaking part of Switzerland approximately 2 years before the start of the recordings, which coincided with the start of her PhD, but she reports having mostly spoken English in her daily life before starting her PhD. Her interactions have been video recorded in regular intervals, yielding a total of 16.2 hours of data distributed over 22 recordings. Of the 205 tokens of COD overall, 204 tokens occurred in word searches. We first established an inventory of all COD expressions found in word searches and roughly annotated co-occurring embodied conduct. We then ordered the collection longitudinally, which showed notable differences in the formal patterning of the construction, most prominently between the first and the third semester of recordings (see the next section). Based on these initial observations, we conducted multimodal sequential analyses of all excerpts containing the target construction and supplemented these with quantification of the types of uses found in the data (see Figure 1). Throughout this process, transcription of verbal conduct was done based on Jeffersonian conventions (Jefferson, 2004), and transcription of

embodied conduct follows Mondada (2019; see the Appendix for transcription conventions).

In what follows, we first provide a general overview of the formal and functional change in the construction over time. We then provide detailed multimodal analyses of selected excerpts for each of the documented uses, showing that change in syntactic and prosodic properties of COD goes hand in hand with precise co-occurring embodied conduct and is symptomatic for COD undergoing change over time in its functional use. This change is not absolute but materializes in different frequencies with which COD accomplishes various functions at different moments in time (see Figure 1). Overall, we observe a progressive diversification in use and a routinization of interaction-organizational uses over time and proficiency levels.

A GENERAL PICTURE OF THE DEVELOPMENTAL TRAJECTORY

The longitudinal data show notable differences in the formal patterning of Malia's use of the construction between the beginning and the end of the recordings, as well as important quantitative change in the functional use of the construction.

*Differences in the Formal Patterning of "*Comment On Dit*" Over Time*

Differences in the formal patterning of COD are illustrated in the following set of examples that represent the most typical occurrences in Semester 1 (Example 2) versus Semester 3 (Example 3).

All of these excerpts show COD in the context of word searches, as suggested by word-search markers such as "euhs," cutoffs, syllable lengthenings, silent pauses, and so forth. However, there are notable differences over time in the syntactic and prosodic formatting of COD. During the first semester (Examples 2a–e), COD is used as a complement-taking predicate construction, with the complement (typically produced in English as a lingua franca) either preceding or following it: It serves as a request for a candidate solution, mostly a request for translation. In contrast, the typical occurrences found in the later recordings are inserted, as parentheticals, in the larger syntactic trajectory of environing talk (most clearly in 3a–d); as such, they have no complements but are followed by Malia's own candidate solutions (3a–d) to the word search (sometimes preceded by further hesitation phenomena; 3c), or by her overt abandonment of the search (3e). As we will show in detail, in all of the cases (3a–e), Malia uses COD not to request help with solving the word search but to hold the floor as she engages in a solitary search to which she herself ends up finding a (candidate) solution. Furthermore, there is difference between the prosodic properties of COD over time: During the first semester, COD is produced without any prosodic downgrading, while in the third semester it is typically delivered with speedup of tempo (3a–e; as indicated by the > < signs in the transcripts), relatively flat prosody, and lower volume than environing talk (3b–e, as indicated by the ° ° signs in the transcripts), which, together, have the effect of downgrading the prosodic eminence of the construction (see Ogden, 2006). In sum, over time COD has lost

EXAMPLE 2

Typical Occurrences: Semester 1 (Months 1–3)

(a) £c(h)ompl(h)è(tement)£ (.) irrelevent- **irrelevant. comment dit?** (16.11.16_Mal2)
completely irrelevent- +irrelevant+ ((Eng.)) how (do you) say

(b) eu:h ça, (1.1) **°comment di:t** it sounds (0.3) intéressant°? (16.11.16_Mal6)
that how (do you) say +it sounds+ ((Eng.)) interesting

(c) (0.2) °d- d-° **comment dit download?** (16.11.16_Mal7)
d- d- how (do you) say +download+ ((Eng.))

(d) je sui:s (0.4) **under pressure. comment dit?** (16.11.16_Mal8)
I am +under pressure+ ((Eng.)) how (do you) say

(e) .hh e::h **comment dit these years?** (16.11.30_Mal1)
how (do you) say +these years+ ((Eng.))

EXAMPLE 3

Typical Occurrences: Semester 3 (Months 11–15)

(a) dans (.) **>comment dit<** dans la salle oula, (17.11.08_ Mal5)
in how (do you) say in the room (aula)

(b) quand j'ai: °m (.) **>comment dit<°** (.) quand je:: j'entends, (17.11.08_ Mal17)
when I've how (do you) say when I I hear

(c) j'essayais de: °.hh **>comment< di:t** e::h° de ob- obtenir quelque chose
I tried to how (do you) say to ob- obtain something
(17.11.22_Mal21)

(d) il est asse:::z euh ph **°>comment dit<°** intellectu£e(h)ll(h)e£,
it is rather how (do you) say intellectual
(17.11.22_Mal24)

(e) >eh- eh< (.) **°°>comment< di:t°°** (0.4) °e:::h° (0.8) >j- je ne sais pas<
how (do you) say I- I don't know
(17.12.06_Mal6)

one of its syntactic characteristics—namely, taking a grammatical complement—and appears to have acquired the property of a parenthetical, occurring inserted at various points in the syntactic trajectories of turns at talk and being prosodically downgraded in comparison to surrounding talk.

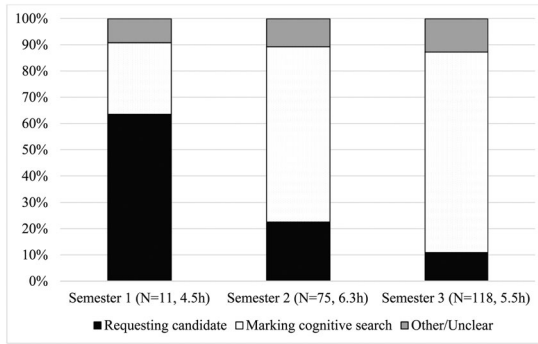
*Differences in the Functional Use of "*Comment On Dit*" Over Time*

The change in the formal features of COD, as documented here, goes hand in hand with change over time in our target participant's functional use of COD: While the literal use of COD expands in terms of action-context, from request for translation to request for confirmation, proportionally such literal use decreases considerably over time. Marker-like uses start to predominate, and these also diversify in function from indexing cognitive search to marking incipient self-correction (see the qualitative analysis in the next section for examples).

As shown in Figure 1, the most striking functional change pertains to the relative frequency of Malia's use of COD as a request for a candidate solution or translation versus a marker of cognitive search.

The use of COD as request for candidate solution (typically calling for a translation) decreases proportionally from 64% ($n = 7$) of all COD occurrences in Semester 1, to 23% ($n = 17$) in Semester 2, and then further to 11% ($n = 13$) in

FIGURE 1
Proportion of Types of Uses of COD Over Time



Note. COD = *comment on dit* [how do you say] construction. Total number of occurrences and hours of data is shown in parentheses. "Other" includes COD used as request for confirmation, to initiate self-correction, and unclear cases.

TABLE 1
Overview of All Types of Uses of COD per Semester

Semester (hours of data)	Requesting candidate	Requesting confirmation	Marking cognitive search	Initiating self-correction	Unclear	TOTAL
1 (4.5 hours)	7	–	3	–	1	11
2 (6.3 hours)	17	**2**	50	**4**	2	75
3 (5.5 hours)	13	**5**	90	**6**	4	118
TOTAL	37	7	143	10	7	204

Note. COD = *comment on dit* [how do you say] construction.

Semester 3. In contrast, its use as cognitive search marker, through which Malia displays that she is engaged in a solitary search not inviting recipient help, significantly increases from 27% ($n = 3$) in Semester 1, to 67% ($n = 50$) in Semester 2, to 76% ($n = 90$) in Semester 3. A Chi-square test of independence reveals that the longitudinal difference between these two uses is statistically significant ($p < 0.001$) and the Cramér's V (0.332) shows that the association is strong. The proportional differences between the three semesters can thus be assumed to reflect a real change over time; in other words, they are not due to coincidental frequencies occurring at the moments when the recordings were done. In short, the results show gradual change over the three semesters.[2]

Table 1, which provides an overview of all types of uses of COD in the data, including the more sporadic cases grouped under "other" in Figure 1, further reveals the emergence of two new uses (see the bolded items) in Semester 2. These uses also occur in Semester 3, although they remain comparatively rare.

First, the construction is occasionally used for pursuing confirmation of a candidate offered by the speaker herself but that is met with lack of recipient uptake (two occurrences in Semester 2, five in Semester 3): The speaker searches for a word, finds a solution, which she offers tentatively (with rising intonation) but receives no response from co-participants, and then produces COD (see Excerpt 3 in the next section) in pursuit of a response from the recipient. This shows an expansion of the literal use of COD into new action environments (similar to Eskildsen's, 2011, findings for English "what do you say"). Possibly more interesting is another emergent use—namely, for initiating self-correction, similarly to "I mean" in English (four occurrences in Semester 2 and six in Semester 3). Just like in the use as marker of cognitive search, this is a marker-like use showing loss of semanticism and consistent prosodic downgrading of COD, which becomes an interactional organizational device, as we will show in the qualitative analysis in the next section.

Also, the overall number of occurrences of COD increases considerably over time, with 11 occurrences in 4.5 hours of data in Semester 1 (i.e., 2.4/hour), 75 occurrences in 6.3 hours in Semester 2 (11.9/hour), and 118 occurrences in 5.5 hours in Semester 3 (21.5/hour). The marked increase in use of COD, especially as cognitive search marker, suggests that this multiword expression progressively routinizes as an effective device for managing the interactional contingencies involved in word searches.[3]

QUALITATIVE ANALYSIS I: INITIAL MONTHS OF RECORDING (SEMESTER 1)

In the initial months of recording (Months 1–3, Semester 1), Malia uses COD predominantly in its literal sense as a request for help when she encounters lexical problems. In these cases, the delivery of COD is systematically combined with response-mobilizing gaze at the recipient (see Rossano, 2012), and the construction takes a complement (*comment on dit X*) and shows no prosodic downgrading. Excerpt 1 provides a first illustration. While telling Zarah, Theo, and Mariana about a radio podcast that she often listens to, Malia engages in a word search, marked by multiple cutoffs, syllable lengthenings, and repetitions (1–6), targeting the French equivalent of "download."

After some tentative formulations that appear to be in French (2) and the first production of the target item in English (4), Malia resorts to *comment dit*—a slightly shortened form of *comment on dit* typical for spoken French—to request a translation of "download" (6). The COD is produced as part of a full interrogative clause comprising the object complement "download," and it is prosodically just as prominent as surrounding talk (no downgrade in volume, no speedup of tempo). In lines 7–8,

EXCERPT 1

"Download" (Mer1_2016-11-16_Mal6)

01 MAL: *parce que .hhh c'est- et- et *tu peu:x e::h eh*
because it's- and and you can
mal *gazes down----------*gazes up at MAR-*

02 *(trajeur-) #°°(trajeur)°°*
(trajeu-) (trajeur)
mal *gazes at ZAR----------*
fig #1A

Figure 1A

03 *(0.5)
mal *gazes at MAR-->

04 MAL: +down#load.+
+download ((in English))+
fig #1B

05 *(0.2)
mal *gazes at THE-->1.09

06 MAL: °°d- d-°° **comment dit down#load?**
how (do you) say download
fig #1C

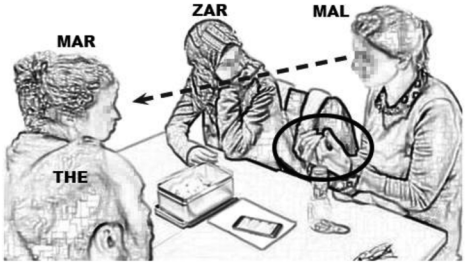


Figure 1B

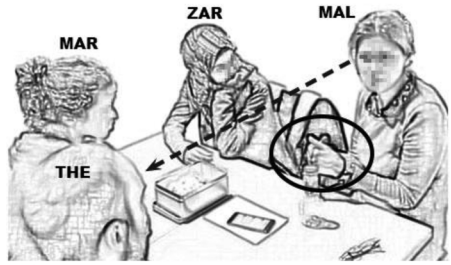


Figure 1C

07 THE: download.
download

08 THE: okay,
okay

09 MAL: oui* [mai:s, il y a:] comme-
yes but there is like-
mal -->*

10 ZAR: [£hhhh °hhhh°£]

((MAL's turn continued))

Theo responds to Malia's request by confirming the English "download"; while he does not produce a candidate item in French, he displays that he treats the COD in its literal sense, as a request.

The fact that Malia uses COD for requesting help from co-participants is also evidenced by her simultaneous deployment of bodily visual means that invite recipient response. Malia uses gaze in a response-mobilizing way (Rossano, 2012) by looking successively at each of her co-participants (Excerpt1/Figures 1A–C). With her production of the English word "download" (4), she deploys a depictive gesture, turning her open hands with spread fingers toward herself in a downward movement, as if enacting "download" (Excerpt 1/Figure 1B). By making the searched-for referent recognizable through both verbal and gestural means, she provides an opportunity for recipients to participate in the search (Hayashi, 2003; see also Dressel, 2020; Streeck, 2009a). In the absence of co-participant response, Malia then delivers an explicit call for help, in the form of COD, while distinctly turning her gaze and head toward Theo (Excerpt 1/Figure 1C) and deploying a pragmatic gesture (Streeck, 2009b)—tapping one open hand into the other—conferring "come on, give me the solution." It is hence both the verbal and the bodilyvisual features of Malia's delivery of *comment dit 'download'* [how do you say 'download']?" that display it as a request for help, calling for a translation. This is the predominant use of COD during the first semester.

In requests for help, COD is found either preceding, as in Excerpt 1, or following the production of the target item in English, as in Excerpt 2 where Malia talks about her difficulties communicating in L2 French.

Again, the *comment dit* (6) is part of a request for translation, but here it is incrementally added to what precedes: "irrelevant – how do you say." It ends on rising intonation inviting co-participants' reaction, and again does not show any noteworthy prosodic downgrading. Just as in Excerpt 1, it is delivered with gaze directed at a precise co-participant—again Theo (Excerpt 2/Figure 2A)—and coupled with a response-inviting gesture (here: finger snapping with wide-open hands followed by palm up toward recipient; see Kendon, 2004; Streeck, 2009b). Note that it is followed, with slight delay—and after Malia's gaze briefly turned down (8), and then again at Theo (9)—by another co-participant's candidate answer (Mariana's *différent* [different], 10), which shows that Malia's COD is treated as a question—a request for translation.

Excerpts 1 and 2 are representative of what we see Malia do most frequently in the first semester of recordings: using COD as a request for a candidate solution (typically a request for translation of an English word) coupled with other response-mobilizing features. Through the speaker's gaze at recipient, the search "becomes formulated as a social activity" (Goodwin, 1987, p. 118) inviting co-participation from recipients, rather than remaining a solitary search. This further materializes through co-occurring pragmatic gesturing toward the recipient that confers the sense of the speaker's soliciting recipient response (Streeck, 2009b), sometimes preceded by depictive gestures that may help co-participants' participation in the search (Dressel, 2020; Hayashi, 2003; Rydell, 2019). As we show next, in the later months of her participation in the conversation circle, Malia's use of the construction diversifies both in its context of use and in its interactional workings.

ANALYSIS II: LATER MONTHS OF RECORDING (SEMESTERS 2–3)

In this section, we turn to the later months of Malia's participation in the recordings (Semesters 2–3). Two types of change are documented: (a) COD, in its literal use (see Examples 2a–e), diversifies in the actions that it accomplishes: Its use as a request for translation (as documented in the previous section) is complemented by its use as a request for confirmation of a candidate solution to the word search; and (b) overall, such literal uses decrease significantly in relative frequency as the construction starts to be predominantly used as a marker-like element (see Figure 1). Furthermore, these marker-like uses themselves show functional diversification over time: COD's use for indexing cognitive search and holding the floor is later supplemented by its being used for prefacing self-correction (see Table 1). In what follows, we illustrate these findings one by one.

Expansion of Use to New Action-Contexts: Pursuing Recipient's Confirmation

In this subsection, we show that the functioning of COD as a request expands into a new context of use—namely, as a request for confirmation after Malia has herself produced a try-marked candidate solution to a word search. This is illustrated in Excerpt 3, where Malia produces alternative forms of the verb *payer* [to pay] as candidates to be confirmed by her co-participants. Malia is asking Zarah how much she pays for her cell phone subscription (1–2), while pointing toward her.

EXCERPT 2

"Irrelevant" (Mer1_2016-11-16_Mal2)

01 MAL: et qua- eh- eh quelques fois,
and qua- a few times

02 parfois,
sometimes

03 .hh (0.2) eh j- e::h je n'y comprends rien,
I- I NEG PRO understand nothing

04 (0.4) et donc j'ai (0.2) je £répo(h)nds hh£
and so I have I answer

05 *£c(h)ompl(h)è(tement)£ *(.) irrelevent- *irrelevant. *
(completely) irrelevant- +irrelevant+ ((in English))
mal *gazes down----------*gazes at MAR----*gazes at THE*

06 MAL: ***±[commment] #dit?±***
how (do you) say
mal *gazes at MAR then THE*
mal ±snaps fingers, opens hands±
fig #2A

07 MAR: [mm-hm,]

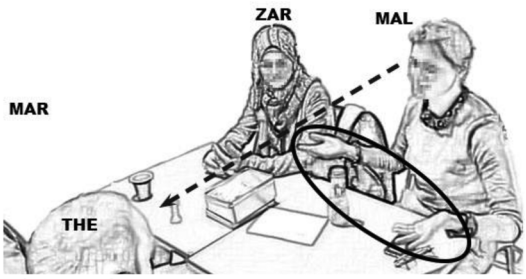


Figure 2A

08 MAL: *eh °phh .hhhh°
mal *gazes down-->

09 THE: ma tu [peux *dire que]::
PRT you can say that
mal -->*gazes at THE-->>

10 MAR: [différent,]
different

11 MAL: £hh-hh[-hh£]

12 THE: [je n'ai] pas compris,
I have not understood

EXCERPT 3

"*Tu Paies*" (Mer1_2017-04-12_Mal4)

```
01 MAL: .hh ±mai:s *euh tu: (.) tu #°<paies>°¿*
                but          you       you      pay
   mal      ±points toward ZAR w RH index finger-->
   mal             *gazes up toward ceiling--*
   fig                              #3A

02       *(0.3) °tu pay*ais°?#±
                 you     paid
   mal  *gazes at ZAR-*gazes at CAT-->1.08
   mal                      -->±
   fig                       #3B
```

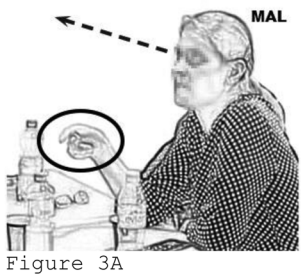


Figure 3A

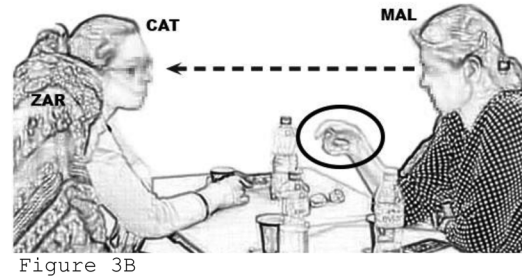


Figure 3B

```
03 ZAR: [  je-  ]
           I-

04 MAL: [±°tu pa]ies°¿#±
           you   pay
   mal   ±flips RH palm up twd CAT±
   fig              #3C

05 ZAR: ±m[h.]
   mal  ±retracts RH±

06 CAT:    [£h]h£

07 MAL: >comment #dit<?=
          how (do you) say
   fig           #3D
```

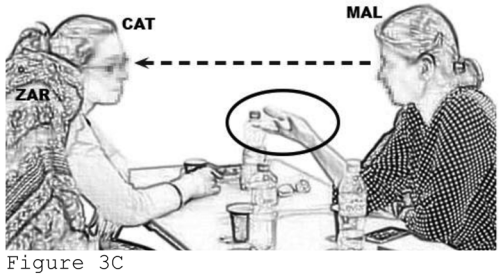


Figure 3C

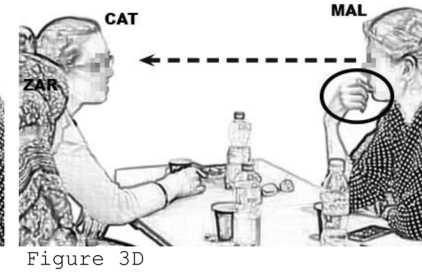


Figure 3D

```
08 ZAR: =oui je paye.=*
          yes  I   pay
   mal              -->*

09 MAL: =tu paies,=
          you  pay

10 CAT: =tu p/ɛ/.
          you +pay+ ((untypical pronunciation))

11 MAL: eh tu p/ɛ/ (0.7) eu:::h (.)
             you +pay+ ((untypical pronunciation))

12 ZAR: combien?
          how much
```

In her word search, Malia offers "tu: (.) tu <°paies°>¿ [you, you pay]" (1): The repetition of *tu*, the low volume, the slowing down of tempo, and the final mid-rising intonation confer the tentative nature of the item. Although she is first gazing up into the air (Excerpt 3/Figure 3A), as if involved in a solitary search, she subsequently turns her gaze shortly toward Zarah (2), holding her pointing gesture, and then keeps her gaze directed at Catarina (Excerpt 3/Figures 3B–D) as she offers an alternative attempt (*tu payais?*, 2), again in low volume but with distinctly rising intonation. Malia's gaze on her co-participants, her frozen pointing gesture as well as the prosodic delivery of the candidate word suggest that she is awaiting a response (see Floyd et al., 2016). In overlap with Zarah's turn initiation (3), Malia produces yet another attempt (4) as she flips her hand palm up toward Catarina (Excerpt 3/Figure 3C) to further upgrade her call for confirmation (see Streeck, 2009b). However, Malia's attempt to recruit help is received only with a minimal laughter token (6). It is at this point that Malia resorts to ">comment dit<" (7), produced while still gazing at Catarina, to pursue a response (Excerpt 3/Figure 3D; note that she has now pulled her hand toward her chin in a classic thinking posture; Mori & Hayashi, 2006). The COD hence does not call for a translation or a missing lexical item, as in the start of the recordings. Rather, it is deployed in the pursuit of confirmation after Malia's production of a candidate that did not receive such confirmation. In other words, the functioning of COD as a request for help expands into a new context of use.

Routinization of Marker-Like Uses for Interaction-Organizational Purposes

The most striking change observed over the 15-month recording period pertains to the strong increase in marker-like uses of COD, which are packaged multimodally in different ways than the literal uses discussed thus far. From Month 4 on (start of Semester 2), Malia most frequently uses COD to display that she is engaged in a solitary cognitive search; by doing so, she holds the floor and preempts co-participants' entry into the search. In other words, COD fulfills a distinctly interaction-organizational function. In these uses, the construction shows features such as erosion of semantic meaning, change in grammatical structure (loss of complementization), and reduction of prosodic prominence (see 3a–e) that have been associated with routinization and, ultimately, grammaticization of patterns of language use (e.g., Bybee, 2010; Hopper & Traugott, 2003). This linguistic change goes hand in hand with change in cooccurring embodied conduct: The expression is systematically deployed with gaze diverted from recipient, with the speaker deploying an "out of focus 'middle-distance' look" (Goodwin, 1987, p. 117) that is characteristic of searches that do not invite recipients' co-participation (Dressel, 2020; Skogmyr Marian & Pekarek Doehler, 2022). Furthermore, this marker-like use shows functional diversification over time, as COD starts to be employed also as a means for initiating self-correction, that is, as a preface to incipient self-repair. In what follows, we discuss these two uses one by one.

Indexing Cognitive Search—and Thereby Holding the Floor. In Excerpt 4, Malia reports on what she intended to do after enrolling at the university. She produces COD while seeking to solve her production problem herself.

Malia is again clearly engaged in a word search, marked by the cut off on *mon-* [my] (2), the syllable lengthening on "mo::n [my]" (2), the filled pause "e:hm::" (3) and the subsequent 0.6-second pause in midsyntactic trajectory of her turn (3). The COD (3), however, is delivered quite differently than in the previous examples: It is produced with faster tempo, flat pitch, and markedly lower volume, which together contribute to prosodically downgrading it relative to surrounding talk (see Ogden, 2006). It does not have a complement and is hence grammatically reduced as compared to the request format documented earlier. Furthermore, it is not delivered as a turn-constructional unit (TCU) or an action in itself, but is inserted into the syntactic trajectory of the turn-in-progress (part of which is recycled after the COD, 4). And it is accompanied by embodied conduct indicating the speaker's cognitive search rather than inviting recipients' help: Malia's gaze wanders, first down (Excerpt 4/Figure 4A) then up on COD (Excerpt 4/Figure 4B), in ways that are clearly averted from her co-participants (Theo is sitting opposite Zarah). Malia's gestures, pointing to her temple and waving backward (2–3, Excerpt 4/Figure 4A, B), add to this multimodal gestalt (Mondada, 2014) conveying her doing thinking. Accordingly, the COD is not treated by co-participants as delivering a request for help: They do not respond, and instead Malia herself offers a candidate in line 4 ("saught," possibly a mispronunciation of English "thought"). This is then followed by a paraphrase during which Malia's

EXCERPT 4

"Saught" (Mer1_2017-03-08_Mal4)

```
01 MAL: °je n'sais pas c'est possible ou non°,
          I   don't know    it's   possible    or  not

02      *.hh ±mais c'était mon- mo::n*±
              but   it was   my    my
   mal  *gazes at ZAR----------------*
   mal       ±lifts RH to temple, circling gestures±

03      *±e::hm::::# (0.6) *>°comment dit°<,#
                            how (do you) say
   mal  *gazes down--------*gazes up toward ceiling-->
   mal   ±holds RH by temple-->
   fig             #4A                       #4B
```

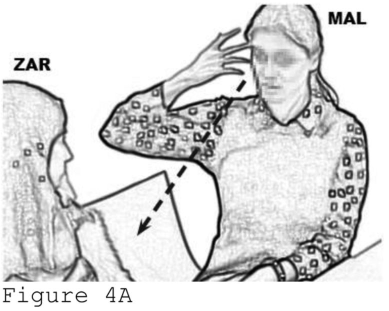


Figure 4A

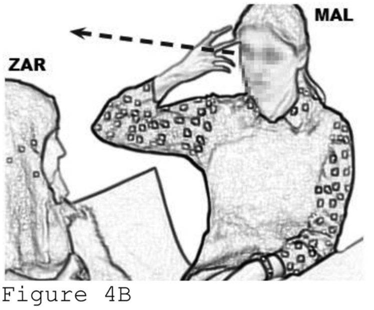


Figure 4B

```
04      (0.4) c'était mo:n (0.6)± °(saught)°,*±
               it was   my          (thought, in English?)
   mal                                       -->*
   mal                          -->±points bwd w whole hand±

05      *mo:n °s::::° .hhh (0.2) c'était qu'est-ce *que-
          my      s                 it was      what-
   mal  *gazes down/closes eyes-------------------*gazes at ZAR-->

06      euh <c'était:t ce qui> que je pensais# dé§jà:,*§
              it  was   what         I  thought   already
   mal                                                -->*
   zar                                           §nods-§
   fig                                    #4C
```

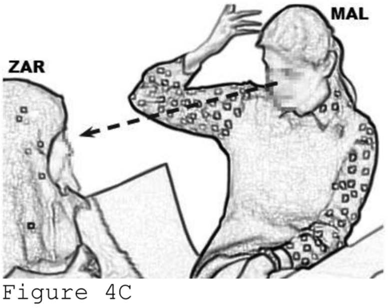


Figure 4C

```
07      .hh après immatricule:r,
             after    matriculating

   ((MAL's turn continued))
```

EXCERPT 5

"*Séance*" (Mer1_2017-08-23_Mal4)

```
01 MAL: par exemple la semaine (.) passée: euh (0.8) e::::h
          for  example              last week

02      j'ai eu u::n (0.4) une séance avec les étudia:nts pou:r
          I had  a          a    session with the  students  for

03      (0.4) mm: *>comment# dit< séance de: ques*tions et ré#ponses.
                   how (do you) say  session of   questions and answers
   mal          *gazes down-------------------*gazes at JAV-->>
   fig                  #5A                                  #5B
```

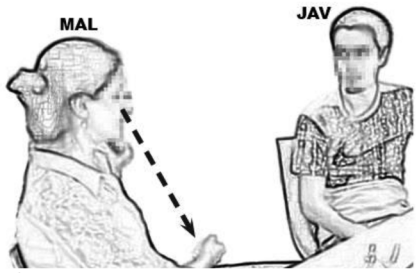


Figure 5A

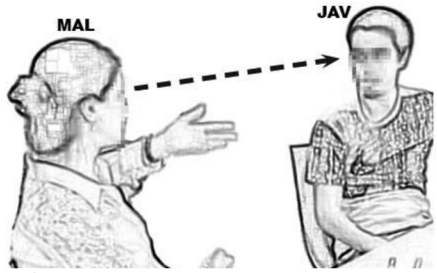


Figure 5B

```
04      (0.3)

05 JAV: [oui.]
          yes
```

gaze returns to Zarah (Excerpt 4/Figure 4C), who displays her understanding by nodding (6).

Similar features pertain to Excerpts 5 and 6, which, furthermore, illustrate Malia's increased tendency over time to rapidly resolve her own word searches following COD in ways that are less disruptive for the progressivity of talk than her prior word-search conduct (see also Pekarek Doehler & Berger, 2019; Skogmyr Marian & Pekarek Doehler, 2022). Both examples come from Semester 3, almost 1 year after the beginning of the recordings. In Excerpt 5, Malia is talking about a question–answer session that she had with her students the week before.

In line 3, Malia enters into a word search, as evidenced by the brief silence, the hesitation marker "mm:," and the shift of gaze direction from her co-participants down (Excerpt 5/Figure 5A) as she offers ">comment dit<" in notably fast pace, indexing cognitive search. The search is rapidly resolved, as Malia recycles a part of her prior turn (*séance* [session]) and offers the candidate *questions et réponses* [questions and answers] (3) exactly when lifting her gaze up at her co-participant (Excerpt 5/Figure 5B), which has been shown to be a recurrent feature of solitary word searches (Koshik & Seo, 2012; Skogmyr Marian & Pekarek Doehler, 2022). Javier then confirms his understanding (5).

Excerpt 6 shows a similar case. Malia is explaining that foreigners must leave Switzerland if they do not find a job within 6 months.

Malia enters into a word search by halting her talk, producing some minor hesitation markers and offering ">comment< di:t" while gazing down after having looked at Jordan (3, Excerpt 6/Figure 6A). Following another brief "eh," she resumes her talk and lifts her gaze toward her co-participant at the end of her turn (Excerpt 6/Figure 6B). Again, the co-participant confirms understanding (4) and Malia continues her explanation (5). The word search is brief, and so is the interruption in the progressivity of talk.

Excerpts 4–6 have shown a use of COD that is distinctly different from what we have observed in Excerpts 1–3—namely one involved in a solitary word search. While we find three instances of such use already in Malia's second month of participation in the recordings (i.e., 27% of the occurrences), it increases massively in relative

EXCERPT 6

"Job" (Mer1_2017-10-25_Mal6)

```
01 MAL: eh ils peuvent (.) euh rentrer (.) le pays,
              they   can              come back     the country

02      .h mais si après six mois (0.3) ils ne peuvent pa:s
            but  if  after  six months       they     cannot

03      *(0.5) .mt °e:h >comment< #di:t eh° trouver un *job,# *
                        how (do you) say       find    a   job
   mal  *gazes down---------------------------------*gz-JOR*
   fig                               #6A                  #6B
```

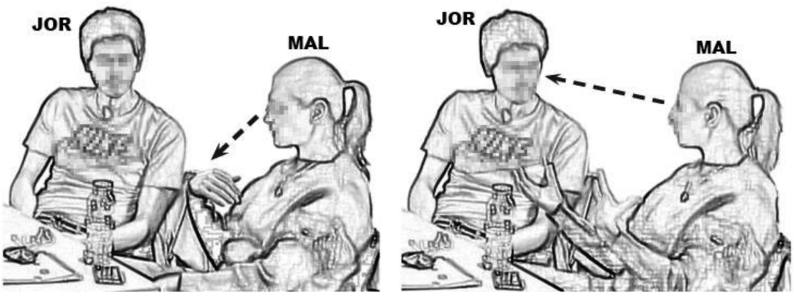


Figure 6A Figure 6B

```
04 JOR: [  okay. ]
           okay

05 MAL: [ils doit] quit- °ils° doit partir.
         they has to leav-  they has to leave
```

frequency over time, making up 76% ($n = 90$) of the occurrences in the last semester of recordings (see Figure 1). In these uses, the construction is combined with gaze aversion that indexes the speaker's cognitive search rather than serving to recruit co-participants' help. As it is recognizable to co-participants for what it is, the recurrent assembly of COD and gaze aversion serves as a floor-holding device, allowing Malia to buy time while searching for a solution herself.

Importantly, as illustrated specifically in Excerpts 4 and 5, the construction in this use shows features of routinization (e.g., Bybee, 2010; Hopper & Traugott, 2003): Important increase in frequency (see Figure 1) and prosodic downgrading, combined with semantic bleaching, reduction of grammatical properties (COD does not have a complement), and free placement within the syntactic trajectories of turns converge in suggesting that the construction is used as a routinized marker-like element rather than a complement-taking predicate construction around the verb *dire* [to say]. Case-by-case analyses of all occurrences in the data show that these features are consistent across the uses of COD indexing cognitive search: The COD-plus-gaze-aversion package routinizes over time as an interaction-organizational marker, through which the speaker signals doing thinking and thereby holds the floor, preempting co-participants' entry into the turn-in-progress.

Initiating Self-Correction. A further emerging use of *comment dit* is as a marker of self-repair, and specifically self-correction. The syntactic and prosodic properties of the construction in this use align with what we observed earlier for its use as a marker of cognitive search (no complement, prosodic downgrading, occurrence as a parenthetical insert in a larger syntactic trajectory). However, by contrast to its use for indexing cognitive search, the distinctive feature of its use for initiating self-correction is that COD occurs immediately before the alternative wording of a just previously produced linguistic element: The COD frames that alternative as a self-correction. In

EXCERPT 7

"*Venue*" (Mer1_2017-09-13_Mal2)

```
01 MAL: en- en fait quand- quand je suis venue (.) à: (.) en suisse,
        in- in fact when- when I came to to Switzerland

02      %(1.3)% °eu::h° *(.) eh j'ai venu- eh >comment #dit< je suis venue
                                I have.AUX.1SG come.PP how (do you) say I am.AUX.1SG come.PP
                                'I cam- how (do you) say I came'
   jav  %nods-%
   mal                  *gazes down-->
   fig                                          #7A

03      à fri*berne,#
        to Friberne
   mal    -->*gazes at JOR then JAV-->>
   fig             #7B
```

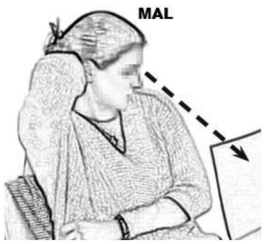


Figure 7A

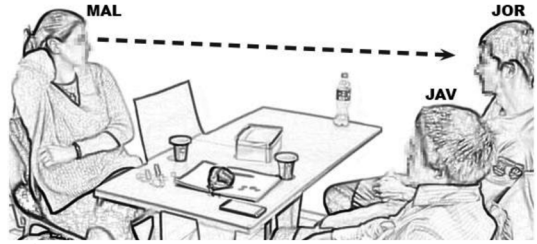


Figure 7B

```
04      $donc c'est pour ça$ que (.) j'habite à friberne.
          so that is why I live in Friberne
   jor  $nods-------------$
```

Excerpt 7, Malia is explaining that she now lives in the town Friberne because that is where she first moved when coming to Switzerland.

The search looks similar to the ones in Excerpts 4 and 5, with the exception that the *comment dit* (2) works to introduce a self-correction replacing the first-person auxiliary *ai* [have] with *suis* [am]. As with the other marker-like uses of COD, the construction is produced with a speedup of tempo and accompanied by averted gaze (Excerpt 7/Figure 7A), which Malia returns to her co-participants at the end of the turn (3; Excerpt 7/Figure 7B). Her turn is receipted by Jordan with nods (4). Self-repair involves "disjunction with the immediately preceding talk" (Schegloff, 2000, p. 207). While in Excerpt 6, repair, and more precisely correction, is initiated with the cutoff *venu-*, the COD works as an overt disjunction marker, hearable as an insertion that is not grammatically continuous with prior talk, whereas the recycling of the first-person subject pronoun *je* marks resumption of prior talk.

Excerpts 8 and 9 provide two further illustrations.

EXCERPT 8

"*Top Étudiant*" I (Mer1_2017-05-24_Mal7)

```
01 MAL: j'avai:s °euh° e:h le (0.5) j'avai:s >comment dit< j'étais
        I have.1SG.IMP the I have.1SG.IMP how (do you) say I be.1SG.IMP

02      le top étudia:nt
        the top student
```

'I had the I had how do you say I was the top student'

EXCERPT 9

"*Top Étudiant*" II (Mer1_2017-05-24_Mal7)

```
01 MAL: tu va:s (.) eu::hm euh >comment dit< eh doi:s étudie:r le math.
        you will                how (do you) say  need to  study  mathematics
```

In Excerpt 8, Malia begins her turn with *j'avais* [I had], which is then corrected to *j'étais* [I was], and this repair is initiated by a ">comment dit<" produced with a speedup of tempo and low prosodic prominence (1). Similarly, in Excerpt 9, "tu va:s [you will]" is repaired to "doi:s [need to]" (1).

The COD in these examples functions as repair preface (Lerner & Kitzinger, 2010) similar to what has been documented for the English "I mean," "well," and "actually": It frames the next item as repairing or replacing the prior one. In terms of co-occurring embodied conduct, we have gaze aversion with the COD, again suggesting that this is part of Malia's own search, and then a return of gaze to her co-participant with the delivery of the replacing item (not shown in Excerpt 8–9; see Excerpt 7). Importantly, we take such expansion in the functions accomplished by the marker-like use of COD as a further indicator of its routinization over time.

SUMMARY AND DISCUSSION

In this study, we have documented the progressive routinization of a pattern of language use for social interaction. We tracked an L2 French speaker's use of the multiword expression *comment on dit* (COD; "how do you say") in the context of word searches over the course of three semesters (15 months), as the speaker progressed from an upper-elementary (A2) to an upper-intermediate (B2) level of French proficiency. Through multimodal sequential analysis supplemented with quantification of the functional use of the construction, the following changes over time were documented:

1. The literal use of COD expands in terms of its action-context, from requests for translation to requests for confirmation, but overall progressively decreases in frequency relative to marker-like uses.
2. Marker-like uses massively increase in frequency, start to predominate over literal uses, and eventually diversify from only markers of cognitive search to also markers of self-correction.
3. There is an important overall increase in the absolute frequency of use of COD.
4. The different uses are closely intertwined with precise embodied features, most notably differential gaze patterns, as part of interactionally functional multimodal packages.

Rather than tracking how constructions emerge from single instances of use, as is typical for usage-based SLA (see the Background section), we set out to investigate the other end of the development of multiword expressions. The observed increase in frequency of COD over time as well as the progressive development and then diversification of marker-like uses show that, once available in the repertoire of the speaker, a lexically fixed multiword expression may become routinized in the L2 in ways that are parallel to general phenomena of language change: "Repeated sequences of words (or morphemes) are packaged together" (Bybee, 2010, p. 7) as a single unit; frequent combination in use (collocations) may eventually lead to entrenchment. Our findings about COD converge in this respect with what has been observed regarding the routinization of *je sais pas* [I don't know] into an interaction-organizational device in L2 French (Pekarek Doehler, 2018, 2022). The L2 trajectory of both patterns of language use parallels what has been shown for the grammaticization of lexical elements into discourse markers: They undergo a process of desemantization (Brinton & Traugott, 2000) involving, among others, changes in prosodic profile and position within utterances (Beeching & Wang, 2014); also, they often become pragmatically multifunctional (e.g., Hansen, 1998). While, as we have previously discussed (see the Background section), the L2 use of *je sais pas* approaches over time that observed with L1 speakers of French, there is no study on COD in L1 French that would allow us to draw conclusions in this regard. That research remains yet to be done.

These findings raise an important question: What drives such routinization? The fact is that the observed use of COD to index cognitive search—by far the most frequent use at the end of the recording period—responds to a precise interactional need: Coupled with the speaker's particular embodied conduct, mainly gaze aversion from recipient, COD works successfully to

hold the floor and prevent co-participants from taking the turn (see Skogmyr Marian & Pekarek Doehler, 2022, on the role of gestures in this context). Similarly, its use for marking incipient self-correction appears to be perfectly functional interactionally, alerting recipients to the fact that an upcoming item replaces a prior one. Such local interactional effectiveness of the construction likely contributes to its long-term routinization as a marker. This is in line with recent work (but see already Hopper & Traugott, 2003) suggesting that grammatical routines may be motivated by social-interactional exigencies (Couper–Kuhlen, 2011) such as turn-taking (Detges & Waltereit, 2011), the projection of incipient courses of action (Pekarek Doehler, 2021), or the maintenance of progressivity (Pekarek Doehler & Balaman, 2021).

Malia's increased use of COD as a cognitive search marker may be interpreted along these lines. Not only are word searches frequent throughout the data but also the cumulatively stronger interactional dynamics observed in the group over time (progressively, all participants increase their L2 proficiency) put increasingly higher demands on effective floor-holding during these searches. As documented elsewhere (Skogmyr Marian & Pekarek Doehler, 2022), Malia's interactions with her co-participants unfold at a relatively slow pace with extensive pausing and longer language-related side sequences at the beginning of the recordings, while the later interactions are more fluent and proceed at a higher pace. Also, at the beginning, the co-participants were less likely to intervene with unsolicited candidate solutions when turns-in-progress came to a halt, due to their own limited linguistic repertoires and lack of shared knowledge within the group. These two observations concur to indicate that, with time and at higher proficiency levels, the group's interactional dynamics are such that there is an increased need for participants to account for breaks in progressivity and to effectively hold the floor while searching for a word. It is exactly to these increasing interactional needs that the routinized use of COD responds: It marks interruptions in turn production as related to a cognitive search and thereby works as an effective floor-holding device that simultaneously accounts for the need to suspend progressivity (see also Pekarek Doehler & Balaman, 2021), perhaps more so than silence and nonlinguistic hesitation sounds alone would do. We thus suggest that the growing marker-like use of COD over time both reflects higher L2 proficiency among co-participants and may be driven or accelerated by interactional needs that come with such increase in proficiency.

These observations have important implications. It should be obvious—though this has not been foregrounded much in prior research—that frequency itself may depend on social-interactional factors. Speakers' functional use of linguistic resources for dealing with local interactional needs—such as buying time for thinking, or recognizably displaying that a next linguistic item replaces a prior one—and recipients' responses to these resources, may reinforce (or else weaken) their use. There is now growing evidence from both sociologically and psychologically oriented research that recurrent interactional experience grounds the longitudinal development of resources and procedures put to work by individuals (see already Berger & Luckmann, 1966; Clark, 1996; for a recent discussion, see Deppermann & Pekarek Doehler, 2021). Yet, there remains much to be discovered as to in what ways and to what extent frequency in use is affected by social-interactional factors and how these factors may entail the entrenchment of speakers' practices and resources, ultimately resulting in chunking, routinization, and/or grammaticization. The developmental trajectory of grammar-for-interaction in an L2 provides a rich arena for future investigations into how grammar is motivated by and evolves for social interaction.

POST SCRIPTUM: EDUCATIONAL IMPLICATIONS

Educational implications that ensue from the analysis of social-interactional L2 developmental trajectories have only recently begun to be discussed in some detail (see some of the articles in Kunitz et al., 2021; Salaberry & Kunitz, 2019). We hope that the findings presented here can relevantly feed into the ongoing debates in the field.

Our analysis of Malia's use of COD supports the idea that language learning involves not only the emergence and progressive diversification of linguistic resources but also the functional diversification and routinization of patterns of language use for precise interactional purposes. Clearly, the integration of a given linguistic element in one's linguistic repertoire is just one step in L2 development; another step consists of change over time in the functional use of the same linguistic resource. We have shown how, in the case studied here, the functional development of COD responds to precise interactional needs associated with the speaker's engagement in spontaneous conversation in the L2. The findings

converge with other studies (Ishida, 2009; Kim, 2009; Pekarek Doehler, 2018, 2022; Pekarek Doehler & Balaman, 2021) that show how interaction-functional uses evolve once L2 speakers are recurrently engaged in situated communicative language use. Such findings stress the need for L2 learners to participate in real-life interactions for developing adequate functional uses of language. Therefore, especially in foreign language learning contexts, it is important to complement instruction focusing specifically on pragmatic aspects of language use with actively creating spaces where speakers can practice their ability to get by in social interaction, for example through conversation circles, language cafés, skype tandems, and other semiordinary conversational settings in the wild (Hellermann et al., 2019; Wagner, 2015).

The findings also inform our understanding of the construct of fluency. The CEFR descriptor for spoken fluency (Council of Europe, 2020) presents a progression from very evident pausing and disruptions of short contributions at the A1–A2 level, increased ability to self-repair but still marked pausing at B1 level, to higher fluency in longer stretches of talk with few noticeable pauses at B2 level and above. Malia's increased use of COD as a marker of cognitive search reflects her growing ability, as an advancing L2 learner, to maintain progressivity of talk by completing word searches on her own instead of interrupting her turn to recruit help from co-participants. At the same time, the increased use of COD as a floor-holding device helps to construct this fluency, as it allows Malia to fill pauses with linguistic material rather than merely relying on silences and non-linguistic hesitation phenomena when engaging in a cognitive search. Our findings therefore concretely exemplify the kind of stock phrases that the CEFR descriptor for turn-taking (Council of Europe, 2020) suggests that learners at B2 level and above should be able to deploy to gain thinking time and keep their turns in communicative interaction.

Last but not least, our observations highlight the close connection between language and embodiment, which is something that tends to be overlooked in L2 textbooks and policy documents. Gestures, when mentioned, typically feature as a support to (lacking) language. This is also the case in the CEFR for levels A1 and A2 (Council of Europe, 2020). At more advanced levels, embodiment is simply not mentioned, which might be seen as reflecting a view of gestures as occupying a marginal—or possibly only compensatory—role in communication. Our identification of multimodal COD packages shows the integrated nature of language and embodiment. Embodiment is here not deployed as an added support or as something that disappears over time; instead, the differential use of embodied conduct is an integral part of the construction's interactional effectiveness.

The multifunctional interactional use of a particular linguistic construction depending on its multimodal packaging deserves more attention both in SLA research and in L2 instruction. Such use pertains to the working and development of an L2 grammar-for-interaction—an emergent resource for coordinating action in communicative encounters—that is an integral part of L2 speakers' interactional competence.

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NOTES

[1] "Pragmatic gestures can be regarded as "operators" (Kendon, 2004) that display what a bit of talk is designed to do in the current situation, the stance that the speaker takes toward utterance content or an action, how an upcoming utterance will be designed (e.g., as a series or list), or how it is to be taken by its recipient" (Streeck, 2009a, p. 169; see also Streeck, 2009b).

[2] More specifically, Semester 1 shows a strong overrepresentation, vis-à-vis other uses, of COD used as request for candidate solution or translation (adjusted residual = 4.0), and Semester 3 shows a strong overrepresentation, vis-à-vis other uses, of COD used as cognitive search marker (adjusted residual = 3.0). The expected count for COD as request for candidate solution or translation in Semester 1 is well below 5 (2.1), which likely can be explained by the semester's low total number of occurrences of COD. A Chi-square test comparing only Semesters 2 and 3 also shows significance, however, even if the association is less strong ($p = 0.033$, Cramér's $V = 0.163$); we can therefore safely affirm that Malia deployed COD as cognitive search marker proportionally more in Semester 3 than in Semester 2. Overall, there is gradual change across the three semesters.

[3] We have not measured the frequency of COD in relation to the total number of words spoken by Malia in

the recordings. Therefore, we cannot exclude that an increased speaking rate (e.g., more words spoken per hour) may at least in part explain the increased number of occurrences of COD in Semesters 2 and 3.

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APPENDIX: TRANSCRIPTION CONVENTIONS

Transcription of Verbal Conduct

[	Start of overlap
]	End of overlap
=	Latching (no pause, no overlap)
(.)	Pause of approximately one tenth of a second
(0.7)	Measured pause in seconds and tenths of seconds
wo-	Abrupt cut-off
wo:rd	Syllable lengthening
?	Rising final intonation
¿	Mid-rise intonation
.	Falling final intonation
,	Continuing intonation
word	Emphasis
WORD	Louder than surrounding speech
°word°	Lower volume than surrounding speech
>word<	Faster delivery than surrounding speech
<word>	Slower delivery than surrounding speech
£word£	Smiley voice
↑word	Marked high rise in pitch (refers to the next syllable)
.h	Indrawn breath
h	Outdrawn breath or laughter token, in parentheses within words
/symbol/	Phonetic transcription
(word)	Uncertain transcription
((laughter))	Transcriber's comment

Transcription of Embodied Conduct

*/±/§/%	Indicates start and end of embodied conduct (e.g., gaze, nodding)
*–>l.12	Continuation of embodied conduct until line 12 of transcript
–>*	End of described embodied conduct
*–>>	Continuation of the described embodied conduct until end of excerpt
#	Indicates occurrence of figure (video still) in the course of verbal production
- - >	Dashed arrow in figure indicates eye gaze direction