‘Getting on the page’: The practical accord of material resources in educational interaction

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Introduction

This article explicates the notion of ‘practical accord’, encompassing the routine nonproblematic relationship of material artifacts and textual objects that provides the necessary grounds for further classroom work. Practical accord consists of courses of action that are temporally aligned with structured objects such as series of pages, slides or questions, ordered as a sequence of steps. Grounded in the video-based analysis of a single case, the article argues that such practical accord can be a necessary requirement for an educative activity to take place in an orderly way in the classroom. The analysis focuses on a particular instance of three students working with a shared laptop and a paper worksheet, and losing their grasp of the relationship between the screen and the sheet. The identified practices used to get back ‘on the page’ include the verbal and gestural constitution of the screen and the sheet as two separate objects that are related through instructions provided on the screen, which serves as a link between two independent but interrelated numbering systems used to organise the on-screen material and the questions on the worksheet. The article concludes with a discussion of the notion of practical accord with regard to instructed action and gestalt contextures.

The turn to naturalistic EM/CA inquiry into classroom practices in the 1970s provided fertile ground for a reformulation of traditional questions and the asking of completely novel ones (Payne 1976; Mehan 1979; Macbeth 2003).[1] Research interest in the embodied situated details of learning situations has thus made them an established and versatile research field (Box et al. 2013; Gardner 2019; Markee 2015; Waring 2015; Waring 2017; Watson 1992), with a specific focus on phenomena 'otherwise treated as givens in social science and education' (Baker 1997, 43). Examining the interactional details of 'teaching and learning moments' (Carlin and Moutinho 2020), this paper aims to explore aspects of the apparent fact that educational settings incorporate and consist of material features (Macbeth 1992; 2000) and are characterised by a multitude of artifacts or objects (Hindmarsh and Heath 2000b) that are integral to the practical achievement of 'situated learning' on the spot and in real time (Hemmings et al. 2000).

More specifically, this paper analyses how a group of students operates with a shared computer and a paper worksheet in a classroom setting, and how they solve troubles arising from the synchronous use of these varied artifacts. This warrants consulting the EM/CA corpora on educational technologies and classroom use of textual objects. The existing research shows that educational tasks related to technologies are established and followed as local practical accomplishments that are progressively clarified through pupils' and teachers' co-present work (Greiffenhagen 2008). Even when interacting in a synchronous multimodal online environment, participants co-produce and maintain a common 'indexical field' that is a precondition for intersubjectivity in teaching and learning (Perit Çakır, Zemel and Stahl 2009). The introduction of digital technologies, such as the use of slide-shows in design reviews that are part of architectural education, has been shown to profoundly transform the interaction (Lymer, Ivarsson and Lindwall 2009). The educational use of video is highlighted in instructional debriefings, in which students can adopt a specific perspective to reflect on their own videotaped actions (Johansson, Lindwall and Rystedt 2017). When it comes to studying educational technologies, EM/CA findings can be valuable for curricular design if analysts strive to retain participants' competences and orientations and focus systematically on 'actions and immanent pedagogies' (Lindwall and Lymer 2005). In addition to digital technologies, work with miscellaneous 'inscribed objects' (Day and Mortensen 2020) has also been shown to be closely coordinated with talk and bodily conduct (Hindmarsh & Heath 2000a; Mondada and Svinhufvud 2016), displaying 'literacy in action' (Ford 1999, 375). In language education, 'grammatical learnables' can be foregrounded on a worksheet via pointing

[1] The data examined in this paper was collected while I was supported by the *Swiss Government Excellence Scholarship for Foreign Scholars and Artists for the 2017–18 Academic Year* (no. 2017.0307). For their help during the project, I thank Alfons Adam, Marek Brožek, Urs Fischer, Esther González-Martínez, Jiří Kocián, Katka Kristová, Marcel Mahdal, Magali Michelet, Gilles Saillen, Christina Späti, Stephan Stach, Monika Stehlíková and all participating students. This article benefited from valuable observations and suggestions obtained during a data session at the Université de Neuchâtel (29 March 2021). I would also like to thank Paul V. Smith and an anonymous reviewer for their very helpful and inspiring comments on a previous version of the text. Any remaining shortcomings or errors are my own. I am grateful to Elisabeth Lyman for editing and proofreading the manuscript. The analysis presented in this article and the preparation of the text was supported by Charles University Research Centre No. 9 (UNCE VITRI).

gestures (Majlesi 2014). Routine handling of textual artifacts such as worksheets and handbooks is related to requests for information among students (Jakonen 2015), while 'designedly incomplete objects' in text form may be used by teachers to elicit student contributions (Hazel and Mortensen 2019).

Within this broader context, this article is grounded in analysis of a 'single episode of interaction' (Schegloff 1987) taken from a corpus of video recordings in which high school students worked in dyads or triads with a shared computer. Their work was structured by on-line material dealing with the topic of persecution of the Jewish population during World War II in Europe. The e-learning lesson consisted of subtitled oral history clips, texts, images and instructions; each group also had to answer six questions in writing on a paper worksheet. In the examined sequence, a group of three students strays from the designed order of the tasks, which is outlined by the sequence of the webpages and the corresponding sequence of questions on the worksheet. It is precisely this intended 'correspondence' between the material on the screen and the sheet, a presupposed but unclear connection between the two textual artifacts,that becomes a trouble for the group. Only after recovering a crucial constitutive condition of their classroom setting through 'the practices of instantiating objects' (Koschmann et al. 2006) can the group move forward towards the completion of its 'educative' tasks.

By focusing on the detailed analysis of a single case, this paper investigates the way a problem is solved routinely in and as a group: just how an aspect of work is identified as problematic, how the trouble is subsequently solved and how it is finally transformed into an accountably past problem that had already been overcome. By studying 'learning in the midst of action itself' (Goodwin 2018, 24), I demonstrate that the practical condition of taking part in an educational activity is mastery of the local orderliness of the activity itself. I examine in detail just how the working order of 'following the materials' (Ekström and Lindwall 2014) is established once again by putting the sheet into a *practical accord* with the material available on the screen – i.e., just how the students achieve 'getting on the page' (Garfinkel 2002, 200) again to get things done.

THE INTENDED WORKING ORDER

In the sequence that is presented and analysed in the following sections, a group of Czech students works with a shared laptop and a paper worksheet to complete an e-learning lesson called *From Czechoslovakia to Switzerland: Migration as a personal experience – The case of World War II*. The lesson consists of a sequence of tasks including reading texts, watching video excerpts from oral history interviews and writing down answers to questions on the worksheet. While working on the tasks, the students often use their considerable previous knowledge of the topic, but this remains outside the scope of this text.[2] This article

[2] The Holocaust is an obligatory subject in the latter stages of Czech primary and secondary education, usually within the context of World War II. Teachers are provided with a number of workshops, seminars and other activities (offered, e.g., by museums and memorial centres) to help them with this uneasy and sensitive subject. Ultimately, the specific implementation in the classrooms always depends on the individual

focuses on a two-minute sequence in which the routine of the group's working order and its unproblematic moving forward through the lesson's tasks shatters. To allow the reader to understand what became the trouble, how it was recognised and just how the unproblematic working order was restored, I must first explain in adequate detail what counts as the 'proper' intended working order in this particular setting and how it was implied in the material available to the students on the computer screen and the single worksheet.

After a brief introduction from the teacher and the researcher, followed by the signing of informed consent, the student groups of two or three members used shared computer devices to access a website prepared specifically for the classroom activity. This website consisted of a sequence of seven pages divided into four sections: (I) *The Context* (consisting of four individual pages: I.1 *The rise of Nazi Germany*; I.2 *The situation in Czechoslovakia during WWII*; I.3 *Anti-Jewish Measures*; I.4 *The situation in Switzerland during WWII*), (II) *The Decision*, (III) *The Journey* and (IV) *The Memory*. For an illustration, pages I.3 and II are displayed in Figures 1.1 and 1.2. Note that depending on the device used and its display settings, students needed to scroll down to see the lower parts of each page. The numbers of sections were displayed as Roman numerals in a blue triangle, next to which the number of the subsection (if applicable) was displayed in the title. In addition to the headings and the 'Next >>' button for moving ahead, all pages included various images and bits of text. Some of the pages also included short subtitled video clips from oral history testimonies (selected from the USC Shoah Foundation's *Visual History Archive*, see http://vha.usc.edu).

Furthermore, a paper worksheet was distributed among the students at the beginning of the lesson (see Figure 2) and collected when their work was finished. The worksheet was designed to go with the on-screen material, as could be seen in the instructions present on some of the individual webpages: 'Please fill in field X.Y' (see Figure 1.2), in which X.Y referred to the numbered boxes on the worksheet, each preceded by a question. The group's task was thus to write down answers to all the questions on the basis of the on-screen materials. For instance, in the case of webpage I.3 (*Anti-Jewish Measures*), a reference to field 1.2 was included at the bottom of the webpage; in the case of webpage II (*The Decision*), a reference to fields 2.1 and 2.2 was included. For a better overview, a comprehensive chart is presented below to indicate the intended relationship between the on-screen material, the worksheet and their respective numbering systems (see Table 1). No such table (or anything of the kind) was presented to the students in the classroom. They worked solely with the on-screen materials and the worksheet. Apart from the limitations of the two-hour lesson that was made available by the teachers for the entire activity, there was no precise time limit, but every group finished the work in a timeframe of 30–50 minutes.

teachers and schools. The subject is generally quite important in the Czech curriculum. The e-learning activity that I have prepared, and which is the background for this article, was offered only to three Czech teachers in the framework of testing its implementation.

Figure 1.1: On-screen materials available to the students through a shared computer device (in Czech). This example shows page I.3, titled 'Anti-Jewish Measures' ('Protižidovská opatření' in Czech). The lower part of the page, not visible in the screenshot, contains two video clips and instructions to fill in field 1.2.

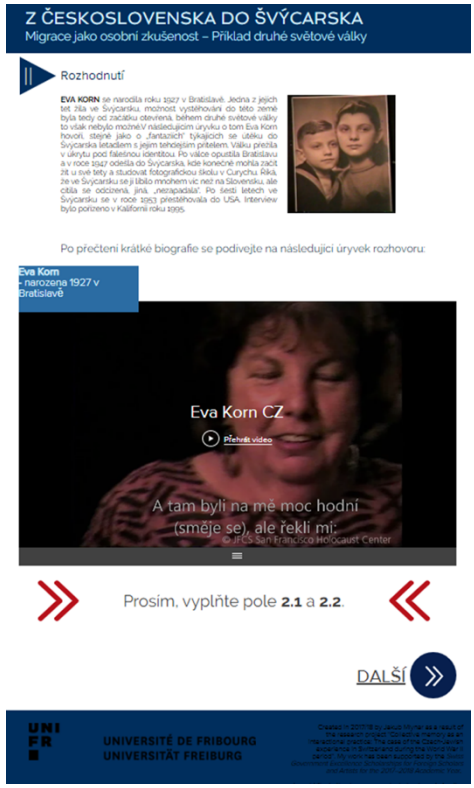

Figure 1.2: On-screen materials available to the students through a shared computer device (in Czech). This example shows page II, titled 'The Decision' ('Rozhodnutí' in Czech). The lower part of the page contains instructions to fill in fields 2.1 and 2.2.

Figure 2: Paper worksheet distributed for collaborative work during the lesson and filled in (in Czech). For an English translation of the printed questions, see Table 1 below.

Number on screen	Title displayed at the top of the screen	Number on sheet	Question on the sheet to be answered in relation to the section
(I) 1	The rise of Nazi Germany	Field 1.1	How did Adolf Hitler gain his political power?
(I) 2	The situation in Czechoslovakia during WWII	*(none)*	*(none)*
(I) 3	Anti-Jewish Measures	Field 1.2	Which groups were primarily affected by the Nazi regime? How?
(I) 4	The situation in Switzerland during WWII	*(none)*	*(none)*
(II)	The Decision	Field 2.1	Why could Eva Korn not leave Slovakia?
		Field 2.2	Would you also currently like to live somewhere else? Where? Why?
(III)	The Journey	Field 3.1	What are the main differences between Martin Spitzer's and Eduard Kornfeld's journey to Switzerland?
(IV)	The Memory	Field 4.1	Is Martha Szpiro Swiss? In what sense?

Table 1: The intended relationship between the on-screen material (first and second columns) and the worksheet (third and fourth columns).

A CURSORY DESCRIPTION OF THE ANALYSED SEQUENCE

In the particular 105-second sequence that is of central interest for this paper, we join a group of three students – for convenience I call them Petra, Filip and Lukas (see Figure 3) – about eight minutes into their work with the e-learning lesson. Before we get to this sequence, however, in order to comprehend its very substance, a brief gloss of what happened before is needed. Throughout their collaboration on the tasks constituting the educational activity, Petra takes responsibility for writing, while Lukas controls the shared laptop. No particular role is assigned to Filip in this impromptu division of labour. After commencing the activity, reading the first text (the section 'The rise of Nazi Germany') and inspecting other on-screen elements, the group wrote down an answer to the first question on the sheet. Next, moving to the second page ('The situation in Czechoslovakia during WWII'), they have read the text provided and written down their answer to the second question on the sheet – 'Which groups were primarily affected by the Nazi regime? How?' It is consequential that the question was in fact intended to be answered only later, specifically after they read the third page dedicated to anti-Jewish measures.

On the page, there were no instructions about filling in field 1.2, or any other instructions, apart from the icon '>> Next'.

Figure 3: The group of students at work (pseudonyms are used for the members)

Nevertheless, the group was able to write down a very reasonable answer (see Figure 4.1) based on the available text, which dealt with the political situation in Czechoslovakia. In formulating the answer, they also utilised their previous historical knowledge, which allowed them to also write down 'Jews' and 'Roma' although these social groups were not mentioned in the on-screen text (webpage I.2). After pronouncing the answer finished – as displayed in Figure 4.1 – they move to the next webpage: I.3 'Anti-Jewish Measures' and start reading the text provided on-screen. The sequence analysed in detail in the next section begins as the students have been reading this text together silently, nearly motionless, for almost two minutes. A full transcript of the 105-second sequence that follows this reading is available in Appendix 1, implementing the conventions of Jefferson (2004) for speech and Mondada (2018) for bodily conduct (see Appendix 2 for an overview).

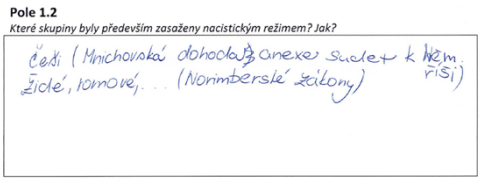

Figure 4.1: Question 1.2 as filled in after reading webpage I.2 'The situation in Czechoslovakia during WWII' (reconstructed from the scanned sheet). The inscription reads: 'Czechs (Munich agreement) annexation of Sudeten to the Ger. Empire) Jews, Roma, … (Nuremberg laws)'.

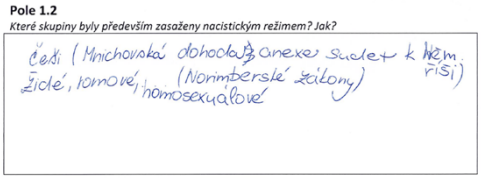

Figure 4.2: Question 1.2 as amended after reading webpage I.3 'Anti-Jewish Measures' (actual final form). The inscription reads: 'Czechs (Munich agreement) annexation of Sudeten to the Ger. Empire) Jews, Roma, homosexuals (Nuremberg laws)'.

A discordance between the on-screen material and the worksheet is first discovered after the group finishes reading. Petra comments on the relationship between the on-screen text and the question on the sheet, which she reads aloud: 'Why could Eva Korn not leave Slovakia?' They realise that there is no mention of 'Eva Korn' in the on-screen text. Petra then suggests that perhaps this is related to some 'further' materials to be encountered later. Lukas also notices a difference between the numbers of the questions on the sheet ('2.1' is the number of the question quoted above) and the numbers in the top left corner of the displayed webpage ('3' in the case of the on-screen text just read by the group – see Figure 1.1). Filip and Petra express surprise and puzzlement about this misalignment. Lukas moves the cursor and inspects the screen contents, while Petra provides an initial explanatory account. Then they realise that they answered question 1.2 too early, and inscribe one additional persecuted category: 'homosexuals' (see Figure 4.2).

Then they decide to move on, as the trouble seems to be already resolved. However, the next page, dedicated to 'The situation in Switzerland during WWII', seems to bring further problems, also because of the number four in its title. Filip turns the worksheet over and inspects the upcoming questions. They also return to the previous webpage and Lukas provides an explanation: 'it is not linked, the question is not linked to these points'. Petra and Filip agree, and upon Petra's suggestion they move ahead to the next webpage entitled (II) 'The Decision' (see Figure 1.2 above). At the top of it, they can see Eva Korn's name, and at the bottom, the instructions to fill in fields 2.1 and 2.2. They conclude that they finally know where they are. At the very end of the sequence, as they are already moving to the next component of their task, they discuss certain attributes of the video clip, such as the volume of the sound and the presence of subtitles. The sequence is then followed by silent and predominantly motionless watching of the video clip from an oral history interview with Eva Korn.

In summary, once they notice the seeming incongruence between the sheet and the screen, the group dedicates around 1 minute 45 seconds to restoring a coherent working order, which consists of identifying the problem and formulating the proper relationship between the two numbering systems used in the e-learning activity. This sequence of the group's concerted action, which is my central interest here, is clearly delineated by the preceding and following sequences of quiet individual attendance to the computer screen (to read a text and watch a video clip). In the following section of the article, I will analyse the methods the group used to restore the practical accord between the paper and the screen, with a focus on their situated detail. Subsequently, on the grounds of the analysis, I will discuss and specify the notion of 'practical accord' as a way of glossing the embodied achievement of a particular activity that requires courses of action to be temporally aligned with several structured objects such as ordered series of textual items, slides or pages.

RESTORING THE PRACTICAL ACCORD AS A SITUATED ACCOMPLISHMENT

Following the temporal order of the examined sequence, I will present the analysis in four subsections: *Realising the trouble* (20 seconds of the video recording, lines 1–13 of the transcript in Appendix 1), *solving the trouble once* (29 seconds, lines 14–25), *realising the persistence of the trouble* (15 seconds, lines 26–37) and *solving the trouble once and for all* (41 seconds, lines 38–59). This organisation is motivated by the premise, inherent to various strands of ethnomethodological analysis (Sormani 2019), that social action and the constitution of its 'actors' needs to be analytically grasped in real time (Button and Sharrock 1991) and reconstructed in its lived sequential order (Ayaß and Meyer 2012; Rawls 2005). It is crucial to maintain, as much as possible, the local sequential orderliness 'bit by bit' (Goodwin 2018, 48). Herein lies the chief import of video-based analysis, which makes activities available for rewatching and thorough examination in their witnessable detail and specific temporal progression (Mondada 2006), in our case: 'accountably done and made witnessed and made witnessable tasks of learning and teaching' (Garfinkel 2007, 19).

Realising the trouble

The first moments after the group members finish reading the on-screen text do not seem to indicate any particular trouble. Petra makes the worksheet relevant by orienting her gaze to it and moving it slightly on the table. When Lukas also looks at the sheet, Petra makes an initial comment on the text that they have just finished reading individually: 'so that already – that somehow still belongs to this here right' (line 1). The first and second 'that' seems to indexically refer to the question on the worksheet that was already answered (see Figure 4.1), while the 'this' seems to refer to the on-screen text. This interpretation is substantiated by her tapping the paper with her pen while producing the Czech word 'ještě' ('still') just after she utters the first indexical term 'that', while she uses the writing end of the pen to produce a precisely timed brief pointing to the computer screen while uttering the words 'this here' (see Figure 5). Two distinct objects are being established through Petra's practices, for '[t]here are no objects without practices' (Rawls 2008, 51). While the practical accord of the screen and the sheet is already problematised by Petra's referring to each of these objects separately, a 'belonging' between the on-screen text and the question on the worksheet is still suggested and maintained.

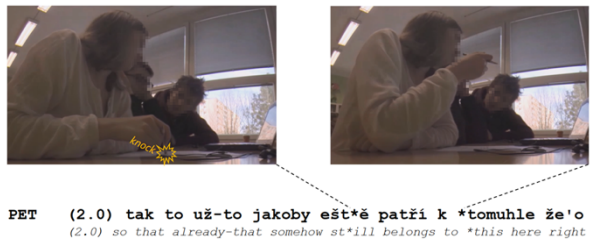

Figure 5: The sheet and the screen are practically and discursively constituted as two separate objects (line 1).

In the meantime, Lukas is visibly orienting to reading the question on the sheet, and in the one-second silence that follows Petra's comment, Lukas turns his gaze to the screen. Making a textual object intersubjectively available, Petra now reads aloud the question that she previously marked only by tapping her pen on the paper: 'why could Eva Korn not [leave Slovakia]' (line 3). Yet the latter part of her utterance overlaps with Lukas's question, which comes right after Eva Korn's name is mentioned, Lukas asking: 'is there any Eva Korn?' (line 4). Asking this question, he scrolls up the webpage with the touchpad, thereby turning the question into an account of his simultaneous bodily conduct: also looking for the answer on screen. After a silence, Petra replies 'no (.) there isn't' (line 6). While Lukas's question could be an initial explicit formulation of a possible trouble – the question on the sheet asks about a person not yet mentioned in the on-line material – Petra still provides a quite orderly account that seems to invite a 'wait-and-see' strategy: 'probably that's on the next one' (line 6). She suggests that a later event occurring on the screen, such as a text displayed as 'next one', could possibly clarify the present uncertainties (cf. Garfinkel 1967).

After a silence in line 7, during which he looks from the screen to the sheet and back again, Lukas formulates another aspect of the emerging trouble: 'that is two one though (.) three already' (line 8), referring to the number of the question ('2.1') and the webpage ('3'). He is looking again at the paper and back at the screen in the micropause, while Petra also shifts her gaze from the paper to the screen. In this segment of the analysed sequence, frequent alternation in gaze direction and its precise coordination with talk appear to be highly consequential for establishing the encountered trouble as a problem of misalignment between the numbering systems on the screen and the sheet (see Figure 6).

Figure 6: Gaze alternation is precisely coordinated with talk (line 8).

A relatively long 1.5-second silence follows, whereafter Petra produces a change-of-state token 'aha' (Heritage 1984), which may indicate a change in awareness or orientation, learning 'a restructuring of the world' (Nishizaka 2006). Then Filip speaks for the first time in this sequence, leaning backwards – away from the screen – and saying 'what' (line 12). Petra joins Filip immediately with an upgraded repetition of his turn (line 13), which she produces not only in a prosodically marked elongated manner but also with hearable laughter particles within the word and afterwards. Meanwhile, Lukas continues inspecting the relatively long webpage (see Figure 1.1) by scrolling up and down it. The marked displays of surprise, confusion and puzzlement seem to indicate that at this point the whole group is in consensus that something has gone wrong. A problem appears; what needs to be done next is the 'diagnostics' (Büscher, O'Neil & Rooksby 2009).

To summarise, this segment of the analysed sequence underscores two aspects of how the trouble was identified. First, through bodily conduct and speech, the sheet and the screen are established as two independent but somehow interlinked resources, which is the necessary basis for indicating a trouble in their relationship. An earlier working whole – a practical *gestalt* – is divided into parts. This is done by indexicals and deictics ('this here', 'that') that refer to particular items on the screen or the sheet. These references are used simultaneously with bodily practices such as pointing. Notably, the gaze direction of all group members visibly and quickly alternates between orienting to the sheet and orienting to the screen, which contributes to the constitution of these two material artifacts as separate and problematic. Second, and relatedly, the explicit introduction of the two numeric ordering systems (line 8) – one organising the textual material on the sheet and the other organising the material on the screen – is consequential for the common realisation and agreement about being in trouble. A singular problem could be reasonably solved by the 'wait-and-see' method, consisting of moving ahead, which Petra seems to offer in line 6. On the contrary, the disaligned numbers on the screen and the sheet indicate a more general structural problem which, given the prospective predictability of natural number series, can be a chronic one and require other solutions. Turning his attention to the discordance of the two numbers from the two series, Lukas points to a possibly more fundamental trouble. Petra's account is an account of *this* pair of a webpage and a sheet question, whereas Lukas's account is an account of *any* pair of webpages and sheet questions. The group's trouble is thus recast as a problem of determining the rationale for alignment and correspondence between these two serial numeric systems.

Solving the trouble once

After realising the trouble, and arriving at a group consensus on the nature of that trouble, the group members next direct their actions at 'determining and categorising the trouble, and scoping for what to do about it' (Büscher, O'Neil & Rooksby 2009). The students work first to establish the alignment of the two numbering systems – i.e., to reach the practical accord again – located by Lukas as the relevant organisational

principles of the textual materials on the paper and the screen. These organisational principles are in a supposed correspondence (which was designed by the authors of the educational materials) but the specific rules of this correspondence remain obscure. Working towards the solution of the trouble, and following both Filip's and Petra's 'what' (lines 12 and 13), Lukas in line 15 provides a beginning of a possible explanation: 'we have started already'. In overlap with his utterance, and perhaps building on it, Filip produces an excited but highly indexical remark 'YEAh those are the the' (line 16). However opaque his suggestion may be, Petra seems to align with its sense and pronounces an extended explanation in lines 18 and 19, which can also be heard as an unpacking of Filip's vague gloss. Petra's turn at talk starts with the Czech particle 'no', which is mostly used when reconfirming a previously conveyed proposition (Weidner 2016) and can be roughly translated into English as 'yes' or 'well'. This might be related to Petra's reuse of elements from her earlier initial commentary (given in line 1), doing format tying (Goodwin 1990, 177–185) especially via the phrase 'belongs to this here'. Perhaps even more consequentially, Petra points out to her colleagues that at the bottom of the current webpage there are instructions to fill in field 1.2 and that this is the field that they have already filled in before. Once again, similarly to the previous section, she relies on the use of pointing with the pen in her hand to elucidate the relationship between the on-screen elements and the question on the worksheet (see Figure 7 in comparison with Figure 5).

Figure 7: Pointing to the sheet and to the screen is precisely timed with the explanation of their relationship (lines 8 and 9).

Simultaneously, in the course of her explanation, Petra locates a novel relevant piece of information, which is at that moment missing from their inscribed answer to question 1.2. After noting that 'also homosexuals' should be listed as a group persecuted by the Nazi regime, she goes ahead and starts inscribing it. In overlap, Lukas in line 21 produces another change-of-state token and continues inspecting the screen and the sheet. After 7.3 seconds of silence, while Petra inscribes the word 'homosexuals' (see Figure 4.2 above for the result), Lukas provides another gloss, confirming Petra's previous candidate solution: 'yeah we have pre-settled it' (line 23). He uses a rather unusual Czech word 'předvypořádat' ('pre-settle') that is typical in legal discourse. At this point, it seems that the problem with the numbering systems has been identified as a problem of filling in question 1.2 too early, that is, before receiving the relevant instructions on the webpage. The numeric indicators of the two distinct ordering systems also made the 'presupposed underlying pattern' (Garfinkel [1959] 2019, 14) visible. This pattern consists of the two numeric systems' possibly intended correspondence, which is used as a resource for a

practical interpretation of the material on screen and on the paper. A shared understanding now having been established, the laptop screen and the sheet are, at least for now, in practical accord once again. Indeed, Petra orients to this particular task as finished, concluding with 'we have this', continuing and completing her turn after a 0.6-second pause with the transition marker 'okay' (Beach 1993; Reichert and Liebscher 2018). Everything seems to be back in order. Nevertheless, as we will see in the next section, after moving ahead by clicking the 'Next >>' icon, the group members realise that the trouble is still present.

To summarise, this segment of the analysed sequence underscored two aspects of how the group solved the trouble: assessing their previous answering of the question as being done too early, and noting the importance of following the on-screen instructions. Any instructions, however, 'find their sense, relevance, determinate character and coherence in their practical enactment, if at all' (Sormani 2009, 3). On the grounds of separating the screen and the paper, and orienting to their respective, independent but interwoven, numbering systems (see previous section), the group has so far made progress that they retrospectively formulate and gloss as a local task history. First, the key feature of the trouble is related to the disruption of a proper temporality of the overall task, i.e., the timing of its particular sub-tasks, in other words, 'what' should be done 'when'. This is indicated in Lukas's possibly unfinished utterance 'we have started already', vaguely confirmed by Filip, and further expanded by Petra, who suggests 'that still belongs to this', pointing to the question on the worksheet that they have already answered. Moreover, and relatedly, Petra in her longest turn at talk (lines 18 and 19) also explicitly topicalises the instructions provided at the bottom of some webpages, which effectively constitute the link between the on-screen material and the worksheet. She documents that 'the instructions began to show themselves as a tendentious sequence of "nexts"' (Macbeth 2014, 302) through which the available material on the screen and the sheet can be instructably seen as sequentially ordered and aligned. By adding an item ('homosexuals') from the currently visible webpage, numbered 'I.3', to question 1.2, which was already treated earlier by the group as finished, she embodies this relationship (see Table 1) by doing the instructed inscribing.

Realising the persistence of the trouble

Despite the apparent solution of the trouble in lines 23 and 24, when Lukas proceeds to the next webpage, the problem appears again. While all members of the group visibly orient their gaze to the screen, Filip produces a marked 'wha::t' (line 27), in a way similar to his and Petra's utterances earlier in lines 12 and 13. This is a rather economical and elliptic resource for recasting the status of the group's work quickly from nonproblematic to problematic. Filip then comments on the number of the webpage just displayed, noting it is number four 'already' (line 29), whereupon Lukas produces an exhalation that could be a laughter particle but is also potentially hearable as a token of confusion (line 31). Similarly to Goodwin's analysis of a hopscotch dispute, numbers are used here as

categorical references to some problematic aspects of the material environment (Goodwin 2018, 183). Meanwhile, Filip's change in bodily posture during Lukas's turn in line 31 indicates readiness for action (see Figure 8).

Figure 8: Filip's bodily posture at the beginning (left) and at the end (right) of line 31. Next, he grasps and turns the worksheet over.

Figure 9: Turning the worksheet over to inspect the other side (line 32).

Next, while saying 'hol' on' (line 32), Filip grasps and turns the worksheet over to inspect its other side and the upcoming questions, presumably to confirm the logic of the number series (see Figure 9). The previously established understanding of the 'underlying pattern' is beginning to appear incorrect, and given that 'our understanding proceeds in a way that is self-confirming' (Liberman 2013, 240) through procedures such as the documentary method of interpretation, it needs to be revisited and perhaps wholly reestablished at this point. After four seconds of silence, Petra seems to express doubt that question number 4 could be related to the displayed webpage (line 34). Upon Filip's suggestion, Lukas returns to the previous page (line 35), which has the number 3, as Filip also says out loud (line 37). The trouble is evidently back and the two parallel numeric systems seem to be immediately identified and examined as the persistent sources of the group's problem.

To summarise, in this brief segment of the analysed sequence we could see how the trouble was identified as, in fact, still present and unsolved. First, a group member reused the stand-alone 'what' to effectively tie back to the status of problem solving, rather than performing the educational tasks inherent to the provided materials. Second, the group found a method for establishing the proper order in discovering the logic operative in the two numbering systems (on screen and on paper) and their possible relationship. They did this by inspecting in advance the later parts of the worksheet, as well as moving back and forth through the webpages displayed on screen, scrolling up and down them, and following the numbers on screen as possibly related to the numbers of the questions

on the paper. The descriptive numeric systems are thus read alternately as instructions to look for their possible associations, echoing Garfinkel's insight that 'as local occasion demands, practitioners are required to read descriptive accounts alternately as instructions' (1996, 19).

Solving the trouble once and for all

The final part of the analysed sequence brings the group to the conclusion, as they work towards establishing anew the practical accord of the screen and the worksheet. Responding to Filip's comment in line 37, which makes the discordant number of the displayed webpage relevant, Lukas begins his next turn with a contrast conjunction, providing an explanation of the cause of their trouble and its possible solution by formulating the nature of the link between the numbering systems used on the sheet and on the screen: 'but tha- it- >because it's not lin-ked< it is like there is [that the question is not linked to the points:]' (lines 38, 39 and 41). In a complex environmentally coupled gesture (Goodwin 2007) at precisely timed moments in his turn at talk, Lukas uses his left index finger to point first to the screen and then to the sheet to indexically refer to them as two separate objects (compare with Figures 5 and 7).

Figure 10: Pointing to the screen and to the sheet as part of the explanation of the trouble.

In an extended overlap, Petra agrees with Lukas's account simultaneously, as he is still producing it: '[yeah that's it it is like tha:t (.) yeah exactly]' (line 40). This early onset seems to show that Lukas's explanation is compatible with Petra's accounts produced earlier in lines 18 and 19. Moreover, while Lukas and Petra are speaking in overlap, Filip turns the sheet back to its first page. After Lukas and Petra both come to turn conclusion, Filip confirms his reception of their joint explanation with the token 'aha' (line 42). In line 43, Petra orients to the progressivity of the task by suggesting they should 'simply go ahead', which resonates with her earlier turn in line 6. She also displays her availability to take charge of the role of inscriber once again by moving the sheet slightly on the desk with her left hand and grasping the pen with her right hand.

Lukas then clicks on the 'Next >>' icon and produces a quiet comment (partly inaudible) in line 45. Petra suggests that he should 'try scrolling down' (line 46), which he does and shows her that there is just the 'Next >>' icon, rather than any instructions related to a question on the sheet. He clicks the icon and reaches the next webpage with section II (see Figure 1.2 and Table 1). During the silence in line 52, he is scrolling down again,

showing the instructions at the bottom of the page. He reads them aloud in line 54: 'fill in fields two one and two two', in overlap with Petra's quick repeated utterance of 'here it is' (line 55). Although Lukas displays uncertainty and shifts his gaze to the sheet again (line 56), in line 57 Petra confirms her previous statement, and Filip subsequently also announces his understanding ('yeah like this'), followed by a conclusive 'and we're here' in line 59 after a micropause, while also slightly leaning forward towards the screen. They are finally able to *see* the sheet and the screen as attuned once again, and act upon this reestablished practical accord: in this respect, their 'action has *its own* kind of sight' (Heidegger 1962, 99). In what remains of the interactional sequence, which is not analysed here in more detail, once they have re-established the practical accord of the screen and the sheet, the group immediately resumes the sequence of the tasks, starting the video clip from the interview with Eva Korn, which will then allow them to finally answer question 2.1 on the sheet.

To summarise, this segment of the analysed sequence upholds the observations made earlier in this paper on the close coordination of gaze, pointing and talk in establishing the screen and the sheet as two distinct objects in order to examine their relationship and diagnose its problems. Furthermore, the analysis reveals that the relevant text items, such as on-screen numbers and instructions, are routinely read aloud (line 54), although they are visually available to all participants. This allows all other members to offer interpretation of the publicly available part of the text, e.g., relating it to the group's task, as Petra did in line 55 and as Filip confirmed in line 59. Last but not least, it underscores the crucial import of the method of proceeding further to the next webpage, despite the trouble not being entirely solved, and only a preliminary account stating the disconnection of the two numbering systems is available. Once the necessary link is located – in this case, the instructions to fill in fields 2.1 and 2.2 – the group can reach the closure of their trouble by reaching the specific 'here': the right point in the order of their tasks. It seems to be only here that the screen and the paper are reestablished in their practical accord as grounds for the instructed action: only now do the instructions make sense again and does instructed action become possible as a matter of the student's local competence.

GESTALT CONTEXTURES, INSTRUCTED ACTION AND PRACTICAL ACCORD

This article offers the notion of 'practical accord' as an analytical gloss of a particular feature of concerted action. It is, however, necessary to clarify how it relates to other established notions in the EM/CA analytical tradition. What does this new term contribute and what is it exactly that makes it visible and accountable? In this section, I will briefly discuss the conceptual relationship between practical accord, gestalt contextures and instructed action – both originating in Garfinkel's thought (1996, 2002, 2021), providing for investigations of 'order and structure as local, praxiological operations, in detail' (Macbeth 2014, 303). As is often the case, a detailed praxiology is facilitated by moments

when something goes wrong – *discordantly* rather than in accord – as we saw in the previous section.

The notion of gestalt contexture originates in Gurwitsch's phenomenology, where it comprises the mutual relationship between constitutive elements of phenomenal fields, while '[b]etween the parts or constituents of a Gestalt-contexture, there prevails the particular relationship of *Gestalt-coherence* defined as *the determining and conditioning of the constituents upon each other*' (Gurwitsch 2010, 131). In other words, as Watson puts it, '[e]ach phenomenal detail at once gains its sense from its affiliation with a texture of other detail and lends its sense to them: and this sense emerges, develops and transforms over a texture-specific *durée* as endogenously apperceived by participants' (Watson 2008, 231). In this sense, the practical accord is a subset and perhaps also an aspect of gestalt contextures. In situations with a discordance, such as that analysed in the previous section, it is precisely the mutual interdependence and affiliation of the parts or constituents of the contexture that become problematic and need to be re-established. Garfinkel's ethnomethodological 'misreading' (2021) of Gurwitsch repurposes gestalt contextures as phenomena of practical action, i.e., Garfinkel 'extends this into the social world of enacted practices' (Eisenmann & Lynch 2021, 6). The notion of practical accord builds on these insights and aims to examine particular members' methods for establishing a meaningful relationship between two artifacts that are specifically interlinked through practice and incorporated into the ongoing activity.

Practical accord is principally related to members' skilled and routine operations with *structured objects* (see Mlynář 2021). Structured objects are objects with recognisable 'beginnings', 'middles' or 'ends' (such as stories, streets or ropes); or 'left' and 'right' sides (such as figures, faces or squares); or 'fronts' and 'backs' (such as houses, mobile phones or worksheets). Other ways of structuring objects involve various numeric systems, as we saw in the examined data. The structuredness is established in and through practical action and in practical manipulations with the relevant 'parts'. These parts are constitutive of a whole, but – as we saw in detail in the previous section – can be separated. Meaningful parts of a structured object emerge from the practices of its manipulation. A structured object, however, is not a kind or a type of object per se, but a characterisation of a set of practices that are done to structure a perceived object (e.g., referring to the 'sides' or 'ends' of the object, showing them, pointing them out). An object is structured as a result of this set of practices, due to the *structurability* of objects. The practices, not the artifacts themselves, are the key. The notion of practical accord aims to capture the work done when the parts of several structured objects have to be properly aligned for a job to be done, such as the classroom task of writing down answers to questions on paper on the basis of material on a computer screen.

As illustrated in the previous section, the students' work as a strip of instructed action is closely contingent on the instructions on the screen, making proper sense of them and implementing them as pointing to a more general pattern. Moreover, descriptive elements such as numbering systems or textual items on the screen and the sheet are read alternatively as instructions, employing the locally relevant competence in their

practices, 'chained bodily and chiasmically to places, spaces, architectures, equipment, instruments, and timing' (Garfinkel 1996, 19). On these grounds, the notion of practical accord allows us to examine certain aspects of observable courses of action that are related to establishing and maintaining an alignment between structured objects. In the case of the students' work, the texts on the sheet and the screen were dismantled in reflection, their sequentially ordered parts inspected and aligned step by step, which finally reproduced the practical accord they needed to carry out the educative task. The notion of practical accord underlines just how structured objects can be attuned to each other as features of an ongoing activity and resources for particular actions, pointing to 'the coherence of finding instruction as an endogenous gestalt contexture' (Macbeth 2014, 303). Practical accord – visible also, e.g., in the ability to align one's written speech properly with a slideshow, or to use a textbook as a resource for navigating a classroom task sequentially – is part of the locally relevant competence that is constituent to instructed action within gestalt contextures.

CONCLUSION: WHAT DOES THE CORRECT SEQUENCECOME TO LOOK LIKE?

The group's problem, and its achieved solution, highlights 'what does completeness, followability, sequence, correct sequence, local historicity (and the rest) *come to look like*' (Garfinkel 2002, 202; original italics). For the group, the problem is the misalignment of screen and paper, which arise as two distinct objects with supposed but unclear relevance to each other. They find themselves with a set of 'fragmented' materials that have to be 'integrated' (see Schneider and Wagner 1993). The 'correct sequence' of the group's tasks is then rooted in specifying and operating upon this mutual relevance that was previously taken for granted. In order for the group to continue, the two material resources have to be grasped once again as a practical *gestalt* and become 'ready-to-hand' (Heidegger 1962, 98) in a non-reflexive manner: as an 'unquestionable background of matters' (Garfinkel 1967, 173). Even for instructed action in the classroom – which is also the case with the student triad – it is necessary to have the material resources attuned and their structural features nonproblematically aligned, in order to execute the given instructions. For the instructions – i.e., 'their followability, their completeness, their consistency, their sufficiency' (Garfinkel 2021, 36) – to be praxeologically operative, it is necessary for the equipment to 'withdraw' and become transparent. This is progressively accomplished when the group inspects the available textual objects from a novel perspective: focusing on the numbering systems used on screen and on the paper to organise parts of the activity, and the location of the instructions for 'filling in', which are revealed as the links of the on-screen material to the questions on the sheet.

In this article, I have described and explicated the members' methods for identifying and solving the trouble in their situated detail. The students go back and forth through the significant parts of the texts and summarise how exactly the questions already answered on the sheet relate to the available webpages. As part of this procedure, their

descriptions and accounts of the structure of the on-screen material often employ spatial terms, in phrases such as '°so back°' or 'simply go ahead' capturing the movement through the webpage series, but also 'scrolling down' referring to the structural features of the visible page – 'down' being the specific location on the webpage (and on the screen) that could possibly contain specific instructions for using the sheet. The materials displayed on the screen and on the paper are conceived in and through members' practices as structured objects, which consist of routinely recognisable and locatable parts. Structural features of textual artifacts are thus reified for all practical purposes, which is a necessary precondition of any concerted action: 'No reification, no object; no reification, no action' (Garfinkel 2008, 134).

The work of fixing the problem is identical to, and contingent on, an understanding of 'what went wrong' (Alby and Zucchermaglio 2007). The group's courses of action thus aptly illustrate the sense of Hemmings et al.'s observation that 'while the instructions and the artefact itself "have a pedagogy" (…), i.e. they embody a theory concerning the nature of the lesson and how it is to be learned in terms of suggestions as to how the outcome should be achieved processually, they are no guarantee that these are the lessons learned nor that the process will take a given form' (2000, 233–234). In other words, the sequence of tasks implied by the materials is often changed in praxis (Takahashi & Lee 2011), yet – as we have learned from the single case analysed in this paper – the sequence of tasks implied by the materials must first be comprehended, before it can be either relevant or irrelevant for the praxis. With regard to instructed action, this local competence seems to establish grounds for a successful following of instructions given in the educational material, 'the essential competence which enables one to follow instructions per se' (Amerine & Bilmes 1998, 330). Part of such competence in the setting analysed in this article is establishing and maintaining the available textual artifacts in practical accord.

The notion of 'practical accord', which I have introduced and exemplified in this article, aims to capture the nonproblematic work with material artifacts and textual objects, required to perform routinely and steadily in order to provide the necessary grounds for further action facilitated by their mutual practical relationship. Practical accord enables courses of action that are temporally aligned with structured objects whose parts are ordered in a proper succession of followable steps. As underscored in the interactional sequence examined in this article, the practical accord can be a necessary yet often neglected requirement for an 'educative' activity – such as reading texts and answering appropriate questions – to take place in an orderly way in the classroom. By examining how members deal with moments when things go wrong, and how they solve troubles, we can make visible what is involved in the proper operation of the material environment, spatial arrangements and correct sequence of work: in a word, the practical accord. As Lucy Suchman noted, 'by studying what things look like when they are unfamiliar, [we can] understand better what is involved in their mastery' (1987, 75). Ultimately, this points to a tacit underlying process of local teaching and learning – acquiring

a competent grasp of the common material environment, and displaying it all the way through – at the very basis of 'educational interactions'.

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APPENDIX 1: THE FULL SEQUENCE TRANSCRIBED

```
   ((reading an on-screen text together silently for 103 seconds))
1  PET  *(2.0) & tak to už-to jakoby ešt*ě patří k *tomuhle že'o
         (2.0) so that already-that somehow still belongs to this here
               right
        *looks down, puts down right hand, moves sheet
                                      *taps paper with pen
                                                 *points at screen
   luk          &looks at sheet
2       (0.6)&(0.3)
   luk       &looks at screen
3  PET  proč nemohla Eva Korn [opustit Slovensko to'e]
        why could Eva Korn not [leave Slovakia that's]
```

```
4  LUK                          &[tam je ňáká  Eva Korn?]
                                 [is there any Eva Korn?]
                                &touches touchpad and scrolls up
5        (0.8)
6  PET   ne (.) neni (.) asi na dalšim až
         no (.) there isn't (.) probably that's on the next one
7        &(0.9)
   Luk   &looks at paper, looks back at screen
8  LUK   to je dva jedna a*le & (.) & tři už
         that is two one though (.)  three already
                                &looks at paper
                                      &looks at screen
  Pet                      *looks at paper, at screen, at paper
9        (0.5)
10 PET   a:ha
11       (1.5)
12 FIL   co $
         what
            $leans backward
13 PET   c(h)o:: heh heh .hhh
         wha::t(h) heh heh .hhh
14       (1.2)
15 LUK   °my 'sme začа&li [už]°
         °we have started [already]°
                     &looks at paper
16 FIL                   [JÓ]:: to sou$ ↑ty ty.
                         [YEA]::h those are the the
                                      $moves right hand twd laptop
17       (1.7)
18 PET   * nó to furt patří k *tomuhle žejo ta*dy máš když sjedeš
           well that still belongs to this y'know here you have when
         *looks at paper      *points at paper with pen
                                            *points at screen
19       dolu tak tam máš *prosím vyplňte pole je&dna dva a to už (.)
         you scroll down then you have please fill in field one two and
         that we already (.)
                         *points at paper with pen (at Q and A)
   luk                                        &looks at paper and
                                               screen
20       to už jsme tam na- ještě ho[mosexuálové] (.) *
         that is already wri- also ho[mosexuals]
                                                  *starts inscribing
```

```
21 LUK                              [ a h a ]
22      (7.3) ((Lukas and Filip both monitor Petra's inscribing))
23 LUK  jo my sme to před[vypořádali]
        yeah we have sett[led it before]
24 PET                   [no to máme] (0.6) ↑°'kej°
                         [we have this] (0.6) ↑°'kay°
25 FIL  (už tam vidim zpátky)
        (I can see it back)
26      (0.5)
27 FIL  co::
        wha::t
28      (0.3)
29 FIL  to už je čtyry ale &
        but that's four already
   luk                      &looks at paper--->
30      (1.1)&$(0.8)
luk      --->&
   fil        $looks at paper
31 LUK  hahhh
32 FIL  $ 'čka:t
          hol' o:n
        $ sits upright, turns sheet over
33      (4.1)
34 PET  čtyry (no)
        four (well)
35 FIL  °tak zpět°
        °so back°
36      (1.0)
37 FIL  tje trojka: už
        it's three: already
38 LUK  ale von- to- >vono se to totiž nes-&pojuje<
        but tha- it- >because it's not lin-ked<
                                          &points at screen
39      tam to jako& je
        it's like there is
                  &points at paper
40 PET  [no jasný vono to je jako*by vono ta: (.) nó jasný]
        [yeah that's it it is like tha:t (.) yeah exactly]
                                *points at screen
41 LUK  [že ta  $votázka se  nespojuje  s   těma  bodama: ]
        [that the question is not linked to the points:]
   fil          $turns sheet over
```

```
42 FIL  aha
43 PET  takže asi prostě jít dál no *
        so probably just simply go ahead
                                    *RH takes pen, LH moves sheet
44      (3.9)
45 LUK  tady [(       )]
        here [(       )]
46 PET       [tak 'čkej] *zkus sjet dolu
             [so hol' on] try scrolling down
                         *points at screen with pen
47      (0.8)
48 LUK  to bylo podiv[ej da]lší
        that was look [next]
49 PET               [a h a] *
                             *withdraws pen
50      (0.9)
51 LUK  °tady vidíš°
        °here see°
52      (1.6)
53 PET  jo
        yep
54 LUK  tady právě je vyplňte [dva  jedna  a  dva &dva]
        just here fill in fiel[ds two one and two two]
                                                 &looks at paper
55 PET                        [>ta'y už toje*ta'y už to]je<
                              [>here it is here it is<]
                                          *points at screen w. pen
56 LUK  ah?
57 PET  ↑hm
58      (0.7)
59 FIL  $ jo takhle (.) a sme tady
          yeah like this (.) and we're here
        $ leans forward
60      (8.3)
61 FIL  (když to dáš víc nahlas)
        (when we turn up the volume)
62 LUK  (tak budeš potřebovat sluchátka) (.) (   )
        (then you need headphones) (.) (   )
63 PET  hm
64 FIL  (tak tam jsou stejně titulky)
        (there are subtitles anyway)
65 LUK  (no)
```

```
        (yeah)
   ((watching clip together for 62 seconds in silence))
```

APPENDIX 2: TRANSCRIPTION CONVENTIONS

Notation of speech (based on Jefferson 2004)

[ ]	overlapping talk
(.)	micro-pause
(trouble)	estimated hearing
( )	inaudible segment
(2.1)	pause measured in seconds
a::	vocal prolongation
.	final intonation
>yes<	notably faster talk
<no>	notably slower talk
par-	cut-off
↑	higher pitch
=	rapid continuation (latching)
.hh hh	inhalation and exhalation
n(h)o	laughter particle within word
exTRA	louder volume
extra	marked emphasis

Notation of bodily conduct (based on Mondada 2018)

* *	two symbols delimit descriptions (one symbol per participant) synchronised with talk
% %	
--->$	described action continues across subsequent lines until the same symbol is reached