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Recontextualizing Through Gestures

Modifying the Interactional Spaces in Hybrid Communicative Contexts

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Abstract

In today's vibrant society, digitally-mediated communication has become a natural part of our everyday life and work communication. In this study, we explore the gestures the interactants deployed in their face-to-face communication to modify their interactional spaces in a hybrid digital-physical context. The effects of these practices will be analyzed through the lens of recontextualization, which assists interactants in making meanings and reaching their communicative aims. The data were collected from six 45-minute video recordings of six groups (consisting of 4–6 undergraduate sophomores per group) engaged in task-based interactional discussions during a reading class. We have identified three

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types of gestures, performed either by hand or by fingers, that mod-
ify group members' interactional spaces in their meaning-making
process. Our discussions aim to enrich the semiotic resources that
underline the foundation of recontextualization, thereby expand-
ing its theoretical reach in the highly evolving digitally-mediated
world.

Keywords: recontextualization, hand gestures, AI-assisted
face-to-face communication

1 Introduction

It has widely been accepted that gestures accompanying speech feed into
the multimodal constitution of information. They are a sophisticated aid
to both thinking and communicating. A wide body of interdisciplinary
research has pointed to its prominent status in face-to-face communica-
tion (cf. Olza 2024). These improvised yet social-culturally embedded
gestures have been explored in relation to speech at various discourse
levels (cf. Chen & Adlophs 2023). For example, gestures reinforce the
meaning of the accompanying verbal utterances and disambiguate cer-
tain lexical items. Gestures also contribute to the transition and cohesion
across turns at talk (Belhiah 2013). Studies using conversation analysis
are informed by insights from sociolinguistics (e. g., Bucholtz and Hall
2016), cognitive linguistics (cf. Cuffari 2011; Cienki 2016, 2017) and
psycholinguistics (cf. Morett 2018) to explain how gestures both reflect
and shape interlocutors' thoughts and acts.

   In an age of tech-infused networked society, face-to-face communica-
tion inevitably get laminated and mediated by various digital interfaces.
This hybrid communicative context leads to our gestured interactions
being capable of taking place across different spaces, blurring the bound-
aries between online and offline, private and public, as well as one-on-
one and one-to-many. In this interconnected world, our gesticulations
could take on more nuanced meanings across different interactional
spaces. However, despite a burgeoning body of studies concerning the
verbally-embodied resources intertwinement in digitally afforded com-
municative context (cf. Vänttinen and Käänttä 2024), this fascinating

hybrid of gesture-com-digital communication remains relatively under-explored. To our knowledge, while large quantities of work have been done concerning pragmatic use of gestures among children (e. g., Kelly 2001; Bucciarelli et al. 2003; Guidetti 2002; Kirk et al. 2011), disabled people (cf. Baron-Cohen 1988; Goodwin 2012) or in human-computer interactions (cf. Kopp and Wachsmuth 2010), only very limited discussions pertaining to this manner of communication are conducted in the studies of developing L2 interactional competence (e. g. Balaman and Sert 2017) or computer-supported cooperative activities (e. g. Due and Toft 2021), albeit in passing.

This paper explores gesticulation in the tech-infused world, striving to enrich our understanding of multimodally constructed interpersonal meanings by exclusively examining gesticulations used in cooperative activities. Gestures examined in this study are not stereotypic hand movement that encodes a clearly recognized meaning. With the talks accompanying them, gestures under study obtain an accessible sense. How then do the gestures modify the interactional spaces in multi-layered communicative contexts and how then, are the recipients able to understand the gestures?

In what follows, the relevant literature on gestured interactions is reviewed (Section 2) to set the stage for the perspective of recontextualization (Section 3) that may offer insights into our spontaneous construction of interpersonal meaning. Data for the exploration are presented (Section 4) and analyzed (Section 5) to legitimize the new approach in a digitally supported context. In conclusion (Section 6) we propose that this new perspective on gesticulation may benefit both fields in meaning generation and comprehension.

2 Gesticulations

Studies concerning gestures in everyday use are referred to as *gesticulation*, "the motion that embodies a meaning relatable to the accompanying speech" (McNeill 2006: 299). Gesticulations have properties unlike language: they synchronize with co-expressive speech. As such they are

different from sign language, body language[1] or other embodied mimetic performance.

The relationship between speech and gesture is reciprocal – they interact with one another in order to create a precise and vivid understanding. When gestures express information redundant with speech, they contribute to successful comprehension (Goldin-Meadow & Alibali 2013).

It has been long established that gestures have referential and pragmatic functions as per the accompanying utterance (Kendon 2004). Referential functions can be realized in two ways: a) providing a representation aspect of the content of an utterance by *acting out*; and b) contributing to the propositional content of an utterance by *pointing*. The technical part of representation distinguishes *modeling*, *enactment* and *depiction*. In modeling, hands, for example, are shaped in a way to bear some relationship to the shape of the object being referred to; in enactment, hands are used to act out an actual pattern of an action being referred to; and in depiction, hands are used to sketch an object in the air.

Recognizing the gestured representations requires an understanding of the social-cultural norms from which those gestures are widely used, while contexts, of which those gestures are a part, offer a much more specific reading of a gesture *in situ*. Some gestures provide expressions parallel to the meaning of the words in the utterance, while others refine or qualify the verbally conveyed meanings. Yet in other cases, gestures can provide aspects of reference not presented at all in the verbal components.

Here, the discussion of referential functions presupposes communicative intentions that could not be understood without taking into account the interlocutors who initiate them in the first place. Gestured interaction relies heavily on cultural nuances and individuals' engagement in recognizing, interpreting and possibly responding to these actions so

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1 Body language encompasses the part of non-verbal communication whereby the speakers may send unintentional messages about themselves and thus broader in range than gesticulation (cf. Abner et al. 2015).

that effective communication of information, emotions and intentions could be realized.

It is imperative to acknowledge that any referential functions have a pragmatic aspect to it. Kendon (2004: 359), in making such a distinction, also proposes that the pragmatic aspects of gestures lie in their purposes of indicating the act speakers are engaged in, their stances towards the act and their way of structuring the discourse to make the act ostensible. Thus, when referential function is in action, the speakers are at the same time displaying their pragmatics associated with it: their attitudes, intentions, evaluations, stance and alignment, as well as their being interactive by navigating the turn-taking (Abner et al. 2015).

Other studies on how gestures function pragmatically conceive them as set of modes of bodily action to structure and understand the world. Gestures serve communication activities by aligning people and the material-perceptual-cognitive ecology of the situated world within which they interact (cf. Streeck 2006). Such alignment reveals a rich potential of gestures beyond structuring turn-taking narrative. For example, experimental studies have proved that gesture in itself is psychologically relevant and salient for the audience, and gesticulations have a direct influence on interpersonal evaluation in terms of one's competence and social influence (Maricchiolo et al. 2009), as well as effective communication of information (cf. Morret 2018). To be more specific, it can help interlocutors get the irony of an utterance and serve as metapragmatic acts (cf. Hübler 2007). It helps the speakers make predictions of the acts of both themselves and others (Wilson 2024).

In this study, we want to add that when the communicative context is laminated and a hybrid of different interactional spaces, gestures function to modify the interactional space and get on recontextualized meanings, a point we now turn to.

3 Recontextualization and interactional space

In the tech-mediatized environment, context is a dynamic unfolding process accomplished through the ongoing structuring of the talk, the

participation framework, interactional spaces and the material world. It is important to recognize that our interactional space goes beyond the physical presence of material objects. The interactions among the material as well as the social and psychological worlds of the interlocutors exert great influence on the communication dynamics. Within this multi-layered environment, our attention plays a crucial role in orienting us towards different aspects of communication, enabling certain actions and rendering others (im)possible.

In an environment that is increasingly media-rich, our attention, both as a cognitive and social construct, faces challenges. The abundance of information and stimuli across different interactional spaces can strain our cognitive capacity, posing a potential obstacle to smooth communication. As we navigate these interactional spaces, we engage in a multimodal negotiation of interpersonal meanings that orient towards a delicate balance between information consumption and cognitive processing. This negotiation involves both verbal and non-verbal elements, such as gestures, which serves as linguistic enactments of collaborative sense-making.

Gestures accompanying speech are integral to the process of tracking and interpreting emerging meanings across different interactional spaces, both for the speakers and the present others participating in the ongoing talk. This kind of reasoning is grounded in the understanding that recontextualization is a ubiquitous discursive practice, where meanings are continuously shaped and reshaped through the interplay of various contextual factors.

As Gruber (2019) has observed, recontextualization can manifest in myriad forms and serve diverse functions. One fundamental form of recontextualization is discourse representation, often achieved through direct and indirect quoting. For instance, quoting in emails can enhance coherence and provide contextual clarity to the message conveyed (Gruber 2017).

Sociopragmatic discourse analysis views recontextualization as the process of embedding one discourse element into another, during which the embedded element's meaning is frequently transformed (van Leeuwen 2008). In our multimodally constructed human world, dis-

course elements extend beyond a text-based one. Prosodies, gestures, or even material objects can be considered legitimate discourse elements. These elements, much like text, can undergo significant meaning transformations and factor into interlocutors' meaning-making process.

In the following section, empirical evidence will be presented to illustrate how gestures can enact recontextualization within conversation. The recontextualization not only sustains the ongoing activity, but also contributes to the emergence of new meanings, demonstrating the dynamic nature of communicative context. Gesticulations seen through this theoretical lens are strategic molding of situations (Weizman 2023) by way of modifying the interactional spaces.

4 Data

The corpus involves six 45-minute video recordings of six groups (six undergraduate sophomores per group) when they were conducting task-based interactional discussions in reading class. The final task for each team was a piece of news feature and the in-class discussion activities were organized in October, 2023. These recordings were done by themselves with the understanding that their discussion activities would be archived for research on AI assisted learning.

Based on the tenets of conversation analysis, a careful thorough watching of the corpus is conducted to look for segments of embodied practices whereby interlocutors rely heavily on gesticulation to express themselves. Gestures in the study are spontaneous movement of the hands and fingers.

Through the lens of recontextualization, three types of gesticulation in which hand gestures were deployed in multiparty communication in the hybrid context were isolated. These three types of cases are of analytical interest for they reflect the established dimensions of gesticulations (McNeill 1992), namely *iconicity*, *metaphoricity*, *deixis* and *beats*, but with a tinge of *space mix*.

To be more specific, they bear formal resemblance to events or objects that have already been recontextualized in various settings (Scenario a);

Metaphorically wise, they convey at a meta-level not abstract meanings, but concrete ones as if the interactional space had been shifted (Scenarios b–d); they reflect a prime effect that gesticulations beget gesticulations. That is, once an interlocutor starts using hands to talk, the co-present others would act likewise so that a specific interactional space is co-created within the on-going conversation for interlocutors to gesticulate (Scenario e).

Evidentially in each scenario, different dimensions would juxtapose with each other in the process of meaning construction. But by locating and highlighting the trajectories and functions of one dimension of gestures in specific activities, we are able to discover what resources interlocutors use to find its sense and relatedly, how such recontextualized multimodal meaning is consequential for the ongoing activities (Goodwin and Goodwin 1998). All the participants were pseudonymized and the multimodal transcription was adapted from the conventions of Mondada (2018).

5 Gestures for recontextualization in a hybrid context

The following discussion scenarios all took place in an environment where teammates sat in a half circle with their personal computers directly in their front. These teammates' physical positioning to each other was set in such a way that they could easily sense and observe each other's movements without much ado and have a clear view of their AI-assisted computers. These scenarios were categorized in relation to their different fashion of recontextualization.

5.1 Type I: Iconic gestures recontextualized

5.1.1 Scenario a. "Share it in our group chat"

The first isolated scenario occurred at the initial warm-up stage of a team discussion when the teammates were activating their individual AI assistants. It was their first time to know each other's computer configuration. Thus, the task-based discussion began with exchanges of

the choices over personal AI and its installment. The verbal transcript started when the boy in suit (C) shared his version of AI while the visual captures were the target phenomenon of gesticulation. The places of the target gestures are marked with # highlighted in grey (*sic passim*).

C: 这个 是 要 买 的 (0.6) 两 年 只 要 20块
   this be need buy (particle) two year only need 20 (unit)

   You need to pay for this. Only 20 RMB for two years.

Z: 这么 便宜 啊
   so cheap (particle)

   So cheap!

M: #发 群 里 , , , #
   send group inside

   Share it in our group chat.
   raises hands and positions in the shape of a right angle , , ,

fig # fig. 1   # fig. 2

Z: # (0.2) . . .发 群 里#, , ,#
   send group inside

   Share it in our group chat.
   $raises hands and positions in the shape of a right angle$

fig # fig. 3   # fig. 4   # fig. 5

Iconic gestures are defined as exhibiting a close formal relationship to what is semantically conveyed in speech. The target gesture here is iconic in the sense that it conveys the physical affordance of a concrete action (fig. 1): The two hands were positioned to form the shape of a right angle, resembling a common practice in primary school classrooms.

Typically, pupils in China are disciplined to fold their arms on desks while following lectures. Whenever they want to answer the teacher's questions or make a request, they need to first raise one of their folded arms to get the teacher's attention. Only when they are acknowledged can they proceed with their intended acts. Thus, this gesture indexes a power hierarchy and social distance between the interlocutors.

Interestingly, this gesture has evolved into a meme, popularized by a leading actress in China who performed it during a TV interview. The interview went viral, sparking heated discussion and the creation of meme videos on social media.[2] As a result, young people, Generation Z in particular, parody this gesture in their offline interactions to demonstrate a certain in-group identity, where the unconventional meaning is only accessible to the people 'in the know'.

In our clipped scenario, Y initiated this gesture to mitigate the face-threatening nature of her request. The request was imposing because it risked putting C under official sanctions, threatening his credibility as a student and possibly as a future employee. Additionally, the interactional space was semi-public, involving acquaintances rather than close friends. Without fully established mutual trust, there was a risk that shared secrets might become public and possibly distorted. This would increase the possibility for C to reject the request decently. Furthermore, since the discussion was being recorded, Y also had face concerns: being rejected

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2 For this video clip, please go to *https://b23.tv/XvZRSaS*.

in front of a few colleagues is already stressful, and having this rejection documented nearly permanently adds to the pressure.

The mitigation worked, as all the other members laughed (fig. 2), and C did positively respond to the request (fig. 5). Moreover, the gesture was relayed by Z (fig. 4), after a very brief interval of 10 seconds (fig. 3). Here the gesture got recontextualized not only in the sense that it is now used among social equals for pragmatic effect, i. e. mitigation and alignment, it also opens up new research avenues on identity politics and community building. The participation framework for Y's use of her gesturing hand is evidently operative when viewed through the lens of recontextualization. It allows the gesture research to reach more pragmatic meanings.

5.2 Type II: Finger-pointing for recontextualization

The second group of isolated scenarios are all finger-pointing cases functioning deictically, e. g., drawing attention, indicating direction, emphasizing a point, or assigning blame (Kita 2009). In the isolated scenarios, these functions are used to mold situations in ways that fully demonstrate the hybridity of our communicative contexts as well as the multimodality of our meaning-making process.

5.2.1 Scenario b. "We could add a link"

This episode was recorded when the task-based discussion had gone halfway, where the teammates were deciding how to present the task in its final form. The verbal transcription started when the girl on the picture left (J) made a tentative proposal and the target gesture of finger-pointing was captured when she joined the teammate (X) who accepted her proposal by making it more concrete.

J: 她 不 说 也 可 以 用 视 频 么
     she not say too may use video (particle)

     Didn't she say that video was also ok.

X: 对. 然后 我们 也 学 她们. 我们 在 后面 加 一个digital resources
yes then we also learn them we at back add a digital resources

Yes. Then we can follow suit. Adding a section of digital resources at the end.

J: #我们 加 个 链接 在 上面=
we add a link at top

We could add a link to our work
points in the air

X: =补充 什么 文献#
supplement what literature

Supplement some literature#
+ points at the airpad +

fig # fig. 6   # fig. 7

Deictic pointing involves locating entities and actions in space, which can be either abstract or concrete. In this instance, J points to the idea conjured up at the moment, i. e., adding a link to their final task product. Her deictic gesture (fig. 6) animates the imagined entity of a final product, enabling concrete editing actions, such as supplementing additional information here, to be conducted and visible to all the other members. This established visual focus in space could have been directly aligned with the task being executed on their digital devices, just like what the member X had been pointing at – a team member's digital pad where their group writing had been drafted (fig. 7). However, J's finger-pointing gesture transitions their interactions from a digitally-assisted context

to a more open space. This shift allows for a shared view that could be more conveniently structured and regarded collectively.

Recontextualizing the team product in this way seems to transform it from a two-dimensional to a three-dimensional. Once a shared visual focus is established, what is seen together can be organized by the motions of fingers and hands projecting lines, vectors, points, indicating how the visible elements should be perceived. The interactional space, modified in such a manner, invites more conjured-up ideas from different perspectives (data not shown). When gestures are used to recontextualize an idea or entity, they open up a space for the collective sharing of sights.

5.2.2 Scenario c. "Hyphen"

Gestures for intensification or mitigation of the expressed content are pragmatic by nature as they showcase the speakers' stances in action. The isolated episode is a typical case in point. It also recorded the initial stage of a task-based discussion, where one of the teammates (E) just started an interaction with her AI assistance. The transcription documented her sharing of the result and the target gesture was captured when another teammate (Y) started to interpret the AI outcome.

E: 我 真的 让AI 起了 个 标题. AI说 教育的 力量.
    I seriously let AI make a title AI says educational power
    提升 国家 软实力 的 关键 因素#
    raise national soft power of key element

    I seriously ask AI to give us a title. AI says "The power of education. The key to enhancing a nation's soft power".
    palm covers her smiling

Y: +gazes at E+

fig: # fig. 8

Y: 教育的 力量， #破折号#
    educational power hyphen

    The power of education. Hyphen.
    +points in the air and draws a horizontal line ---+palm covers her smile+

E: * loose her cover ---turns to Y and smiles---turns back to look at her digital pad with palm covering her smile*
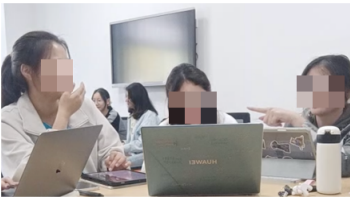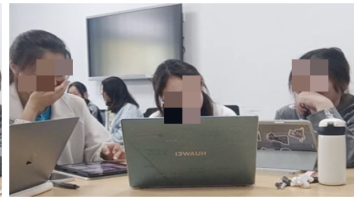
fig: # fig. 9   # fig. 10

The use of extended index fingers combined with continuous movement along a well-defined path is a form of action used in contexts where gestures serve to emphasize or illustrate specific points. This technique, known as the 'outline' gesture, is understood through our shared knowledge of its use in interaction with the reference to shape the signifier made in the verbal component.

   A pertinent aspect of the non-verbal communication here is the contextual factors that prompt Y to gesticulate a punctuation mark in the

air. E's giggling reflects her evaluative stance towards AI's response to her instruction, which she found grandiosely familiar (fig. 8).[3]

This interpretation is supported by Y's gesture indicating that such a dual title was usually presented with a hyphen in between. So when Y extended her index finger and gesticulated the hyphen in the air (fig. 9), she was recontextualizing her gesture to achieve different interpersonal effects: Pragmatically, she was intensifying the referent in her accompanying utterance, highlighting her shared understanding of E's evaluation; meta-pragmatically, akin to scenario b, she shifted a two-dimensional text-based context into a three-dimension interactional space where the imagined news feature title could be vividly perceived by all teammates through their own mind's eye.

Such an awakening of the new interactional space, although possible through words alone, is enhanced by Y's finger-pointing gesture. The gesture not only intensifies the meaning but also demonstrates Y's active engagement in and full attentiveness to the on-going conversation. This contrast becomes evident when considering the girl sitting between E and Y, who was preoccupied with her AI assistant before contributing her ideas (data not shown).

Thus, the gesture displaying a hyphen recontextualizes a serious message, infusing an entertaining vibe among the group members. These interpersonal effects are crucial as they would increase group morale and contribute to task accomplishment.

5.2.3 Scenario d. "I even demand it not to write too much"

A typical beat is "a simple flick of the hand or the fingers up and down, or back and forth" (McNeill 1992: 15). Beats may showcase the rhythmicity of the speech but also signal the temporal locus of what the speaker feels important in the context. These dimensions may be present in a single gesture in different combinations. This episode of 'beats' was recorded when one teammate (C) joined the others in sharing their approaches in having their term paper done. The verbal transcription started when

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3 This reading is from a culture-insider's perspective.

C started her 'even-worse' confession in response to another member's sharing of a convenient way of reviewing literature for their term paper.

C: 我 懒 得 拼 了 (0.2) 拼 都 懒 得 拼#
　　I lazy (particle) collage (particle) collage even lazy (particle) collage.

　　I am too lazy to do the cut-and-paste. I am so lazy that I even don't want to do it.
　　而且我 还 限制 它#不 要 多 写 字#
　　and I even constrain it no want more write character
　　800 字 左 右 差不多 了#
　　800 character left right almost (particle)

　　And I even demand it not to write too much. About 800 words would be enough.
　　*fingers curled up over the nose---> points to the air and beats --->
　　fingers curled up covering her smiling*

fig.　fig 11#　　　　fig 12#　　　　fig 13#　　　　fig 14#

In this scenario, C's use of beat gestures started when she switched to discussing her not-so-honorable business with her AI assistant, following a self-derogatory remark of her laziness. This little hiccup in the task-based discussion, coupled with her smiling embarrassment (fig. 11 & 14) was evidently well-received by the group. Consequently, C divulged her secret in a rather gossipy manner. Her beats synchronized with her words (fig. 12), subtly pointing at the target (fig. 13) – her AI assistants – as if this diligent AI occupied a participation role in their social life (Krummheuer 2015).

From the perspective of recontextualization, C's AI assistant was introduced into a particular communicative setting: A self-derogatory

narrative. C's beat gestures effectively rendered the AI assistant a third-party identity within the conversation. As such these gestures acquired a metaphorical dimension, embodying concrete attributes associated with the assistant's performance.

The positive interpersonal effects of this recontextualization are evident from the vibrant laughter that ensued. By recontextualizing the AI assistant through beat gestures, C not only lightened the atmosphere, but also facilitated a shared understanding and connection among the teammates. This dynamic underscores the powerful role of recontextualization in transforming abstract entities into relatable, tangible elements within social interactions. Group cohesion and engagement are thereby enhanced.

5.3 Type III: Gesture interaction

Gestures can function interactively in their own right even though they are representational, i. e., communicating the topic of the utterance. Scenario e displays how gesture interaction can be deictic, descriptive and metaphorical at the same time, showcasing that gestures having different meaning dimensions (rather than discrete categories) often blend together (Kendon 2004).

5.3.1 Scenario e. Gesturing for concepts

The isolated scenario was taken near the end of the group discussion when the members finally decided upon how to present their research and arguments into a well-structured whole. What is interesting about this piece of group interaction is the spontaneous gesture talk among the teammates that somehow co-creates a space where they can get their abstract concepts across.

01 H: 然后, (.) 然后你 再 具体 然后你 在 最后 (0.9)
　　　then then you again specific then you at last

02   最后 就 是 说 (.) 从 结尾 的 时候 (.) 然后 就. 是说 (0.2)
        at last (particle) be say from end (particle) time. Then (particle) be
        say

03   中华 文化 怎么#使 人类 文化的 发展
        Chinese culture how make human cultural development

        Then, then you go specific. Then you at the end, at the end, that
        is to say, from the end, then, that is to say, how Chinese culture
        contributes to the human cultural development.
        *fingers move along with arm extending forward-->

04 H: 然后 就 进 一步 可以 推出-
        then (particle) forward one step can raise

        Then (that) lead to -

05 Z: 人类 文明?
        human civilization

        Human civilization?

fig.   fig. 15#

06 C: 推#[动 文明
        push move civilization

        To develop civilization
        * right hand moves forward--> right hand moves sideways to the
        members*

fig.   fig. 16#

07 M: [就 是-
       (particle) be-

       That is -#

fig.   fig. 17#

08 H: [你 可以 就=
       you can (particle)=

       You then can

09 M: =从*#[大 到 小，再 从 小 到 大#然后再 说 一下
       from big to small again from small to big then again say a bit

       From the big to the small, then from the small to the big, then say
       something
       *left arm moves upward and forward and backward with loosely
       extended index finger-->

fig   # fig. 18   # fig. 19

10 Z: [嗯 嗯 嗯
       um um um

       Ummmm

11 C: [对 对 对 对 对
       right right right right

       Yes yes yes yes.

12 H: 嗯 嗯=
       um um

       Umm.

13 C: =可以 可以h
       may may

       Ok ok.

14 M: *升 华 一 下 =#
       sublimate a bit

       To sublimate a bit.
       *Right hand moves upward and downward with index finger
       loosely extended

15 C: #升华
       Subliminate

       To subliminate
       *arms upward --->

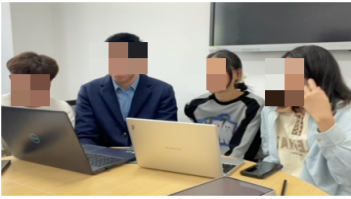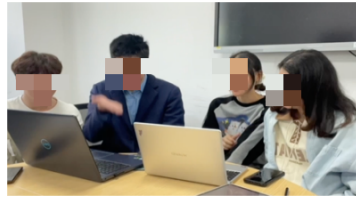fig   # fig. 20   # fig. 21

The co-creation of the interactional space starts with the boy H's 'broken'
Chinese – evidently, he was struggling to verbalize his ideas (lines 01–04)
and he instinctively resorted to gestures to convey his thoughts to the
other teammates. Although the video shows no particular teammates
directly responding to H's action (as they seemed lost in thought, look-
ing at the ceiling or the computers), his strategy of allowing gestures
to gradually shape his thoughts contributed to the progression of the
interaction.

H shifted from an observer viewpoint, describing how he perceived
their final product should be structured, to a character viewpoint when
he encountered difficulty in describing the process. His gaze towards his
members (fig. 15) coupled with his suspended hand in the air expecting
a rejoinder, proved effective. Z attempted to finish H's line, while C
promoted H's ideas through both words and gestures.

A comparison of H's hand gesture and that of C's reveals how their
themes were distinctively shaped and cognitively developed: H used
'walking' fingers to try to get across his organizing scheme for their
task (fig. 15). Somehow his team interpreted the idea as pertaining to
the subtheme of human civilization. Building on Z's contribution, C
gesticulated his idea of 'developing' in a firm and determined manner,
directly pointing to a location in space.

When C's hand met H's fingers halfway (fig. 16), he turned to include
the other members, making the interactional space more visible and his
invitation for feedback more sincere (fig. 17). Right on cue, M started
verbalizing her interpretation of the previous members' contributions
and joined their gesticulation.

The trajectory of her gestures (moving upward and downward, fig. 18 and fig. 19) depicting properties of an action clearly showcases her understanding of H's intention – to demonstrate how their arguments should be organized, rather than the arguments *per se*. Therefore, she facilitated task progression by reverting to H's original viewpoints. These efforts were exchanged in an interactional space where both their verbal and gestural exchanges co-constructed meanings.

M's words and gestures resulted in a unanimous group agreement (l. 10–13) and the exchange concluded with M gesticulating the strength of the proposed structuring, which was reinforced by C both verbally and through gestures (fig. 20 and fig. 21). Although their hand shapes differed, both C and M used an upward trajectory to convey the abstract concept of 'sublimation'.

This scenario of gesture talk is metaphorical in the sense that the members' abstract ideas were presented as if they had form and occupied space, allowing them to be visually manipulated to suit the needs of ongoing conversation. Their actions preserved the idea of gesticulation in visible form and contribute to its prominence in the utterance. Gesticulations in the process of recontextualizing each other's ideas help consolidate fleeting ideas, making them more tangible and comprehensible within the emerging interactional space.

6 Discussion and Conclusion

Previous studies have highlighted that hand gestures contribute to the contextual understanding of speech (Cufarri 2011), for example, by making the illocutionary force more accessible (Kelly et al. 1999). This study extends these findings by investigating how gestures function in the process of recontextualization. The data were gathered in a hybrid communicative context where language learners were encouraged to involve their AI assistants in their task-based group discussions.

In digitally-supported educational contexts, learners are observed to maintain group cohesiveness through talks accompanied by gaze, body movements and touch. However, digital affordances are recruited only at

the level of word spelling (cf. Vänttinen and Kääntä 2024). This study reveals that digital affordances, AI in particular, can take on a participatory status in interactional spaces that emerged through recontextualization. In this process gesticulations operate within Gricean principle of cooperation to make the speech sufficiently informative, truthful and relevant to the ongoing theme in a succinct manner (Enfiled et al. 2007).

Three types of gesticulations were observed from the multimodal data collected that are less anticipated but relative to their utterance affiliates. They constitute interactionally relevant and visibly displayed actions, highlighting what is pertinent for the participants in the interactions:

1. Type I gesticulations indicate that gestures may serve as in-group identity markers that are emblematic within specific socio-cultural communities at certain times. They are not universally accessible (cf. Payrató and Clemente 2020 for universally accessible gestures). Even if they stay, they can acquire specific pragmatic meanings through idiosyncratic use. But meta-pragmatically, they mark subcultural practices. Gestural actions can only be given a precise interpretation when taken in conjunction with the utterances in which they are embedded and the socio-cultural context out of which they are developed.

2. Type 2 gesticulations further demonstrate that gesture repertoire is not as highly codified as language, making it feasible to observe individual gestures for their functions and forms (Hübler 2007). While finger pointing is typically meant to direct interlocutors' attention to concrete entities in the immediate surrounding, in the process of recontextualization, they remain effective in making reference to abstract ideas or absent entities across different interactional spaces.

3. Type 3 gesticulations showcase that gestures, when enacted, are stylized abstractions. When recontextualized, they assist interlocutors in constructing and conveying their thoughts so that current undertakings can progress to the desired outcome. Salient features of an action complex become interlocutors' *attentional focus* (Kidwell and Zimmerman 2007), which can be used to structure the

local environment (a process of recontextualization), as well as various social actions.

Gestures, as embodied resources for interacting and sensing the world in an intersubjective manner, demonstrate our reflexive awareness of contextual configurations. We use gestures not only to animate and enrich our verbal account (Kendon 2004), but also as semiotic resources to create interactional spaces where more nuanced meanings can be oriented to. In an increasingly hybrid communicative context, gestures and other multimodal resources are integral to our strategy for modeling situations. Discourse scholars and pragmatists need to take these factors into account when constantly updating current mainstream theoretical constructs.

This study underscores the importance of recognizing gestures as dynamic tools in the recontextualization process. By understanding how gestures function in modifying interactional spaces, we can better appreciate their role in facilitating communication and fostering group cohesion in both traditional and digitally-supported educational environments. The findings call for more multimodally-oriented studies to explore the theoretical reach of recontextualization in understanding our highly mediated communication.

Acknowledgments

Transcript conventions

#	The figures' position within the turn
* *	Descriptions of embodied actions delimited in between
+ +	Descriptions of embodied actions delimited in between for a different person within a single transcription

*--->	The action described continues across subsequent lines
---->*	until the same symbol is reached.
(0.2)	Intervals within or between talk (time in parentheses measured in tenths of a second)
.	A falling intonation contour, not necessarily an assertion
.....	Action preparation
„„„	Action retraction
=	No discernible interval between turns
-	Abrupt cut off of sound
?	Fully rising intonation
[ ]	Overlapping talk

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