



Human presencing: an alternative perspective on human embodiment and its implications for technology

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Abstract

Human presencing explores how people's past encounters with others shape their present actions. In this paper, I present an alternative perspective on human embodiment in which the re-evoking of the absent can be traced to the intricate interplay of bodily dynamics. By situating the phenomenon within distributed, embodied, and dialogic approaches to language and cognition, I am overcoming the theoretical and methodological challenges involved in perceiving and acting upon what is not perceptually present. In a case study, I present strong and weak dimensions of human presencing. In the former, a person uses their body in distinct ways and shapes their immediate ecology to make others present to them. In contrast, in the latter, a person's past encounter with others powerfully shapes the projections they make onto written digital inscriptions. These findings have implications for how people act in online learning environments and how human activity shapes the machines we use every day. In this way, the paper highlights the complexity of a person as a social being and allows for different approaches to human embodiment in technology.

Keywords Human presencing · Linguaging · Embodiment · Human temporality · Systemic cognition

1 Introduction

The voices of absent people can have incredible control over us. Imagine being a child and taking a cookie from the forbidden cookie jar. In those moments of solitude, you are likely to hear the voice of a physically absent caretaker scolding you. As a result, you either abandon your plan and leave the cookie in the jar, or you take the cookie and go against your caretakers' wishes. In both scenarios, the voices of your absent caretakers have a distinct power over your actions.

Distinct past encounters with others can have long-lasting effects on one's actions, which can be described as "invisible but nonetheless felt 'real presences' (Steiner 1989)" (Shotter 2003: 359). Their agentic influences determine how people engage in and with aspects of the world. But how do these presences of absent people (such as a mother's voice) emerge and affect people's daily activities? And how can they possibly be traced? In this paper, I refer to the phenomenon of

re-evoking one's past encounters with other people as *human presencing*. I present the phenomenon as a specific aspect of human bodily activity in which I understand this re-evoking to be the making *present* of an absent other. In doing so, I emphasize how people's past engagements with others uniquely shape how they act. Using a person-centred systemic ethnographic perspective, I present strong and weak cases of human presencing. The former, I argue, shows how a person uses their body in visible ways to bring about past encounters with others (e.g., through envoicing or mimicry) in a monological-like interview setting. In contrast, the presented weaker case of human presencing hints at how people project their past experiences of engaging with others in text messages.

Taking into account the way in which people draw on past encounters with other people opens up new ways of approaching a person's engagement in a socio-technological environment. Human presencing sheds light on the sociopsychological phenomenon of social presence, which refers to the subjective experience of perceiving someone or something as *real* in a distance online environment (e.g., Kreijns et al. 2021). While scholars tend to approach what Biocca and colleagues (2003) loosely describe as the "sense of being with others" at a distance from a disembodied perspective,

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human presencing allows one to explore *how* the subjective experience of perceiving someone or something that is not perceptually present as real emerges. Engaging with others, for example, in an online environment is one aspect of human engagement with technology. Another can be traced to the ‘inside’ of technology, namely, data activity (Muller et al. 2019). Machines are often treated mostly neutral and objective (Gillespie 2014; Svensson 2022). Any account of human influence on data seems to be neglected (Muller et al. 2019). Such a logical understanding of machines emerges from a deeply entrenched Cartesian and mechanistic view of the world, in which ideas, things, and knowledge are treated as given and pre-existing rather than emerging from human living relations (Shotter 2003). Thus, Shotter (2003) argues that it is necessary “[...] to move out of a mechanical world of (geometric) ‘things’ – consisting in ‘objects’ in motion characterized in shapes and forms – and into a world of meanings experienced by us only in the course of our step-by-step unfolding, living relations to the others around us” (p. 3). He highlights the role of the living body and the dialogical relations people have with each other, and how “our spontaneously responsive, embodied nature” (p. 4) not only shapes our behavior but also how people engage with and, more important, shape technology. Pointing to the role of programmers in digital technologies, Svensson (2022) emphasizes that becoming “increasingly dependent on algorithms, automated systems, and digital technologies” also means becoming “dependent on the programmers’ imaginations that lie behind the technologies we use” (p. 22). Such imaginations rely not only on how programmers create or design data and thereby imbue data with their own interpretations and intentions (Muller et al. 2019) but also on how data workers incorporate clients’ interpretations (as in the case of data annotation for image recognition software) (see Miceli et al. 2020).

Often, scholars approach both cases of human engagement with technology through disembodied views on cognition and language. However, a shift in focus from traditional assumptions in cognition, which reduce cognitive processes to the processing of input (perception) and output (action), and thus separate brain activities from the environment (e.g., Fodor 1975), to embodied or so-called anti-representational approaches to cognition,¹ gives rise to the understanding that ‘mental activities’ are not solely confined to the brain.

¹ Radical embodied cognitive science (RECS) proposes a contrary view to representationalists’ assumptions in the cognitive sciences (e.g., Fodor and Pylyshyn 1988). While mental representations are thought to be mental processes that allow for the encoding of aspects of an external world, RECS traces cognition not to internal symbol processing but to organism-environment coupling. Drawing on key ideas from ecological psychology (Gibson 1979) that trace direct perception to an organism’s activity, RECS assigns cognition to an organism’s actions rather than stable mental representations.

Rather, cognition is distributed across the brain, body, and environment (e.g., Hutchins 2006; Tribble and Sutton 2011; Steffensen 2013; Cowley 2011a, b). How people think, perceive, and act can not be separated from their embedding in a socio-material world (Gahrn-Andersen 2019b). Human presencing emphasizes how humans, as social beings, become entangled with complex past encounters with others and how their ongoing engagement with others ultimately shapes their being. The phenomenon of human presencing is, therefore, theoretically and methodologically deeply embedded in distributed (e.g., Hollan et al. 2000) and embodied (Chemero 2009) approaches to cognition. These approaches stress people’s active role in bringing about aspects of their lived experience as they coordinate in and with their immediate environment.

The paper introduces the phenomenon of human presencing as an aspect of human embodiment and explains how the re-evoking of past encounters with others has significant implications for human perception, action, and thought. This perspective allows for alternative views on human embodiment in technology. In section two, I point to two different aspects of human engagement in technology that depend highly on a person’s re-evoking of their past encounters with others. These occurrences depend to a large extent on verbal activity. In section three, I argue that the languaging perspective, which treats language as human activity rather than an autonomous system used for communication (Cowley 2019), precedes human presencing. Treating language as activity emphasizes a person’s ecological and sociocultural embedding. Thus, languaging is not only embodied but also dialogical (i.e., relying on people’s engagement with others), multiscale (i.e., ranging from fast scales of bodily real-time engagement to slower scales of sociocultural embedding), and ecological (i.e., reacting to aspects of people’s environment). Human presencing emerges out of this interplay of dialogicality, multiscale, and embodiment in two ways: one, a person engages in the world through bodily dialogical coordination with other people (this grounds languaging, knowing, and thinking), and two, in human presencing a person draws on the interplay of bodily dynamics to re-evolve such past encounters. The focus should be on the ways in which bodily activity, engagement with others, and drawing on one’s own history give rise to human presencing.

In section four, I turn the theoretical implications to human presencing as I point out key aspects from the processual philosophies of Henri Lefebvre (2014/1992) and Martin Heidegger (2010). I conceptualize human presencing as an essential part of human activity, drawing on Lefebvre’s distinction between “present” and “presence” and Heidegger’s notion of de-distancing. In section five, I discuss the plurality of a person and how they are linked to aspects of the world by linking Heideggerian philosophy to systemic

cognition (Cowley and Gahrn-Andersen 2023). With attention given to a human cognitive agent, the view enables one to explore how people actively engage in systemic structures. I argue that a systemic view illuminates how a person acts from a distinct spatio-temporal systemic dimension when re-evoking an absent other. When engaging in human presencing, a person links past with present circumstances as they draw on the systemic relations of a distinct social system in which they are embedded. In section six, I show a case study of a student in an interview situation who began to re-evolve the presence of her absent group members as she drew on past events in the classroom through the use of her own body. The study includes both strong and weak cases of human presencing. In section seven, I characterize how human presencing can be understood as the re-evoking of absent others.

2 Two cases of human engagement in technology

Before discussing the theoretical framing of human presencing, I briefly refer to two cases of human engagement in technology. These cases are highly dependent on a person's past interactions with other people. As this paper focuses on how a person's past engagements with other people shape their ongoing actions and perception, human presencing allows for an exploration of how people actively engage in an online learning environment (Kreijns et al. 2021) and the role of the other people in today's AI technology (Miceli et al. 2020; Miceli & Posada 2022).

2.1 Social Presencing: how a sense of being with others emerges

Studies on how people create a sense of being with another (Biocca et al. 2003) in primarily text-based socio-technological environments, especially in an online learning context, have received considerable attention (Kreijns et al. 2011; Weidlich and Bastiaens 2017; Weidlich et al. 2021). Short and colleagues first identified the concept in 1976 as “the degree of salience of the other person in communication and the consequent salience of the interpersonal relationships” (p. 65) (Short et al. 1976). Concerned with the, at the time, upcoming telecommunication technologies, they determined how such media afford a sense of engaging with another person at a distance (Kreijns et al. 2014; Kreijns et al. 2021).

Since the 1990s (Gunawardena 1995), scholars have used social presence to assess how people in primarily text-based online learning environments build social interaction, which leads to a successful learning outcome

(e.g., Weidlich and Bastiaens 2017; Weidlich et al. 2021). Students have to overcome the challenge of being unable to react to and draw from “socio-emotional cues” (Weidlich and Bastiaens 2017). In this vein, Gooch and Watts (2014) assign social presence to “technologically mediated personal relationships as something constructed in the mind of an individual out of the representations the other has crafted with the medium” (p. 509). According to the authors, a person tends to “evoke a sense of themselves” (ibid). Similarly, Weidlich and colleagues (2021) emphasize how individual differences greatly determine how a person perceives the other as ‘being present’. They focus on the situated aspect of constructing social presence in an online environment, while acknowledging a person's personality. Assigning the emergence of social presence to impression formation, Weidlich and Bastiaens highlight the importance of social interaction in a technological environment as people rely on a “sense of face-to-face conversation”. In order for social presence to be effective, the learning environment must provide a particular level of sociability that simultaneously reinforces the sense of belonging to an online group, which Weidlich and Bastiaens (2017) refer to as social space. In online learning, the scholarly focus falls on how a perceived ‘realness’ of a physically absent other in a mediated environment allows for a successful online interaction (Kreijns et al. 2021). Consequently, this sociopsychological perspective on social presence gives attention to situated online interaction and how the online environment affords such realness. In this paper, I apply a more radical embodied approach to not only outline a person's report about their experience but also to observe in more detail how a person actively engages in an online environment. Attention falls on the complexity of personhood, which I trace to a person's role in a wider social system (§ 5). AI turns to the emergence of such systemic structures through the use of a person-oriented systemic ethnography (§ 6) as I investigate in detail. How a person draws on past events to inform present events in their immediate environment. Rather than treating a learner as an individual, one must account for how their engagement with others in an online environment unfolds over time.

2.2 Data annotation as human activity

The theory of social presence focuses on human engagement with technology. Due to the widespread popularity of large language models (e.g., OpenAi 2023) attention must also be given to human activity *in* technology. Like drones, such models appear autonomous (Cowley and Gahrn-Andersen 2021), which leads to an assigned agency to a machine. This not only has crucial effects on how people engage with machines but also on how they conceive of

their societal influence (Peres et al. 2023). Crawford (2021), therefore, unveils the underlying components that constitute AI technology: These range from earthly resources to human labor sourced training data, and underlying power relations. Crawford (2021) breaks with common conceptions of agency and autonomy as she reminds her readers that “[m] any forms of work are shrouded in the term “artificial intelligence,” hiding the facts that people are often performing rote tasks to shore up the impressions that machines can do the work” (p. 57). More attention must, therefore, be given to the people who shape the system (Dzieza 2023).² While more can and needs to be said on this matter, the paper present first ideas about how the notion of human presencing can invite us to rethink human activity in AI technology. In doing so, I turn to Miceli et al. (2020) impressive research on data annotation in the industry. The authors conducted longitudinal fieldwork at two annotation companies and observed how data workers assign meaning to image data through the distinct practice of labelling. They show, in the particular case of image recognition AI systems, how data work is human activity (Muller et al. 2019). Data annotation is a unique sense-making process that involves multiple human actors and iterative decision-making processes. Thus, contrary to the popular notion of a machine's neutrality and objectivity, AI systems are imbued with human biases and judgments (Bender et al. 2021). In order to function well and, most importantly, for a particular (mostly Western) audience, AI systems rely on training data. The hype around speech-enabled AI systems in particular has led people to attribute the ability to understand and make sense to a machine (Bender and Koller 2020). Because they are trained on a massive amount of written data, i.e., on forms, Bender and Koller (2020) argue that such understanding processes cannot be generated by the system itself. Rather, much more attention needs to be paid to the meaning-making processes of annotators, which, as Miceli et al. (2020) fieldwork shows, take place in teams. Because annotators and clients come from different cultural backgrounds, a team leader must successfully communicate the client's ideas. Through direct physical engagement and online interactions, team leaders instruct workers by giving specific instructions and answering questions. In addition, team leaders monitor and review labels and annotated images. Although annotating takes place in teams consisting of a project manager, team leader, annotators and reviewers, the client's imaginations dominate the labeling processes. Labelling is an active meaning-making process which relies on the active past encounters with other people. Consequently annotators are often unaware of the intended use of the labelled data as they rely on their direct engagement with team leads and project managers who need

to “ensure the uniformity of the labels through the standardization of workers’ subjectivities” (Miceli et al. 2020: 11). Rather than orienting to the future purposes of the data at hand, annotators rely on past encounters from briefing sessions and engagements with the team in online environments, or, in other words on direct engagement with others. In another case, Miceli et al. (2020) show how the client's wishes are omnipresent for the team and the annotating process. Thus, imagining the client and their expectations significantly shapes the team's actions. While the annotators rely on past engagements with team leads, team leads and project managers in turn rely on client meetings. Building on Bourdieu's theory of symbolic power, Miceli and colleagues bring to the fore how, in data annotation, not the decision-making processes of the annotators determine the structure of distinct AI systems (in this case, image recognition systems) but the social reality of the client. Annotators and project leads do not necessarily focus solely on data but follow a client's wishes. This raises the question of which social reality has more power within such systems. Thus, when engaging with AI systems, whether advanced chatbots or image recognition software, one encounters not only a programmer's imagination (Svensson 2022) but also a company's preferred worldview. While not taking on a cognitive view, Miceli et al. (2020) detailed fieldwork, however, brings to the fore how people in data work rely on their past engagement with others and how their living and dialogical relations determine the structure of an AI system.

3 Linguaging: language as human activity

People's engagement with others occurs mostly through verbal human activity – we react to what the other has ‘said,’ and most importantly, *how* they have said it. In orthodox approaches to language, such engagements rely on the encoding and decoding of words within a homogenous language system (Saussure 1916/1959). In Western traditions of linguistics, the conception of language as an autonomous a priori system separated language from people. While a formalized perspective on language (Hauser et al. 2002) may be useful for creating speaking machines, it cannot fully account for how people *do* language. The metaphor of language as a code has greatly influenced how people perceive language – as a linguistic code used between sender and receiver to communicate (Kravchenko 2007; Love 2004). In separating linguistic activity from human practices, ideas about language are reduced to the arbitrary relation between form and meaning embedded in the written word. Such written language bias (Linell 2005) has the effect that people treat “[l]anguage as structured sets of forms, used to represent things in the world” (p.4). Understanding language in the form of the written word fosters the

² In this article, the author lays out in detail the human labor process that makes it possible for LLMs to simulate dialogue.

idea that reality exists outside of people. Such views play nowadays a crucial role in the ongoing discussions about whether large language models (LLMs) can understand *meaning* (see Bender and Koller 2020) and “hallucinate” (e.g., Mündler et al. 2023). Since LLMs are trained on a massive amounts of data scraped from the internet, meaning that when engaging with LLMs, one primarily engages with the written word (Durt et al. 2023). Durt and colleagues (2023) make a valuable point in emphasizing that the ‘meaning’ emerging from the written word must be linked to users of such systems. Hence, it is crucial to consider how people project onto written digital inscriptions. The phenomenon of human presencing powerfully illustrates how people engage in such projecting. In Sect. 7, I will argue in more detail how human presencing informs embodying of the disembodied word in AI systems.

Linking language to human practices while disregarding the written word as a stable entity leads to constructivist approaches to language (Imoto 2015; Kravchenko 2007; Maturana 1988). While Bender and Koller (2020) assign understanding to communicative intents and regard those as being “about something that is *outside of language*” and “grounded in the real world the speaker and listener inhabit together” (p. 5187), constructivist approaches focus, first and foremost, on an observer as a living system (Kravchenko 2022; Maturana 1988). In Maturana’s (1988) words, “[w]e human beings operate as observers, that is, we make distinctions in language” (p. 26). Against rationalist assumptions that in language, people use denotations or connotations for “entities that exist independently of us,” people act upon their own experiences of observing. Thus, our experience of talking, observing, or hearing - or, as Maturana calls it, “our praxis of living” (p. 27)—precedes the descriptions or explanations people give to their experience. Only when another observer accepts one’s description of their experience do they bring forth a certain reality. Referring to this concept as “objectivity-in-parenthesis,” Maturana shows how reality cannot occur outside of people. The perspective enables one to investigate how people *construct their socio-material realities through linguistic activity*. Hence, language – or languaging – must be treated as coordinative activity as people engage with other people and other aspects in their immediate environment (Cowley 2019). Maturana’s biological view traces language to a human living being’s coordination with others in a “shared physical context” (Kravchenko 2007:652). However, he does not account for actual human bodily activity.

In contrast, Cowley (e.g., 2014) and Thibault (2011) place languaging in human activity. Therefore, the shift from information technology-based metaphors to metaphors of movement and becoming (see Thibault 2021) recognizes the actual doings of human living beings. Thibault (2011) pursues “[...] to develop the view of languaging as a form

of action that enables us to take care of the world we live in and to perform concrete ecological work in concert with others by drawing on and orchestrating familiar cultural patterns and regularities that have normative value and thus the capacity normatively to affect experience.” (p.11). Thibault’s socioecological view shows how one must treat language, first, as embodied activity and, second, as *multiscalar* and dialogical. In light of the aforementioned anti-individualist approach to cognition, the languaging perspective emerges from distributed views (e.g., Blair and Cowley 2003; Cowley 2011a, b): Language spreads across the brain, body, and a sociocultural world. By treating language not as code but as a first-order human activity opens up not an internal and disclosed but heterogeneous phenomenon (Thibault 2011). Once one places language in human actions, one needs to shift focus to the interplay of various spatio-temporal scales that span from the pico-dynamics of bodily engagement to slower temporal scales of a person’s cultural embedding. Languaging brings to the fore the bodily dynamics of real-time human activity “that are constructed by coacting agents” (Thibault 2011: 211). Thus, people do not *use* a homogeneous language system but engage in a ‘praxis of living’ through language. Languaging plays out through changes and events happening on the pico-scale (less than 200 ms) and micro-scale (up to 500 ms) of real-time bodily dynamics (Thibault 2011). In Sect. 6, I show in detail how human presencing, too, emerges from the interplay of such pico- and micro-modulations.

As one cannot localize language on one particular scale, multiscalarity becomes a significant characteristic of languaging: It plays out on, among others, autobiographical, sociocultural, and evolutionary scales. In integrational linguistics, therefore language must first be understood as linguistic activity (first-order languaging) and second as a second-order construct (that is, in terms of its grammar, syntax, semantics, etc.) (Love 2004, 2017). In Cowley’s words (2019), “[I]anguaging links bodily coordination with socially derived experience” (p. 2). As people coordinate, they draw on physical events: they react to changes in vocal dynamics, body posture, facial expressions, or gaze of their interlocutor (Thibault 2011). Ranging across multiple timescales, people, as they coordinate with others or things in the world, draw on and bring about wider and narrower past influences. Cowley and Steffensen (2015) argue that “people connect the impersonal to lived experiences in narratives, as they draw on autobiography and enact cultural practices” (p. 474). As people engage in dialogical bodily coordination, they draw on and bring in their own temporal experiences, ranging from autobiographical experiences to wider, entrenched, slower sociocultural scales. When using an ecological view that ascribes wordings not to be arbitrary forms tucked into a person’s skull but real-time bodily activity, one cannot

dismiss the role of human lived temporality and how people continuously bring about what is absent.

People are sensible and sensitive human beings (Abram 2017). Therefore, they are prone to react to the pico-dynamics of bodily actions of their interlocutor (Blair and Cowley 2003; Thibault 2011). This dialogical aspect grounds languaging. A person's actions must be understood as responses to and interrelations with other people's actions (Linell 2009). Responding to these real-time events of utterance activity is essential to human becoming and grounds human presencing. For Blair and Cowley (2003), "what human bodies and voices do *together* affect how we conceptualize our encultured worlds" and is microcognitive - it induces *change* in a person (p. 132). Through languaging, people constantly draw on past engagements to bring forth future actions. The multiscale aspect of language illuminates how people incorporate and build on the movements of others as they continuously integrate slower temporal scales that allow them to hear utterance-activity as similar patterns³ (Cowley 2011b; van den Herik 2017). Thus, from the languaging perspective, people do not 'use' words; they draw on world-side events and happenings (Cowley 2011b). Acknowledging linguistic embodiment (Cowley 2014) gives ways to investigate human presencing, moving away from an object-like approach to language.

Languaging, and consequently human presencing, are rooted in bodily dialogical coordination. Given language's dialogical and multiscale nature, one can explore how our past coordinative activities with others are preserved. As people coordinate with others, they constantly re-incorporate the other's actions into their own. Gahrn-Andersen (2019a, b) observes how interaction between children and caregivers grounds socialization. Maturana's idea of recursivity is central to the phenomenon of human presencing. One must ask how our situated engagement with others is 'retained' in a person. Human agents constantly re-incorporate past coordination with others as they construct and incorporate the actions of others (Maturana 1988). People continuously integrate past observations. Similarly, for Raimondi (2019), recursive coordination unfolds over even slower temporal scales as brain evolution and human language evolved through recursive coordination spread across generations and lineages. Both authors illustrate the recursive incorporation of the absent and how it relies on doing things together. However, their focus is on the general underlying sociocultural and phylogenetic temporal scales, whereas human presencing takes a narrower view.

³ Cowley (2011b) refers to the phenomenological experience of perceiving utterance-activity as the 'same' (van den Herik 2017) as *wordings*. He defines wordings, as "readily repeated aspects of vocalizations that, for speakers of a community, carry historically derived information" (p. 186).

4 Theoretical implications for human presencing

The idea of 'being present' or 'making oneself present' is not unknown in the literature. In nursing (e.g., Zerwekh 1997) and leadership (e.g., Scharmer 2000), for example, presencing is treated as a kind of 'being there' – either with others as in the former or to make oneself present in distinct situations, as in the latter. Seen as "a way of caring," Zerwekh (1997) ascribes presencing as an essential practice in nursing where healthcare professionals make themselves present for others while they acknowledge a patient, not as a pure medical object but as a *person*. For Benner (1984), presencing can show through active listening, touching, feeling close, or giving physical care. In leadership, the concept of presencing emerges from a different starting point. While often the notion of 'making present' appears from the focus on past experiences (as done in media archeology (see, for example, Pogačar 2016; Tolia-Kelly 2016)), Scharmer presents a view where "[o]rganizations and their leaders can develop [...] a new cognitive capability, the capability for sensing and seizing emerging business opportunities." In this conception, presencing is a learning capacity that allows for "sensing, embodying and enacting emerging futures" (Scharmer 2000: 2). Functioning as a combination of 'presence' and 'sensing,' this variation of presencing points to how a leader needs to be able to carefully engage with their surroundings (i.e., bring themselves into presence) and create the ability to anticipate future challenges (i.e., observe changes in organizations) (Scharmer 2000; 2009).

The notion of presencing presented in this paper, however, builds on some of Henri Lefebvre's (2014/1992) key ideas in his *Rhythmanalysis*. Taking into account how the *rhythms* of the world and people imbue a person's perception of a distinct world illuminates our everyday actions.⁴ Lefebvre characterizes rhythm as the interplay of space, time, and action. The notion functions as a valuable heuristic to describe the complexity of human relations. It leads one to ask about what determines the bringing about of what is absent. An answer can be found in Lefebvre's distinction

⁴ For Lefebvre, there is "nothing inert in the world, *no things*: very diverse rhythms, slow or lively (in relation to *us*)" (Lefebvre 2014: 26, emphasis in original). Thus, he proposes a processed-based view of people's engagements in everyday life—he shows how biological and social rhythms cannot be separated from our conceptions of human everyday lives. Rather, he points to how these rhythms constrain one another. The perspective is essential when investigating what influences human action and how people bring about human activity. Lefebvre observes that "everywhere where there is interaction between a place, a time and expenditure of energy, there is *rhythm*" (p. 25, original emphasis). Defining rhythm as the interplay of space, time, and action while accounting for movement and repetition is helpful as a heuristic for accounting for the complexity of the relations with others.

between ‘present’ and ‘presence’ as it allows to shed light on *who* is doing the ‘making present.’ For Lefebvre, the significant difference lies between the present as the “thing itself makes itself present,” which relates to a fact or an idea,⁵ and between giving *presence* to something. The latter must be seen as ‘poetic’. For Lefebvre, “[P]resence situates itself in the poetic: value, creation, the situation in the world and not only in the relations of exchange” (p. 56 original emphasis). Notably, presence emerges through a “dramatic becoming” (p. 33) in which a person gives presence to something that is ‘there,’ or present. Therefore, presence is always connected to a *person* – or an observer (e.g., Kravchenko 2021). Once turning to a person, not as an individual, but as an agent embedded in more comprehensive systems, one is left with the question of what imbues a person’s projections – or, in Shotter’s (2003) words, what is the *background* from which a person acts.

The activity of giving presence to something can further be traced to Heidegger’s (2010) notion of de-distancing, which he describes as “making distance disappear, making the being at a distance or something disappear, bringing it near” (p. 102). As *Dasein*, a person must be viewed as part of their world. A person can, therefore, not be considered as separated from an environment. *Dasein* is, in Gahrn-Andersen’s words, “coupled with aspects of the world” (p. 572). Significantly, these aspects stretch across spatial and temporal dimensions and determine *Dasein*. As there is no such thing as being ‘objectively’ present within this Heideggerian idea, *Dasein* is human-world coupling.⁶ How people act and perceive things and others depends on the world, which determines their existence. ‘Bringing something near’ (or de-distancing), then, refers to “as a kind of *Dasein* with its regard to its being-in-the-world” (Heidegger 2010: 102). This is crucial because de-distancing does not refer to measurable distances, but to distances that are existential to *Dasein*. As Heidegger’s concern turns away from the then established subject-object relations, he gives attention to ‘things’ or ‘persons’ as inner-worldly beings and how *Dasein* encounters them (Sloterdijk 2012).

⁵ Lefebvre (2014/1992) uses the distinction between present and presence to show how mediation impacts human lives. Defining the present as representation, such as televised images, he argues that the present “furnishes and occupies time, simulating and dissimulating the living” (p. 56). By contrast, he argues, presence is assigned to the living and emerges through *dialogue*. Dialogue, for Lefebvre, is “the use of time, speech, and action.” (ibid). Thus, presence must be viewed as human activity. It arises as people actively engage in and with the world with others.

⁶ It is also important to note that human living beings can have different *Daseins*, or in other words, can be ‘in’ different worlds. As a human living being, one can be a mathematician, a member of a family, or a chess player; in each case, one’s being is brought about by the world in which they are embedded.

Regarding one’s being, people make what is absent present *for* themselves—in terms of their world embedding (In Sect. 6, I show in detail how a person actively uses their body to do so). This perspective grounds *human presencing*. When people re-evoked past encounters with concrete others, they act from *within* their world. Thus, I argue that Heidegger’s phenomenology of spatiality can be linked to a systemic view of cognition (Cowley and Gahrn-Andersen 2023; Cowley and Vallée-Tourangeau 2017; Vallée-Tourangeau and Vallée-Tourangeau 2014). At its core, “[s]ystems theory is a theory of interacting process and the way they influence one another over time to permit the continuity of some larger whole” (Kravchenko 2022:204). A theory about “wholeness” (Bertalanffy 1968:37 in Kravchenko 2022: 204) is essential when investigating how people re-evoked past circumstances. As concrete absent others stand in relation to a presencing person, distinct spatial and temporal dimensions constitute the relations between a person and the absent others. In his novel “The Unconsoled,” Kazuo Ishiguro describes a feeling that almost all of us may have experienced at one time or another. When we meet old friends, we tend to fall back into our old roles (see Cowley and Fester-Seeger (2023) for a more detailed description of this example).

“But you know, when I went back, when I met them in this pub, they immediately started again. ‘Hey, it’s old Parkers!’ they all shouted. They still call me that, as though no time at all had gone by. ‘Parkers! It’s old Parkers.’ They actually made this big braying noise to welcome me when I first came in, oh God, I can’t tell you how awful it was. And I could feel myself turning back into that pathetic clown I came here to get away from, yes, from the moment they started that braying noise.” (Ishiguro 1995: 199).

In this quote, Ishiguro encapsulates the feeling of being faced with past experiences that one would have liked to bury forever. Cowley and Fester-Seeger (2023) elaborate on how the greeting by the classmates allows them to call forth the absent. Consequently, the braying noise evokes in Parker unpleasant past experiences with his classmates. The absent and the bringing about of the absent are rooted in bodily dynamics, specifically, the ‘braying noise.’ Beyond what can be called a word, voices, and sounds enable one to project. Here, the noise has a distinct rhythm (according to Lefebvre’s definition) that makes it possible to preserve a specific time (that of Parker’s youth) and space (his school in England), which has the effect of evoking the feeling of ‘turning into a pathetic clown.’ Parkers’ *Dasein* is that of a ‘pathetic clown’ when faced with the old group of friends. The distances that he overcomes are not measurable but *experiential*. He brings about the others as they are *for himself*, while simultaneously bringing about the social system ‘old friends’ group.’ As a result, he evokes a version of himself that is deeply embedded in the spatio-temporal dimensions of a distinct social system. Human presencing informs

human cognition in that the term brings to the fore the ways in which people act on what is not immediately locatable.

5 The presencing person: a human cognitive agent in wider systems

While the connection has not been made explicit, Heidegger's phenomenology links to a systemic view of cognition. Concerning going beyond the focus on localized situations, Gahrn-Andersen (2019b) points out how "de-distancing happens as subjects orient beyond immediate experience towards, above all, events and situations that lie outside their immediate embodied space" (p. 575). This principle of acting upon events and situations that are spatially and temporally distributed constitutes the idea of systemic cognition (Cowley and Vallée-Tourangeau 2013, 2017). Tracing thinking to coordination and human activity (see Secchi's (2021) interpretation), Cowley and Vallée-Tourangeau (2013) view "brain-side activity [a]s inseparable from world-side events." (p. 256). Human cognition depends on the "human artifice" of engaging and coordinating with what is outside an immediate situation. Through people's ability to link routines, social practices, and skills, thinking distributes across "supra-personal constraints" (Cowley and Vallée-Tourangeau 2013: 257). This systemic perspective emerges pioneering work of Hutchins (1995a, b) who combined the cognitive sciences with anthropology. Beyond the agenda at the time to trace knowing to an individual knower, Hutchins showed how, in well-defined tasks, knowledge distributes across people, material objects, and systems bound by practices. Steering a ship to port (Hutchins 1995a) or bringing a plane to land (Hutchins 1995b) is accomplished by an entire system consisting of people, material objects, underlying temporal scales, etc. He assigns cognition not solely to the single parts constituting a functional system but to the interplay of such elements (Hutchins 2006). In distributed cognition, human entities are considered equal to other factors that constitute a functioning system, such as in navigation.

By not differentiating the human influence from, say, the role of material artifacts, Hutchins' perspective does not leave room to account for the plasticity of human activity. That is, how intent, a person's history and flexibility determine the working of a system (Cowley and Gahrn-Andersen 2023; Cowley and Kirkeby 2023). Critiquing the distributed cognition perspective, Giere (2004) gives due weight to a human cognitive agent who engages in the process of knowing as they make the system work for themselves. While Hutchins' perspective indicates that an entire distributed cognitive system does 'knowing,' Giere disagrees as he emphasizes that one cannot endow a distributed system with human cognitive traits. Giving importance to a human

cognitive agent in a system changes the focus on how a person's motivation, lived history, flexibility, etc., determines how a person acts within certain systemic constraints (Cowley and Gahrn-Andersen 2023). There would be no knowing in a distributed system without human beings that use the system. Giere's objection allows for a person-oriented view that goes against the traditional perspective that cognition can be reduced to a single organism or individual but also gives due weight to how humans act and bring about distributed systems.

Once turning to a human cognitive agent, *how*-questions begin to open up. Not how does the system work? But *how* do people act in and *with* narrower and wider systemic constraints? While Giere describes a distributed cognitive system as "a system that produces cognitive outputs, just as an agricultural system yields agricultural products" (p. 318), Cowley and Gahrn-Andersen (2023) amend the definition as they emphasize that, in the end, human cognitive agents, "exert control over the results" (p. 11). When being part of specific systems, whether in navigation or at a workplace, each person brings in their own experiences shaped by systemic structures. How is such a systemic view now essential for presencing? Linking Heidegger's Dasein with Giere's human cognitive agent gives ways to explore how people re-evolve what is absent within distinct systemic structures across temporal scales.

6 Case study: an investigation of human presencing

An investigation of presencing requires empirical attention to the person *and* their social system. The data in this article derive from a more extensive participatory ethnographic study conducted in an undergraduate course at an American university over 12 weeks (Fester-Seeger 2021). The dataset consists of videotaped observations of classroom engagement, follow-up interviews, and text-based communication data to trace how recursive, long-term engagement with others determines students' online interactions. The design follows the original research interest of this larger research project, which is how people become attuned to each other over time in such a way that they would perceive someone as 'real' in a text-mediated online environment. However, after data collection and the case investigation, the data revealed that instances of drawing on something that is not perceptually present require a holistic investigation (Kravchenko 2022).

Thus, I offer a person-centric systemic ethnography that, unlike cognitive ethnography (see Alač & Hutchins 2004), focuses on the complexity of a *person* as part of a social system and not solely a whole system. Instead, the method allows one to trace the particular influences that determine

human becoming. Given that human experience is neither linear nor chronological, a person-centered system's view (Fester-Seeger 2021) is a starting point in the plurality of human experience. The method builds on key ideas from cognitive ethnography, such as how immediate environmental structures, material artifacts, other people, and underlying temporal scales determine human action and perception (Trasmundi 2019). Cognitive ethnography “combines traditional long-term participant observation with the micro-analysis of specific occurrences of events and practices” (Alač and Hutchins 2004: 632). However, the investigation of human presencing as presented in this paper does not occur in a task-based environment. Rather, the aim is to trace the underlying influences that enable a person to re-evolve past encounters with others. Given the focus on the living body, an in-depth analysis of the interplay of bodily pico- and micro-dynamics is crucial. This allows one to investigate both how people come to build systems and a sense of the other *and* how they re-evolve and bring about what is absent. Both can be traced to subtle changes in bodily movements (Thibault 2011; Thibault and King 2016).⁷ From the languaging perspective, detailed observation must focus on changes in gaze, body posture, facial expressions, vocal dynamics, and hand gestures. A person-centered systemic ethnography focuses on the person and allows one to specifically explore how through sensorimotor engagement with others and aspects of their immediate environment creates distinct spatio-temporal structures of experience, and how these aspects are later realized when meeting different situational circumstances.

We now turn to the group that progressed more slowly than the other two groups. Consisting of four group members -Paula, Gaby, Vincent, and Anna- who are undergraduate students at different levels, it was possible to observe how different roles became assigned to each member over time. From an outsider's perspective, all seemed well-acquainted. In the interviews, however, I learned that only two members – Gaby and Vincent knew each other from previous classes; the others got acquainted during the course. While the other two groups met regularly in class, the irregular attendance of all group members had a strong impact on the group.⁸ The issue of absence determined how each group member projected onto the actions of the others - not only in class but also in how people perceived written text messages

⁷ I used different kinds of software for data analysis. For managing and interlinking different kinds of multimedia data, I used MAXQDA 2022 (VERBI Software, 2021) for data analysis. For detailed analysis for tracing events on bodily pico- and micro-scale dynamics, I used Elan version 6.5 (2023), and for tracking changes in prosody, I used the phonetics software PRAAT (Boersma and Weenink 2018).

⁸ During the eight weeks of filming, the group met only twice. Often only two or three members were present during class.

or contributions to the shared Google document.⁹ In what follows, I focus, in particular, on Paula,¹⁰ who seemed to take on the leading role in the group. In this section, I show how Paula, through the interplay of her bodily pico- and micro-dynamics (Blair and Cowley 2003; Cowley 2014; Thibault 2011), re-evokes past encounters with absent others and how this allows her to position herself as the leader of the group. In particular, I show how human presencing appears as a moment-to-moment unfolding through subtle changes in gaze, facial expression, body posture, hand gestures, and vocal dynamics.

6.1 Re-evoking absent others

The single interview with Paula was conducted after the group interview. Despite three group members signing for the interview, only Vincent and Paula attended. Initially, my research interest was about how people bring about the presence of absent others in text conversations. However, to ease into the interview I started by asking questions about the project work. For the whole transcript, see Fig. 1.

When inquiring about the project work, I asked Paula about her level of satisfaction with the overall result. Her posture and attitude slowly began to shift. While at the beginning of the interview she took on the role of a typical interviewee, she is now gradually moving into her role as the leader of the group. This shows directly as she moves her gaze (see Fig. 2).

In the first part of my question (“And now? How do you = how content are you with the result?”), Paula directs her gaze at me—the interviewer. In the second part of the question (“that you decided for the topic?”), however, she moves her gaze rightwards. At the same time, she slightly opens her mouth, ready to answer (see Fig. 2, B). The question prompts Paula to connect experiences from her vantage point of being in the classroom with the other group members. What follows are subtle shifts in gaze away from the interviewer. Her gaze is first lowered to her right as she starts to respond to my question (see Fig. 2, C). She then shifts her gaze to the ceiling and pauses for 670 ms (see Fig. 2, D). Now, as she continues to give her account of the group work (“was content with the overarching theme,” Fig. 2, E), she lowers her gaze again to the right. As she begins to generalize about past events in the classroom (“just how like the group dynamic was and how everyone worked together”), she directs her gaze at the table in front of her (Fig. 2, F). Paula is now slowly moving into her ‘systemic self.’ Paula's gaze does not induce any sort of engagement

⁹ As a class requirement, students had to create an ‘outline’ in a shared Google document to keep track of their progression.

¹⁰ All group members signed consent forms to participate in the study. To protect each participant's identity, I used pseudonyms.

1 I And now? How how do you= how content are you now with the result and that you decided for the topic?
 2 P A:h I'm (0.67) was content with the overarching theme bu:t just how like the group dynamic was and how everyone worked together I wa= I'm kindahh frustrated (.hh)
 3 I O:ka:y
 4 P because I feel like it could have been better ((hand movement to her left))
 5 I o:ka:y (.) why Ho= how could it have been better? [((unintelligible))]
 6 P [Becau]se I feel like I was talking to a wall;(0.64) you know (.) like when you try to give direction:ns
 7 I [yah]
 8 P o:r you're trying to get feedba:ck
 9 I [hm:]
 10 P o:r like (.) you're planning stuff but everyone kinda tells you last minute o:r .hhhh they would tell you like "o:h we:ll" >cause I would ask< oh what's your input what's your ideas what your thou= thoughts, feelings what do you want to add to it (.) (and were) like oh we're okay with whatever (.)and I am like .hhhhhh hhh I don't wanna be a dictator bu:t okay (.) you do this you do that kind of thing .hhh (.64)
 11 I °Okay°
 12 P it's very nonchalant like ° oh yah I'm okay with whatever °

Fig. 1 Transcript of an excerpt from a single interview between Paula and the interviewer (author of this paper) (minutes 5:52-6:3)

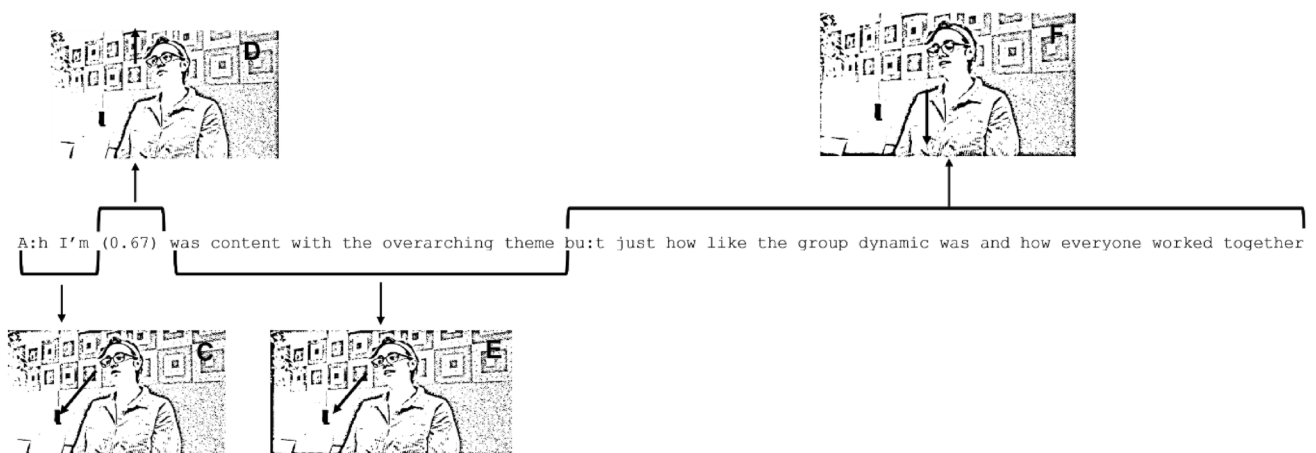
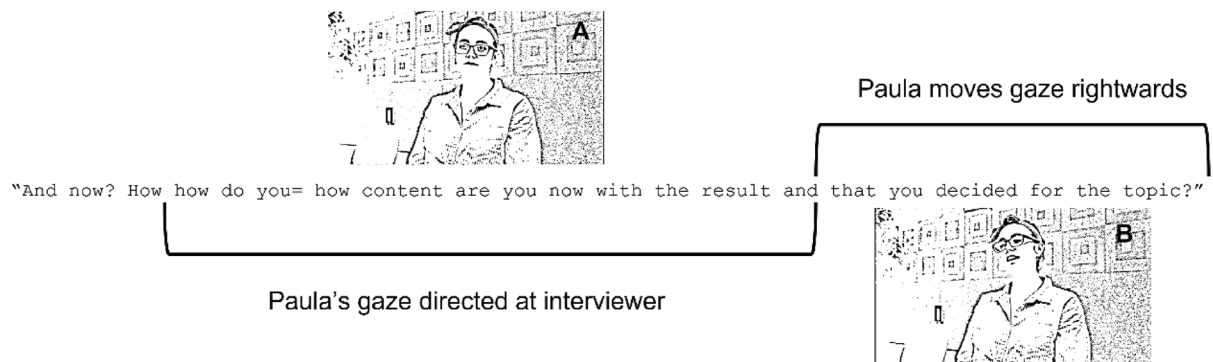


Fig. 2 Visualization of shifts in gaze (lines 1–2 from transcript)

Fig. 3 Interlocking of movements of gaze and changes in vocal dynamics allow Paula to envoice the absent others

and o:r .hhhh **they** would tell you like "o:h we:ll"

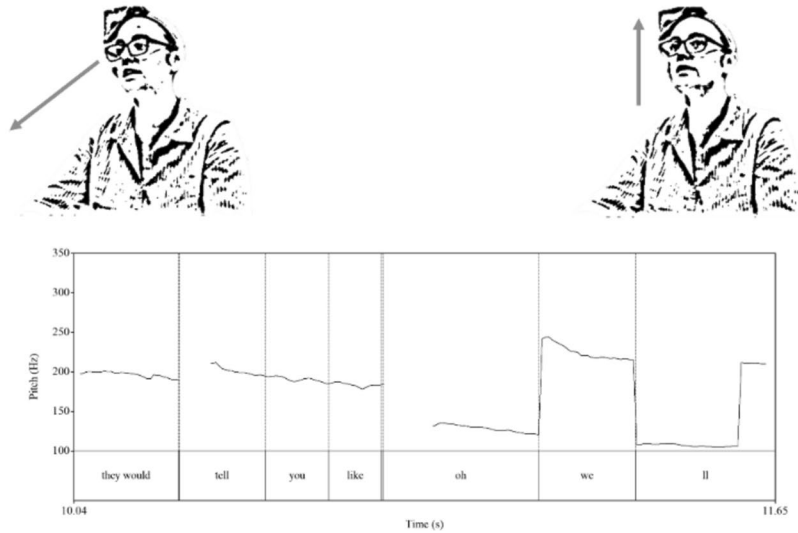


Fig. 4 Gaze shifts in Paula's utterance 'cause I would ask'

Cause I would ask



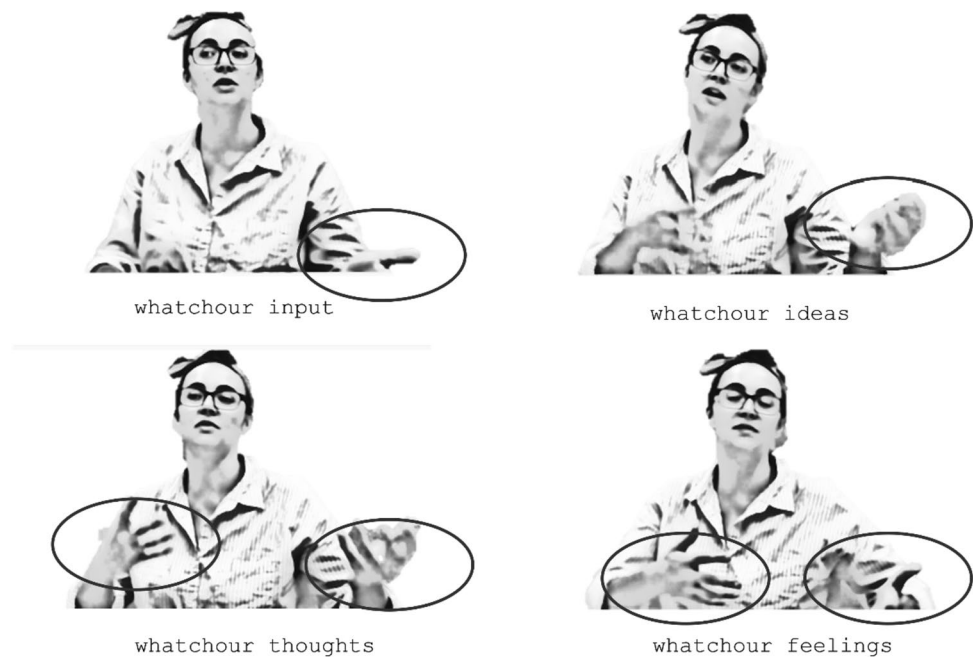
from my side. Rather than taking on a communicative function, her gaze is part of an introspective process, which Jording and colleagues (2018) describe as “attentional disengagement from the outside world,” while a person neither “focuses on objects nor persons in the environment but only on his (sic!) inner experience” (p. 4). I would not so much say that Paula disengages from an ‘outside world.’ Rather, she is connecting past experiences to current circumstances. In doing so, she begins to mold her own cognitive ecology (Hutchins 2010; Tribble and Sutton 2011). Self-motivating her actions, she draws on world-side events (i.e., happenings from her social system -the group). Eventually, these subtle shifts of bodily dynamics allow Paula to re-evolve her absent group members in observable ways, as I will later show.

In line 10, she brings her absent group members ‘at hand’ (in Heideggerian terms) in a more obvious way – for herself

and the interviewer. As she continues her story, she uses her body more directly. The way in which the interplay of body dynamics enables the re-evoking of past encounters becomes more apparent.

Paula acts as a planner, which involves managing the other group members (“or like you’re planning stuff, but everyone kinda tells you last minute,” line 10 in the transcript). In this way, she brings forth her role in the social group. On an enchronic scale (i.e., what is ‘said’), Paula re-evokes the others in an observable way through her third plural wording (‘they’) while remaining in a normal pitch range (at around 190 Hz). However, when she begins, what appears, be a mimicry of the others, her vocal gesture ‘oh well:’ ranges in pitch from 184 to 133 Hz. She audibly drops in pitch. Again, she directs her gaze at the ceiling. On the syllable ‘we,’ her pitch rises by over an octave, only to drop again in pitch on

Fig. 5 Paula's parallel movement to her left



'll.' (Fig. 3). She accompanies her vocal gesture by swaying her torso from right to left while looking at the ceiling.

Through this distinct fall-rise-fall-pitch movement, she re-evokes a flexible sense of the others: The others are easy-going and do not take the work as seriously as she does. Through this alterity (Bakhtin 1990) – being different from the others – Paula positions herself as a planner (and, later, as a leader). She acts as a person-in-the-system while drawing on the social system *for* her. She re-evokes her absent group members as “easy-going” and “nonchalant”. In so doing, she evokes her own sense of the others (or, in Lefebvre’s terms, she displays the rhythm the others have for her). Her envoicing is spontaneous: far from re-producing how people sound or drawing from body memory, Paula presences the absent others as they are *for* her. Thus, Paula does not evoke mental representations of an external reality but through the engagement with the interviewer, she beings to ‘construct’ her identity as the planner/leader of the group. She does as she draws on past events and embeds them in a current situation.

Paula’s interplay of voice, gaze, and body enables Paula to give presence to absent others. Building on her prior actions, she molds her cognitive ecology (Hutchins 2010) in ways that allow her to make absent others present ‘at hand.’ After her envoicing of the others (“oh well”), Paula now moves from a general-you pronoun wording to using the first person (“cause I would ask”). Her speech becomes fast-paced. Contrasting to her prior utterance, she ‘jumps’ in pitch and repeatedly shifts her gaze. The wording “cause I would ask” is musical and bridges to a new shift in Paula’s use of pronouns that evokes the group’s presence (Fig. 4).



Fig. 6 Paula orienting to her left

In this episode, Paula changes not only her prosody but also gaze. While at the beginning of the speech burst, she looks at the ceiling, at the end of the utterance she directs her gaze at (after 463 ms). She orients to her left, which allows her to gradually place her absent group members. By placing herself in the past, her ‘oh’ is spoken as if directly addressed to them, as the parallel phrasing (“whatchour input, whatchour ideas, whatchour thoughts”) shows. Together with striking prosodic elements, this gives her presencing new immediacy.

Paula shapes her immediate environment through iterative movements to her left, using her hands and upper body (see Fig. 5). The iterative gestures allow her to build ephemeral epistemic anchors (Hutchins 2005) to project what is not present. In this way, she bridges experiential spatio-temporal boundaries by linking past experiences to



Fig. 7 Paula in the physical classroom with the other group members

her immediate physical environment (i.e., the interview room). The anchors function as orientation devices (for her and the interviewer) that provide the possibility of ‘talking’ to absent others as she brings them ‘near’ and continuously returns to the absent others. She creates visible structures in her immediate physical environment for herself and others (Goodwin 2007).

Later in the interview, at around minute 16:44, Paula again orients to her left to draw on the absent others (Fig. 6). When asked about the use of the shared Google document that the group used to organize ideas, Paula responded: “Any time we had time in class, I would bring this Google doc up, and we all just kind of talk about it, and I just kind of typed whatever.” As Paula refers to the absent group members, she again turns to her left and aligns her gaze and hand gesture (as seen in Fig. 6). As she acts from the vantage point of being in the classroom, she moves spatio-temporal boundaries (Fig. 7).

Paula’s gestures, which refer to the absent others, only function in the cognitive ecology she has created. As a human cognitive agent, she draws on and brings about the historical scales of her being as she acts from within the social system - the group. Like Goodwin’s (2007) notion of environmentally coupled gestures,¹¹ Paula’s gestures are ecologically coupled. They only work for her and for me as the interviewer within the cognitive ecology and its distinct spatio-temporal dimension that she has structured.

¹¹ Goodwin (2007) shows how gestures, especially in task-based environments, are coupled to specific aspects in the physical environment.

6.2 Bringing about a mediated other

Paula actively shapes her cognitive ecology by drawing on her own body. In another instance, Paula reacts to changes in her immediate environment when her phone rings. The ringing of the phone altered Paula’s current presencing situation. While trying to bring about her sense of her engagement with her group members in the classroom, she relented to look at her phone but remained in her previous position (see Fig. 8).

As her hands are locked in the same position, she is almost visibly holding onto distinct moments in time, while orienting herself to changes in her present and immediate environment. She enacts a dual moment: Her hands anchor an accumulation of events from the classroom/class period (which have moved into the background but are still visible). At the same time, she looks at her phone and thus holds onto a moment from a relatively immediate past that is part of her phenomenal present. She stays focused on her phone for 1327 ms as she is reading Gaby’s message. Paula reacts to Gaby’s message by letting go of her locked position and pointing to her right – towards the door. In the immediate present (i.e., Gaby is in front of the door), Paula also directs the interviewer’s attention to the door, as she utters, ‘oh, Gaby is here’. Deriving from the text message, that Gaby is waiting in front of the door, actual happenings in Paula’s immediated environment made her move and enact a weaker sense of human presencing.¹²

¹² It is striking that the phone was neither put on silent mode nor was placed with the screen on the table – instead, Paula had made herself available by using the phone as a window to the ‘outside.’



Fig. 8 Paula in the locked position while directing gaze at the phone

4-26-18 09:06 am P: Gaby where are you? We have the group interview

4-26-18 10:14 am G: I know its late

4-26-18 10:14 am G: But im in front of 258

Fig. 9 Text message exchange between Paula (P) and Gaby (G)

Gaby made herself present by sending a text message to Paula's phone and by standing on the other side of the door. However, she remains invisible to Paula (i.e., not directly perceivable). With gaze and gesture aligned, Paula extends her orientation space by pointing to the door and shifting attention to Gaby, who is 'present.' Through her pointing, Paula directs the interviewer's attention to Gaby's presence – making Gaby 'visible' to the interviewer and herself. On an interactional level, the gesturing and the orientation space extend to Paula's right. This extension, takes place as Paula reacts to situated happenings—Gaby's text message and her knocking on the door. As Paula points to the door, she creates a space for co-orientation with the interviewer. Paula draws attention to Gaby's physical location in front of the door ('Oh, Gaby is here'); she turns to the interviewer, affirming that it is too late for Gaby to join the interview ('but it's too late already'). Gaby missed the group interview and intruded on Paula's scheduled individual interview.

She moves her gaze from the door to the interviewer while ending her utterance with an intense facial expression-cum-gaze directed at the interviewer. Paula decides that Gaby is 'late' for the interview. In response, as the interviewer, I adopt Paula's prior lexico-grammatical structure and confirm that it is 'too late' for Gaby to attend the interview ('now, it's too late'). Paula remains in her assertive posture as she takes over 'control.' Even during the interview, she maintains her systemic leader role by deciding that Gaby is too late, and, strikingly, I concur. Paula immediately turns to her phone to read Gaby's message aloud. At first sight, Paula appears to render Gaby's messages as they were written: she utters, "Yeah, she is. I am in front 258 (.) I know it's late."

As seen in Fig. 9, this is not the case. Gaby's messages read, '*I know it's late. But im in front of 258*'.¹³ While Gaby's original message sounds somewhat apologetic, Paula's version gives Gaby's message a different twist. In this instance, Paula reads as Paula-being-part-of-the-system, more precisely, from her leading role. Paula brings forth *how* Gaby is *for* Paula within their social system 'project group.'

7 Human presencing as an essential aspect of human activity

Paula used her own body to make her absent group members overtly present in distinct and observable ways. She re-evoked past encounters with her group members during an interview situation, using human presencing to bring herself forth as the group leader. Her presencing of the others played out through a moment-to-moment unfolding of her own doing and sayings. These can be traced to the interplay of bodily dynamics where subtle events in the pico-scale and micro-scale of bodily real-time activity, such as shifts in gaze and prosody, gave rise to the envoicing of absent group members. Distinct bodily pico-scale and micro-scale modulations allowed for the re-rendering of past encounters through a person's ongoing languaging (Cowley 2019). In languaging and human presencing events on both the pico-scale and micro-scales of real-time activity induce responses: Regarding the former, it invites another person to react to distinct changes in the other's languaging (see Cowley 1998). In the latter case, it enables oneself to build upon one's prior actions. In both cases, actions are unplanned. Blair and Cowley (2003) show how, conversations in an Italian family do not rely on what is said but on how one person meets another person's changes in pitch. These examples demonstrate how language is, first,

¹³ While Paula is reading Gaby's message to the interviewer, her phone rings again. While I do not have any eye-tracking records of where Paula was looking on her phone, I can only guess that she may not have been reading the messages directly as she was focused on the incoming message on her phone.

coordinated activity before turning to the symbolic (Cowley 2019, Blair 2003). In human presencing, too, one's actions are unplanned and micro-cognitive. While, among others, Blair and Cowley (2003) and Thibault (2011) visualize how people react to the interplay of pico- and micro-dynamics of another person, in human presencing, one's own actions induce change.

Crucially, human presencing is not a pure reconstruction of past events and could never be investigated or studied in pure isolation. Building on Bartlett's (1932) insights that remembering is activity, Sutton and Williamson (2014) argue that embodied remembering is context-sensitive. Through the recursive use of her body, Paula actively scaffolded her immediate physical environment to bring forth the spatial and temporal dimensions of her cognitive ecology. Human presencing also occurred through recursive whole-body engagement, as Paula continually gestured to her left (§ 6.1). This scaffolding of her physical environment (i.e., the interview room) allowed her to re-evoke and ascribe significance to her past experiences from her engagement in the classroom. She created invisible ephemeral anchors (Hutchins 2005) to project her absent group members (Kirsh 2010). Acting on what is not visible, therefore, relies neither on perception nor on mental states. Human presencing is human activity that is multiscalar, dialogical, embodied, and ecological. Kirsh (2009) defines projection as "a way of 'seeing' something extra in the thing present," which is "sensitive to what is present yet sufficiently controlled by a subject to go beyond what is perceived" (p. 2310). Projection, or the ability to act on what is not perceptually present, is a unique human ability that arises from people's "meaningful interaction with the environment" (Kravchenko 2021, p. 6) and must be linked to the ability of an active observer.

The merging of past and present is thereby essential. Using her body in a unique way, Paula created a distinct cognitive ecology, which enabled her to connect her classroom experiences with changes in her immediate environment. She held onto events from an immediate past (i.e., the ringing of her phone) to adapt them to present events in observable ways as Tribble and Sutton (2011) remind us, "[c]ognitive ecologies are the multidimensional contexts in which we remember, feel, think, sense, communicate, imagine and act, of then collaboratively, on the fly, and in rich ongoing interaction with our environments" (p. 94). By structuring her environment, she made spatio-temporal aspects of her cognitive ecology visible that fed into her presencing of the others and brought forth her own lived stories of what was happening in the classroom. When reading Gaby's text message aloud, Paula did not solely recite the written but brought forth her own projections (Sect. 6.2). In reading the two incoming messages in reverse order (whether on purpose or not), she brought about her sense of Gaby emerging from previous events (i.e., Gaby's knocking on the door and

not attending the interview) here, Lefebvre's (2014/1992) thought takes effect: Presence needs to be treated as a 'dramatic becoming,' which, according to Kirsh (2010), is "controlled" by a "subject."

However, Paula is more than a subject. She is a presencing person who does not act as an autonomous individual stripped away from any influences but as a 'zone of entanglement' (Ingold 2008). The re-evoked presence of absent others shows highlights the importance of past dialogical encounters and their impact on human cognition. Therefore, Heidegger's (2010) notion of de-distancing is instrumental as it gives due weight to the plurality of a person and their being-in-the-world. As Paula has shown, in enacting one's role and bringing forth specific worlds, one connects the non-present with the present. Being part of a distinct social system (the project group), Paula brought the absent group members forth to establish herself as the group's leader. In doing so, she relied on differences. She presented a specific kind of role and being as she showed how the group members are different from her. In other circumstances and with different people, Paula would take on the role of a friend, the role of a daughter, or the role of a co-worker. She would draw on distinct systemic elements (such as material artifacts, people, and locations) that determine her way of being. For instance, the 'outline' or the 'shared Google document' only functioned within the social system of the group and would not have been effective in other settings. Paula re-evokes her *group* members – not Anna, Gaby, or Vincent as mere individuals but as part of a social system.

The case study revealed both strong and weakcases of human presencing. The former showed how Paula was able to bring the absent others into presence, enabling her to 'talk' to them (§6.1). The latter can be traced to how Paula projected and brought about a version of Gaby while reading her incoming messages (§6.2). Concrete dimensions of re-evoking absent others can be seen in cases such as 'hearing someone's voice in text messaging' (Fester-Seeger and Cowley 2018) or when being confronted with an old friend's circle as was 'Old Parkers' (Cowley and Fester-Seeger 2023). Re-evoking past events with absent others is a crucial aspect of human cognition when, for example, trying to come up with solutions. Steffensen (2013) shows how two co-workers dealt with a faulty invoice. As part of the solution, they drew on a potential scenario: how would a customer react to the invoice? By evoking a generalized absent other, they resolved the issue by printing the invoice on a different type of paper that included the company's information (Gahrn-Andersen et al. 2019). Re-evoking past encounters with other people, whether concrete or generalized others, has a tremendous agentic influence on human actions (Shotter 2003).

Human presencing can illuminate the concept of social presence by giving due weight to the person who does the

projecting in text-based online environments. Even though one does not actively use their body in observable ways to re-evolve an absent other, a weak sense of human presencing can still occur. As I argued earlier, people's past encounters with others enable the re-evoking and drawing on past encounters with absent others. Although online learning may not allow for the re-evoking of distinct past physical encounters, Steffensen's (2013) example showed how a generalized sense of an absent other is part of human presencing. Impression formation in an online environment arises from past bodily dialogical coordination with other people. People's past experiences of directly engaging with others inform how they interpret and interact with the digital. In online environments, people rely on their prior experience of interacting with others. As shown in Sect. 6.2, Paula, too, re-evoked her past encounters with Gaby when bringing about the presence of Gaby-for-Paula while reading the incoming text messages. Thus, I argue that social presence should not be viewed solely as a subjective 'feeling' or a 'sense' of another but as a human social activity informed by one's past encounters with others in distinct circumstances.

Re-evoking past encounters with others is also crucial to the human cognitive processes that shape popular AI systems. As Miceli et al. (2020) show and argue, data annotation is a subjective process because it involves the various influences of direct and absent others that are constantly brought in as data annotators must label different instances of image data to make intelligent machines work for a wider (mostly for the Western world) audience. Although annotators, team leaders, and project managers, each act from the vantage point of their socio-cultural and systemic embedding, the voices of the client dominate the labeling process. Highlighting the power relations involved in the annotation process, Miceli et al. (2020) investigate how today's intelligent machines cannot be considered objective or neutral because data work is human activity. The machines with which we engage depend not only on the imaginations of their programmers but, moreover, on the imaginations and sociocultural embedding of their clients. In the specific case of image recognition, the clients' influence strongly shapes a data annotator's decision making process. Rather than incorporating their own understanding of what they see, annotators orient to clients' wishes. It is the voices of others that have a great agentic influence on the meaning-making processes of a data worker. The phenomenon of human presencing allows to conceive of data annotation as a cognitive process. Miceli and colleagues' fieldwork showed how data annotators' meaning-making processes relied on their previous physical and distant engagements with project managers, for example, through briefings that communicated clients' annotation constructions. As people, we are always responsive to the actions of others, which we incorporate in our own actions. Similarly, in data annotation, people link past

events to present circumstances by drawing on their past encounters with others—whether through direct bodily dialogical coordination or through written guidelines. Annotators are human cognitive agents who act in a wider system and rely on human presencing when creating the AI system with which users are supposed to engage in the future.

8 Conclusion

The paper's central purpose was to introduce the phenomenon of human presencing as an essential aspect of human embodiment. It sheds light on how a person's past engagement with human living beings greatly determines how they act, feel, make decisions, or talk. More than re-evoking an image of a person, in human presencing, people bring about past circumstances as they integrate them into present and unknown situations. Drawing on the presence of absent others impacts how people bring forth personhood and their own life stories (§6), how they engage in semiotic-laden mediated environments (§2.1), and how they create such technological environments (§2.2). Human presencing is, thus, a crucial aspect of human cognition and central to problem-solving (Steffensen 2013) or navigating one's 'path of becoming' (Ingold 2008). The phenomenon must be traced to the people's actual bodily (or sensorimotor) engagements with other people, and much more work must be done in this regard. The aim of this paper, however, was to show how human presencing can be observed in the bodily dynamics of human living people and to suggest that, although not directly visible, one constantly draws on one's past encounters with others, or, in other words, the influences of others. Only our past engagements enable us to form impressions and engage vividly with others at a distance. Deploying a systemic view allows for illustrating the plurality of a person's 'mind' and how people, as they re-evolve what is absent, draw on different spatio/temporal aspects of their lived experiences.

A presencing person is a human cognitive agent who is constantly tapping into their history, intent, and expectations. This greatly determines how they perceive and act in the world. The case study has shown that a person gives presence to what they 'see' (recalling Lefebvre's sense of 'presence') as they draw on essential aspects of their systemic embedding. In online environments, people do not simply 'perceive things,' rather one must ask what permeates a person's projections on digital inscriptions. One way to do so is by accounting for the ways a person brings systemic structures forth that enable them to live and learn. The phenomenon of human presencing illuminates how people are entangled with the lives of others. These entanglements not only determine people's behavior in online learning environments but also shape the intelligent machines

with which people interact on a daily basis. Derived from the case study presented in this paper, I have argued that the phenomenon of human presencing can inform an alternative view of human embodiment in technology in two cases: online learning and data annotation. Since much more attention must be paid to a person's ongoing engagement with others who ultimately shape a person's being, this perspective allows for explanations of how people draw on past encounters with others in online environments and how a person's living and dialogical relations determines the structures of highly advanced AI technology. By acknowledging the complexity of a human cognitive agent, human presencing breaks with a deeply ingrained view of machine neutrality by emphasizing a machine's heterogeneous character. People's ability to link past events with present circumstances allows for alternative views on human engagement in online learning environments and with intelligent machines. As advanced AI technology is imbued with human action, it must be treated as a conglomerate of human influences. How we engage with advanced machines in the future depends not only on the voices that determine how we bring forth aspects of our own systemic embedding, but also on the voices that determine the actions and perceptions of the people who shape intelligent machines.

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Data availability I, herewith, confirm that the data, which I have provided for this manuscript can be accessed by the reviewers.

Declarations

Conflict of interest The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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