Introduction: Unthinking Language from a Posthumanist Perspective

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ABSTRACT
In this special issue, we inspect material and nonhuman phenomena that contribute to interaction and meaning-making—among them sounds, visual signs, animals, images, digital devices, bodies, and movements—in order to stimulate new thinking surrounding the question of what language is from a posthumanist perspective. The contributors are language-oriented scholars who focus on material and technological environments in language. They interrogate how linguistic and nonlinguistic practices interrelate to produce meaning, concepts of the human, and social relations. The theoretical backgrounds of such posthumanist approaches to the sociomaterial practice of interaction are introduced in this article.

In times of automated language generation and large language models, the perennial questions of what language is and who or what a speaker is have taken on new and unprecedented implications. As digital language technologies produce text that is indistinguishable from human-produced text, the argument that it is language that distinguishes humans from other species, or that language is evidence of the superior cognitive capacities of the human mind, becomes precarious. At the same time, the question of how machines and humans differ brings into focus aspects of human language that are different from the production of linear, neatly ordered texts. While humans do produce such texts,

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their communicative capacities involve much more. Above all, humans have produced the signs that appear in texts because they have the ability to create meaning, and they do so in interactive social processes. In their interactive processes of making meaning, humans use a variety of material resources, including linguistic and nonlinguistic sounds, body parts, gaze, and their positioning in space. They also use nonembodied and visual written signs, transmitted on paper or via electrical signals on screens. Thus, objects and material matter are involved in processes of sense-making, which is the core interest of the special issue we are introducing here.

Human language as material practice beyond the production of a priori linearly ordered signs has remained hidden in understandings of language as cognition. In social and linguistic discourses in Western societies, *languages* have often been approached as cognitive achievement of the rational abilities unique to humans. In particular, structuralist linguistic paradigms of the twentieth century, founded on the Saussurean dichotomy of *langue* and *parole*, have conceptualized languages as immaterial and cognitive systems (Thibault 2011; Heller and McElhinny 2017, especially chap. 6). On these grounds, modern linguistics has been dominated by structuralist, synchronic approaches in which grammatical form is at the center of attention (Bucholtz and Hall 2016, 174), and linguistic approaches continue to be mired—implicitly or explicitly—in understandings of language as an *image psychologique*.

In a broader sense, the linguistic idea of languages as cognitive and immaterial is embedded in humanist, that is, human-centered traditions, stemming back to Enlightenment roots, in which the binaries of human versus nonhuman, nature versus culture, and mind versus body became epistemological foundations that shaped thought and social order (see also Harris 2010). Again, the reliance on *languages* to distinguish humans from their nonhuman environment was crucial. At the same time, claims to "ordered," rational language were part of the colonial enterprise; for example, missionaries constructed languages as bound to ethnicity and space in order to convert colonized subjects (Pennycook 1998; Errington 2008). The belief in the existence of a rational, context-free language as a sign of the rational creature that had emerged in early Western modernity (Bauman and Briggs 2003, 51) was part of the discourses that legitimized the exploitation and domination of those who supposedly did not use rational languages (Mignolo 2010). Related to this focus on rational languages as proof of (some) humans' rational capacities, the noncognitive elements of language have received little attention in Western linguistics until recently. There has been little interest in language as an embodied activity that depends on

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material phenomena like movements of the body and on sound or visuality. The fact that the endeavor of grammatical analysis relies on material technologies, especially writing (Linell 2005; Spitzmüller 2013), has not become part of general linguistic reflection. Thus, the actual materiality and technological dependence of human language and of linguistic epistemologies have drifted out of focus, along with the constantly changing, multimodal simultaneity and interactivity of human forms of communication.

However, in light of technological developments, transnationalization, and contemporary changes in media culture, the idea of *languages* as immaterial established facts has come under increased scrutiny; as Piller (2016, 1) points out, this is tied to "a paradigm shift from language understood as an object in space toward an understanding of language as a process in motion." As we interact multilingually and multimodally, using sociotechnical modes and channels in an increasingly interconnected way described as *polymedia* (Androutsopoulos 2021), and communicate across national boundaries, the limits and constructedness of concepts of *languages* as ordered, cognitive, stable, and separable grammars come to the fore. Words, gestures, signs, sounds, images, scripts, and videos travel globally in very short instants; their appearance may be co-defined by digital algorithms, or they are themselves produced by machine learning devices. We begin to suspect that writing and the printing press have been crucial in shaping our linear and orderly notions of languages in national contexts (see also Ong 1982; Abram [1996] 2017). In addition, the expanding capabilities of computational devices have stimulated a questioning of how human cognition interacts with the world. The role of material elements in human thought became a focus of cognitive science in the 1990s as "attention turned to how the world beyond the brain contributes to cognition. The change comes, in part, from how work in robotics and neuroscience is bound to view action, perception and attention as entwined with language and thinking (not as purely causal)" (Cowley and Vallée-Tourangeau 2017, 4; cf. also Latour 2005). In relation to these developments, the embodied, material, and interactive qualities of communication have attracted new attention. In this special issue, we look more closely at material and nonhuman elements beyond the cognitive paradigm that contribute to interaction, meaning-making, and the construction of signs—among them sounds, visual signs, animals, images, digital devices, bodies, and movements—in order to stimulate new thinking surrounding the question of what language is in a digital age.

We explore the material foundations of human communicative behavior from a linguistic and sociolinguistic perspective. In line with contemporary

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posthumanist thought, which challenges body-mind/nature-culture dualisms (e.g., Pepperell 2003; Braidotti 2013; Pennycook 2018) and its recent uptake in the field of linguistics (e.g., Wee 2021; Schneider 2022b), the authors in this issue focus on the corporeal, physical, or technological conditions of human and nonhuman communicative interaction and on the relationships between material realities and social discourse. Asking how interaction, meaning, and understanding come into being, this special issue examines communicative activity as dialectically embedded in its bodily, natural, material, and technological environment. It focuses on aspects that have been considered as marginal to communication in traditional linguistics, where they have typically been conceived as merely "the context" of communication. In the tradition of media theory, we assume that the message can never be understood without considering the forms of mediation in which it takes place (McLuhan 1962; Kittler 1985). This realization opens paths to a posthumanist understanding of cognition and language as "distributed" among people, things, and places (e.g., Cowley 2011; Thibault 2011). We acknowledge that we ourselves are still heavily influenced by referential, cognitive conceptions of language in our own communication practices as academics, as, even though images are included in some of the contributions, we mostly rely on standardized linear academic text to convey our messages. Still, we hope to inspire metadiscursive reflection on the types of distribution we participate in.

Engaging with Materialities in/of Language

Engaging with noncognitive aspects of language is not new. Already in the nineteenth century, Wilhelm von Humboldt reflected upon the role of the qualities of sound, which he regarded as crucial in transmitting affect (von Humboldt 1836, 60). In the first half of the twentieth century, we also find voices who were against the idea of language as rational, cognitive system. The literary scholar Voloshinov, for example, was critical of the ahistorical, abstract nature of Saussure's theories of signs and systems and posited that language is itself materiality (Voloshinov [1929] 1973, 11). Roman Jakobson studied the relationship between sound and grammar and argued for a "poetry of grammar" (1960, 375), recognizing the role of sound in shaping language structures.

There are, of course, also nonlinguistic traditions of the study of human communication that have an interest in bodily or material features of interaction, such as media studies or philosophy. German media theorist Friedrich Kittler (1985), for example, argued that *Aufschreibesysteme* (systems of writing), which he broadly defined as any tool for storing and processing information, shape the

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conditions of thought in a culture.[1] The work of Derrida (1974) is closer to linguistic fields and, in the context of posthumanist debates, it is particularly his observations on the role of phonetic script in linguistics and in the sciences in general that come to mind. In *Of Grammatology* he suggests that phonetic writing is a prerequisite of concepts of language as a system and thus a condition of contemporary linguistics (60). An overall questioning of language as appearing in systemic entities can be found today in philosophical strands and in semiotic analyses (e.g., Krämer and König 2002; Makoni and Pennycook 2007).

Immaterial concepts of language have also been questioned by cognitively oriented linguistic research, as, for example, in the field of *integrationism* that has as one of its central tenets that the "linguistic sign alone cannot function as the basis of an independent, self-sufficient form of communication, but depends for effectiveness on its integration with non-verbal activities of many different kinds" (Harris 2010, 3a; see also Harris 1981). Current critical and deconstructive explorations of language thus operate with concepts such as *distributedness*, *agency* and *agentivity* but also with *assemblage*, *entanglement*, or *sedimentation*.[2] Approaches that emphasize an understanding of human interaction as collective social activity and process rather than as product are gaining popularity. As a result, we see terms that capture the sign-making capacities of speakers in the context of the linguistic and material resources available to them, such as *languaging* or *translingualism* (see, e.g., Mignolo 1996; García and Wei 2014), *emergent grammar* (Hopper 1998), or *enregisterment* (Agha 2003). Finally, the materiality and emplacement of visible language has become a conceptual and methodological starting point in studies of linguistic and semiotic landscapes (Jaworski and Thurlow 2010), where language becomes understandable and analyzable only through its grounding in place and the material givens of signage and its various sensories (visibility, but potentially also sound, touch, smell, and others).

And yet, the material and technological grounding of meaning-making, of the making of linguistic signs and of their conventionalization, is still not often considered (with the exception of some authors in the field of critical literacy; see, e.g., Street [1995]). Bucholtz and Hall, in a reflection on *embodied sociolinguistics* review studies that have appeared since the 1950s that include considerations of embodiment. They attest that "a broad-based discussion within

1. Kittler constructs a primordial concept of language, though, and takes standardized language systems as given, which is not unusual in many strands of media theory.

2. Cowley (2011); Pennycook and Otsuji (2017); Tupas (2019); Maly (2022).

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sociocultural linguistics concerning the theoretical relationship between language and embodiment is largely lacking" and posit that this is "not a current debate but a needed interdisciplinary conversation" (2016, 173). Their chapter contributes to the development of such a debate and discusses examples of embodied aspects of indexicality, discourse, and agency.

Despite a lack of a theoretical integration of embodiment and materiality in the field of language studies, there is research that empirically explores multimodal aspects of language (see, e.g., Hodge and Kress 1988; Kress and Leeuwen 2001; Pennycook and Otsuji 2017), the role of physical space in interpreting meaning (Bucholtz and Hall 2016; Blackledge and Creese 2019), or the materialization of linguistic signs in space (Scollon and Scollon 2003). A more recent linguistic consideration of material, embodied as well as nonembodied elements of language is Cavanaugh and Shankar's edited volume *Language and Materiality* (2017). The editors propose an ontological move to understand language as material presence (1). This is based on an understanding that a turn to materiality "can bring into focus the political economic as well as the sensual characteristics of language" (2). Both Marxist approaches (in the sense of historical/dialectical materialism) and phenomenological concepts (focusing on perception, embodiment, and the senses) are seen as crucial to understanding the materiality of language (2). The contributors to the volume engage in ethnographic and linguistic anthropological reflections on language as a material process. While ethnographic studies of the material aspects of language highlight the interactive, physical, and also political embeddedness of interaction, the volume also includes critical voices that are "not quite ready to entirely dissolve 'language' into the semiotic soup. There are some aspects of language as such, as a particular kind of semiotic modality, that are distinctive" (Irvine 2017, 289). A holistic, interdisciplinary interrogation of different kinds of materiality, as it is envisioned in this special issue, contributes to a clearer understanding of the role of these different semiotic modalities. It can help us to scrutinize the material specificity of speaking and writing as well as whether, and for what reasons, we may want to maintain a distinction between linguistic and nonlinguistic interaction.

Exploring the affective and bodily involvement of speakers is another way of bringing nonrational, noncognitive elements of language to the fore. The study of language biographies and the "lived experience of language" (Busch 2015) is an emerging sociolinguistic field that contributes to overcoming immaterial, decontextualized linguistic concepts. In this approach, the embodied experience of language is documented through the methodological approach of the "language portrait," in which informants locate their respective repertoires in a

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schematic image of a human body (Busch 2018). Individual linguistic repertoires are understood as displaying speakers' biographical trajectories, and language ideologies—that is, social and widely shared discourses about language and linguistic hierarchies—are crucial in how individuals perceive, feel, and bodily locate their repertoires.

> What interests us here is not so much the way linguistic skills are acquired and accumulated along the time axis; instead we wish to be able to trace how, by way of emotional and bodily experience, dramatic or recurring situations of interaction with others become part of the repertoire, in the form of explicit and implicit linguistic attitudes and habitualized patterns of language practice. (Busch 2015, 9)

In Busch's paradigm of language biography research, Bourdieu's notion of *habitus* (1979), as embodied social structure, meets Merleau-Ponty's phenomenology of perception (2002), in which the living body (*corps vivant*) is the basis of relating to the world. Busch develops a theoretical and methodological framework to study the linguistic experience of the living body, which is only possible through self-inspection.

In the linguistic anthropological tradition of language ideology research, there is also an increasing interest in the questioning of immaterial concepts of language. For example, linguistic anthropologists Gal and Irvine's monograph *Signs of Difference* (2019) avoids the term *language* in its title, in the endeavor of developing a general understanding of human sign making. Dichotomies of cognition and body, going along with a conception of signs as immaterial, are here criticized:

> Unlike the usual Cartesian view, in which thought is rooted in radical doubt and introspection, our view is that thinking requires some sort of expressive form—signs—to convey the objects of thought. For Cartesians, communication is secondary, other people's minds remain a mystery, and minds are separate from the materiality of bodies. For us, thinking starts not with doubt but with previous knowledge, with matters that at any historical moment are familiar to some knowers, to some extent. Signs are the products and tools of such knowers in social relations. Instead of a Cartesian split between mind and bodily matter, between individual thinkers and social groups, we are interested in how such realms—once separated in one major philosophical tradition—are connected, and how signs mediate the connection. (2019, 89).

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Considering the role of social relations in non-Cartesian language-ideological entanglements, it is worth pointing out that dimensions of power—for example, with regard to race, class, and gender—are written into any and all kinds of meaning-making and therefore are part of embodied, material, and distributed language practices. For example, linguistic practices that have not been materialized in visualized form through script—regional varieties, creole languages, mixed forms, oral genres, and so on—are typically regarded as less prestigious (Blommaert 2013; Deumert and Lexander 2013). In cultures of literacy and print, the ability to create long-lasting conventions in dictionaries and grammar books, and to thus fix language in time and space, have an effect on the enregisterment of linguistic resources as resources of power (Mühleisen 2005). Material practices thus interact with sociolinguistic structures and the effects of digital materialities on these linguistic-material assemblages of power will be an exciting future field of study (van Esch and Elnaz Sarbar 2019; Schneider 2022a).

On a meta-level, the growing interest in the material and embodied aspects of language is closely related to interdisciplinary debates on posthumanism, which have "flourished as a result of the contemporary attempt to redefine the human condition." In this context, "the human is not approached as an autonomous agent, but is located within an extensive system of relations" (Ferrando 2013, 32). The construction of humans as an exceptional species, divided from their natural and material environment in a dichotomous manner on the basis of their rational abilities is questioned in posthumanist discourses. Contributing to "alternative subject formation" and to the "disinvention of Man"—a figure criticized for its cultural and gender biases—are among the aims of the field (see Braidotti 2019, 42). This relates to Haraway's earlier work on feminism and technology (1991) and, in a more recent move, to critical perspectives on language as a human cognitive faculty. Pennycook's book *Posthumanist Applied Linguistics* (2018) has been crucial in linking posthumanist discourse to linguistic research, thus theoretically enhancing a view on language as embodied, material, and transmedial, with the potential of contributing to an alternative understanding of subjectivity. The posthumanist study of interaction and of human forms of language(ing) is therefore central to understanding the human condition today.

Contributions to This Issue

The contributors to this special issue are language-oriented scholars who focus on material, human, and nonhuman bodily and technological environments

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and how these coshape interaction in relation to social structure. They interrogate how linguistic and nonlinguistic practices interrelate to produce meaning, concepts of the human, and social relations. The areas they investigate relate to sounds, bodies, signs, gestures, and human-animal interaction.

Assemblages of Humans, Animals and Technologies

In "When Dogs Talk: Technologically Mediated Human-Dog Interactions as Semiotic Assemblages," Miriam Lind (2024, in this issue) takes a look at pets using "talking buttons" to ostensibly tell their owner about their thoughts and needs. By pressing buttons that upon activation play a prerecorded message, these devices are marketed as tools in "teaching" human language to animals in order to allow them to "speak their minds." The author investigates these practices of technologically mediated human-dog interactions and concludes that "talking buttons" in human-dog communication should be understood as semiotic assemblages in which meaning is collaboratively constructed through the dynamic, situated interaction of bodies, linguistic resources, objects, and touch.

Distributed Repertoires in Sign Languaging

Annelies Kusters's (2024, in this issue) contribution, "International Sign as Distributed Practice," examines the use of International Sign (IS) in a class that brings together young deaf people from different countries, using IS as a means of communication. She focuses on how IS is used in a distributed manner, considering the totality of semiotic resources that speakers use when they communicate. These resources include speech, images, text, gestures, signs, gazes, facial expressions, postures, technological devices, and other objects. This shows that viewing IS as unidirectional or "just signing" ignores the distributed nature of communication and the diverse ways in which semiotic resources are used in situated ways.

Bodily Hexis and the Sounds of Sociolinguistic Sense-Making

In "Voices, Bodies, and the Cultural Organization of Meaning," Erez Levon and Sophie Holmes-Elliot (2024, in this issue) explore some of the nonarbitrary ways in which linguistic variation takes on meaning. They bring traditional ideas about sound symbolism into dialogue with research on embodied behavioral codes, focusing on bodily comportment and the qualia associated with specific social categories and positions. By considering socially meaningful bodily hexis and socially inculcated bodies, the authors provide a unified account of the sociolinguistic patterning they observe and to shed light on how variables acquire social meaning more generally.

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Embodiment in Bodily, Spoken, Written and Digital Modalities

In Kellie Gonçalves's (2024, in this issue) article, "'From the Side, You Should Look like a Japanese Ham Sandwich, No Gap Anywhere': Exploring Embodied, Linguistic, and Nonlinguistic Signs in Enregisterment Processes of Bikram Yoga in Online and Offline Spaces," we learn how interaction, meaning, and understanding emerge within the embodied practice of Bikram yoga. Gonçalves studies communicative activities as dialectally embedded in bodily, material, and technological environments. The influence of a commercial brand on these arrangements displays the need to incorporate both the political-economic and the semiotic to understand the complexities of linguistic, embodied, and material interaction.

Conclusion

Finally, Alastair Pennycook (2024, in this issue) brings together the contributions in a concluding discussion, which links the arguments to the overall field of posthumanist linguistics. Overall, these different perspectives are held together by a common interest in how human interaction and meaning-making cannot be conceived as isolated and autonomous but as material behavior. Engaging with different materialities, from sounds to bodies, visual and bodily signs, movements, technologies, and with different living agents, including dogs and humans, inspires metatheoretical thought and can enhance our understanding of the role of material matter in interaction, norm development, and community formation. This can contribute to the question of whether and why we should retain the concept of "language" for referring to particular kinds of semiotic action. We aim to move toward a holistic and posthumanist comprehension of meaning-making, bonding, and community. In so doing, we hope to contribute to questioning nature-culture/body-mind dualisms, to understanding the complex material entanglements of human social worlds, and to reconsidering human subjectivities as responsible actors on this planet.

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