The Language of Place: Towards an Agenda for Linguistic Platial Cognition Research

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Research on language in the interdisciplinary field of spatial cognition has identified multiple ways in which language represents mental representations of space, including object locations, spatial relationships, spatial problem solving such as wayfinding, and so on. Further, cognitive linguistic research reveals various ways in which language is based on physical experience. What remains under-explored is how the very fundamental human experience of place, in terms of its sensory and emotional attachments, is represented in language (other than works of art). Here I explore possible transfer avenues from linguistic spatial cognition to platial linguistic research.

Keywords: systematicity; methodologies; context; concepts; appreciation; platial language

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1 Introduction

Spatial cognition research has benefited greatly from insights and methodologies in linguistics, adapted for the purpose of understanding how we think about space. How people *talk* about spatial locations and relationships systematically reflects how they *think* about space. This insight has led to a rich diversity of relevant interdisciplinary research and outcomes including GIS applications (Denis, 2017).

So far, pertinent research has focused far more on notions of *space* rather than *place*. The distinction between the two is symptomatic of the typical perspectives adopted in this research field, in spite of its inherent disciplinary diversity. Spatial notions tend to be abstract, formalizable, and context-free (as much as possible). How humans conceptualize space may be rooted in their experience, but the experience itself (in a *platial* sense) is rarely addressed in language-oriented spatial research. Instead, such research focuses on the linguistic expression of spatial perception and conceptions: where locations are, how they relate to each other, and how to get from A to B in familiar and unfamiliar environments. Route descriptions, for instance, have been investigated thoroughly in this tradition, showing how we understand and talk about space when we need to find our way. However, such research rarely captures what really matters for us in our environment, with some exceptions: for instance, pertinent insights concern the importance of landmarks for spatial processing, encompassing both visual salience and personal relevance (Caduff and Timpf, 2008).

Platial research, in contrast, directly addresses human experience, perception, and appreciation in a wider sense. Appreciating an environment does not only mean knowing where places (and landmarks) are, but – much more importantly – knowing what these places mean to us, how we relate to them, what makes them special. Conceptualizations of place must therefore be explored on the basis of how humans live in the world: which kinds of places play what kinds of roles; what are the boundaries of places in terms of their pragmatic reality and human experience; how and under what circumstances are

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emotional attachments developed for specific places; and so on. These perspectives, and their expression in language, may seem elusive and infinite, but the underlying principles are not. Many such principles may in fact be generic, as already demonstrated by pertinent platial research (Cresswell, 2014; Davies, 2018). To capture their linguistic expression, platial discourse needs to be addressed systematically, quite possibly along similar lines as traditional linguistic spatial cognition research. In the following, I will explore relevant research in linguistic spatial cognition with a view on transferability towards an envisioned agenda addressing notions of *place* through the lens of language.

2 Spatial Language and Cognition

Linguistic research in spatial cognition has a rich and varied tradition, albeit one that is no more than a few decades old. Linguistics is a relatively young academic field of its own, which started out with a focus on theoretical explorations of grammatical and lexical structures. In the past, there was thus little room for exploring the ways in which humans use specific domains of language to express specific domains of thinking. However, the surge in interdisciplinary spatial cognition research in the last part of the previous century has sparked a growing interest in the relationships between language and understanding of space. Here are some key insights.

2.1 Key Insights

Space is fundamental to human thinking for the simple reason that we grow up and live immersed in spatial environments (Newcombe and Huttenlocher, 2003; Plumert and Spencer, 2007). This obvious fact remains one of the major obstacles for establishing true artificial intelligence in computers and robots (Goswami and Vadakkepat, 2019): they do not benefit from the intense everyday experience of perceiving and freely moving around in space. Their strengths lie elsewhere, in the abstract computational procedures of their detached 'minds' that are not grounded in space (Beni, 2019). We, as humans, in contrast, understand life on the basis of its embedding in space. It matters to us where things are, how to get to places, how far away from us and from each other things and places are. These things concern our everyday lifes in multiple ways, and so we express them frequently in language. Everyday language therefore contains a host of information about space, reflecting the ways in which we perceive and conceive of space (Talmy, 2000).

This ubiquity has led to an effect that cognitive linguists explore in terms of transferred or 'metaphorical' usage: namely, that spatial terms are frequently found in abstract domains (Tyler and Evans, 2003). Take the previous sentence as an example, where neither *led to* nor *in* (which occurs twice in the sentence) retain their literal spatial meaning. In spite of the fact that the sentence does not seem particularly poetic, we can see the transfer of a path concept (a path is physically *leading to* somewhere) as well as a container concept (something is physically enclosed *in* something else) to a more abstract concept. Spatial terms with both literal and transferred senses are ubiquitous in language, aptly reflecting our physical everyday experience.

There are a number of principles about human spatial concepts that can be derived from the specific ways in which space is verbalized. For instance, we do not *think* (and rarely *speak*) in terms of metric or quantitative measures. Instead of 'The car is 22.35 cm away from the tree', we are much more likely to say 'The car is *near* (or *at*) the tree'. Talmy (1983) explored in detail how spatial language schematically structures space. In spite of the many possible relationships between objects in natural environments, linguistic terms (especially spatial prepositions such as *near* or *at*) draw on a very limited set of principles that can be detected by systematic analysis of linguistic resources and contextual usage. For instance, where exactly is *above*? The term immediately evokes the sense of a vertical relationship in our minds, but no specific distance, and not even a clear angle – it does not have to be anywhere specific. A *qualitative* notion of verticality is sufficient.

With the related term *over*, the context-dependent effects of functionality (Coventry et al., 1994) come into play. Whether or not an umbrella is *over* a person will often depend on where the rain comes from. Similarly, whether an object (say, a flower) is *in* another object (such as a vase) depends on *location control* rather than geometric containment (Coventry and Garrod, 2004). Clearly, the vase does not contain the flower, but it controls its location: if you move the vase, the flower will move with

it. Notably, this specific effect is not part of the lexical entry for *in*. We intuitively know these things from our everyday experience, and apply them to our language use with ease.

Another fundamental insight into human spatial thinking comes from the analysis of a group of expressions commonly known as *projective* terms: *left*, *right*, *in front*, *behind*, and so on. The spatial relations expressed by these terms can be understood in various ways, depending on the underlying reference system and perspective (Levinson, 1996). For instance, *your left* is different from *my left* – and how large the *left* area is might differ according to the situation (Hayward and Tarr, 1995; Moratz and Tenbrink, 2006). Again, the use of a specific spatial term depends on how the speaker and hearer conceive of the spatial relationship in question.

Notably, in all of these cases, there are aspects of the environment that are not expressed in language. This relates to a very basic principle of communication: speakers express (and hearers understand) what is relevant for them, rather than aiming to somehow represent all details (whatever that might mean). Relevance is a major principle in communication (Sperber and Wilson, 1986), and it explains how people manage to fill in the many gaps in communication. For instance, no route description will ever be entirely unambiguous and complete (Tenbrink, 2012) but people will typically understand whatever they need in order to find their way to a destination. In these and other ways, spatial language (and its use in natural discourse) reflects the systematic principles according to which we understand the spatial world around us.

2.2 Theory: Language is Based on Experience

The insight that language is rooted in spatial experience has many implications, well beyond the fact that spatial language is ubiquitous in both literal and abstract senses (as outlined above). Famously, Lakoff and Johnson (1980) demonstrated how our physical experience affects our understanding of more abstract affairs, as reflected in metaphorical conceptions such as *good* is *up*: expressions such as *high spirits* and *feeling down* consistently represent positive experiences as higher up than negative ones, in line with spatial experiences such as having more of something good (like food or coins) frequently represents a higher pile, and somebody who feels good tends to be upright, while the sick may need to lie down.

More generally, the way a language develops represents the way its speakers experience the world – an insight already noted by Whorf (1956), who claimed that language represents the mass mind. Whorf's further speculations as to how the structures of a language, evolved on the basis of its speakers' thoughts, may in turn *constrain* its speakers' thoughts, led to a host of research investigating the intricate interdependencies between thought and language. More modern theories of embodied cognition (e.g., Wilson, 2002) focus primarily on the specific ways in which (and limits as to how) physical experience determines thoughts, and how exactly mental representations find their expression in language (Shapiro, 2019).

As part of this, contrary to previous assumptions concerning the autonomous status of language in the human mind (Chomsky, 1964), more recent theories explain how meanings are acquired through usage in context (Tomasello, 2009). This feat is substantially supported by fundamental cognitive mechanisms that help us bootstrap from known experience to novel insights, acquiring new meanings gradually on the basis of existing ones (Gentner, 2010). Taken together, these theories highlight the profound effects of experience on cognition and its representation in language.

3 The Experience of Place

The insights outlined so far leave little doubt that embodied experience is central to human life, as expressed in language. At a closer look, however, the vast majority of these insights concern what might be aptly characterized as *scientific* experience, on a personal basis. As we discover the world and its mechanisms, we develop concepts and linguistic terms to express them, in line with conventions in the society we live in. This main principle drives the specific ways in which language evolves and thoughts are expressed – generally within and across cultures, and individually in specific situations.

Traditionally, *cognition* is understood as separate from *emotion*, leading to distinct areas of research (a tradition that has been questioned; Pessoa, 2008). The linguistic principles discussed so far are firmly situated in the realm of cognition, and consistently leave aside any aspects that concern *appreciating*

rather than *understanding*. In contrast, notions of *place* fundamentally concern human emotional connections with spatial locations that go beyond personal scientific insight. If human thought is as deeply intertwined with spatial experience as is now widely understood, it is time to account for the linguistic expression of all aspects of this experience – including the non-scientific, emotional experience of appreciating places. The following sections will explore existing insights in this regard and then point to what might be aptly recognized as a gap.

3.1 Pertinent Research Areas and Insights

In spite of the fact that spatial cognition research focuses on scientific rather than affective aspects of experiencing space, a range of insights emerging from the field do pertain to a more personal level, highlighting certain aspects of platial appreciation. All experiences of space are personal, perceived individually in time and space. This is aptly represented by the system of *deixis* in language, which captures the here-and-now of our experience (Fillmore, 1982) using personal pronouns, distinctions between *here* and *there*, or *now* and *then*. Recent research demonstrates that the use of deictic terms may be influenced by factors such as distance, ownership, visibility, and familiarity (Coventry et al., 2014) – aspects that are far more personal than the scientific experience of space.

Further pertinent insights include the central role of *relevance* for cognition as well as communication (Sperber and Wilson, 1986), as well as notions of *salience* that guide focus of attention in various ways (Chiarcos et al., 2011). Both relevance and salience are rooted in personal experience. Objects and places (and abstract ideas) are often relevant to us for a personal reason related to a specific context – this may well be charged with emotional associations. Similarly, objects (or landmarks) may stand out as particularly salient for us not only because of visual contrast to other objects, but also because of their special meaning for us (Caduff and Timpf, 2008). Also, it is well-known in wayfinding research that although route choices can be predicted to some extent by generic heuristics (Hochmair and Frank, 2002), there will always be a certain amount of individual variation based on people's preferences (Hölscher et al., 2011).

In platial research, it is more widely accepted that knowledge of place is semantic, i.e., meaningful, and based on emotional significance (Davies, 2018). This insight has motivated much research in human geography and geographic information science, and some systematic studies of language (Purves and Derungs, 2015; Stock, 2008; Winter and Freksa, 2012). In this realm, much research targets the exploration of *sense of place*, including effects of social and geographical contexts on how places are perceived (Hay, 1998), as well as beliefs about the relationship between oneself and a place, in terms of ownership and behavioural commitments (Jorgensen and Stedman, 2001), or notions of rootedness, belonging, and routines (Buttimer and Seamon, 1980).

Insights such as these complement extensive research in the humanities that has long recognized the significance of how language (and in particular the language of art) represents affective aspects of our spatial experience. Multiple works of poetry, literature, music, and other art forms vigorously express experience and emotion, beyond personal scientific insights – and a host of academic research is available to discuss this in much depth. Take, for instance, John Denver's 'Take Me Home, Country Roads', released 1971 – a song that became popular around the world well beyond audiences who are themselves at home in West Virginia (as described in the song's lyrics), supported by the vivid visual imagery that successfully conjures up emotions of 'almost heaven' (Byklum, 1994).

Notions of *home* as a place with particular emotional significance are also frequently debated in works of fiction and their academic treatment, recognizing the effects of such a spatial location on human experience well beyond its existence as a physical or geographical entity (Rubenstein, 2001). Notably, even though *home* is a very personal notion, the described effect is very generic and very describable (and hence explored widely in the humanities), far from having to be discarded as 'unknowable' along with other personal experiences that are too diverse and individual to be captured systematically.

3.2 The Gap

The overview in the previous section suggests that most insights in platial research, so far, have been generated as a by-product of systematic research on spatial language and cognition, by extensive targeted research in areas of human geography or environmental psychology, and by humanities research that focuses on the affective significance of places in human lifes as represented across

many art forms. While significant insights have been generated in all of these areas, language as a representation of human experience could be exploited far more directly and extensively.

Systematic research could target the linguistic expression of *platial* notions, as opposed to primarily *spatial* ones, doing justice to the fact that emotional and spatial experience are deeply intertwined and ultimately inseparable. It seems that even though this insight has long been recognized in other academic realms, it has not quite reached linguistic spatial cognition research – quite possibly hampered by the traditional separation of cognition from emotion. As a consequence, any relevant insights that may be generated alongside those pertinent to cognition proper tend to be marginalized, rather than being taken seriously as manifestations of basic human experience.

While in-depth qualitative insights based on (particularly literary) language samples have been generated extensively, more generic or quantitative approaches known from linguistic spatial cognition research could be transferred to explore platial notions in a range of ways. Moving on from the wide-ranging recognition that language is based on experience, theoretical approaches (in cognitive linguistics or elsewhere) could specifically target the systematic features of language that express platial notions. Computational approaches need to be enhanced to implement platial language and concepts more thoroughly, accounting for the generic effects that platial experience has on human thinking. To inform both theory and computation, empirical studies are required that systematically address platial language use across various generic types of scenarios. This would parallel the host of research targeting spatial language use in many different contexts, which has successfully identified generic principles that affect spatial language use and highlight important facets of human spatial cognition.

4 Investigating Place Through Language: Towards an Agenda

Language is, as we have seen, an excellent medium for investigating human concepts systematically. Humans have a desire to communicate their thoughts and feelings to others, and thus represent both scientific and emotional experiences in language. Moreover, linguistics is often seen as situated between the science–humanities divide (Pulgram, 1969) and is therefore an obvious candidate discipline for addressing a concern that appears to cross over this divide.

Above all, how humans live in the world, and thus experience it, is key. Personal experience leads not only to generic scientific insights but equally to the development of a *sense of place* related to various locations in the environment. Although specific sense of place experiences are certainly unique to each individual in relation to their platial attachments, we all use the existing repertory of our language to represent our thoughts and feelings – and language thus follows rules and principles that will allow for capturing generic structures that affect our use of language.

A systematic agenda for the investigation of place through linguistic analysis could therefore target questions such as the following, mapping the existing analysis principles for *spatial* language to the investigation of *platial* language:

- What are the principles according to which places are conceptualized and verbalized?
- Which kinds of places play what kinds of roles in human discourse?
- What are the boundaries of places in terms of their pragmatic reality in everyday language use?
- How and under what circumstances are emotional attachments expressed for specific places?
- What are the main categories and concepts represented in language in platial contexts?
- What are the overarching principles behind these categories?
- What do they reveal about the mental representation of place?
- How is this linguistic-conceptual repertory used in discourse, across different settings?

To give a sense of how this might work, consider the following statement expressing platial notions of a local who describes an area in North Wales:

> *I like the old bridge and looking down at the water beneath, the way the tide changes and reveals and hides different islands. The cormorants nesting on the bridge and the turbulence of the currents are fascinating to watch.*

The description clearly reflects both spatial and emotional aspects, closely tied together in the way the place is experienced. Spatial aspects are represented by much-researched prepositions such as *down*, *at*, *beneath* and *on*. In contrast, the platial language is far more diverse and striking in this short text. There are verbs of volitional perception (*looking down* and *to watch*), reflecting what the observer chooses to perceive in their spatial environment, and conveying a sense of connection to nature, to the water and the tide, the cormorants and the turbulence of currents. There are direct terms of appraisal (*like*, *fascinating*) that highlight specific aspects of the place. And there are poetic features that convey a sense of admiration, contrasting with what one might expect in a neutral location description (*beneath* rather than *below*; the rhythmic parallelism in *changes and reveals and hides*).

Linguistic features of this kind may seem related to individual style, but already there is ample indication (in abundant humanities research on works of art, and in existing data) that what we see here goes beyond the random example of an enthusiastic lover of nature. The observations we have just noted here may well indicate some of the generic ways in which speakers express platial notions.

5 Conclusion

Notions of place are central to human experience, and they are pervasive in discourse. As our everyday lives happen in spatial environments, we frequently speak about locations and places, often combining 'scientific' and 'emotional' representations. In academic research, these have been treated separately to a large extent, leaving a gap that could be addressed by a targeted analysis of language, combining insights and methods across research fields. This will allow for more systematic and generic insights, and ultimatively a new understanding of what it means for language to be based on experience – integrating factual and affective facets.

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