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The construal of space in different registers: an exploratory study

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ABSTRACT

In this paper we present linguistic variation in the construal of "space" in different registers. We focus in particular on variation in the lexicogrammatical construal of space across texts belonging to different registers, offering a report based on our exploration of samples of texts operating in different contexts. The registers are differentiated according to the field of activity within context (e.g. Matthiessen, 2006, 2013); the ones considered here are reporting, recreating, doing, enabling, recommending, and expounding. The study is part a long-term research project concerned with the construal of location in and movement through space in language and other semiotic systems, and it is an exploratory guide sketching part of the findings from the research. Our aims, in addition to reporting findings of the project, are to provide the exploratory guide for both more detailed and more extensive analysis in future studies and thus to stimulate more register-based research in this area.

1. Introduction

In this paper, we are concerned with "space", one of two intimately related phenomena that has stimulated Western intellectual inquiry for a long time, the other phenomenon being "time" (cf. Jammer, 1954; Earman, 1989; Peuquet, 2002; Filipović and Jaszczolt, 2012a,b). We are in particular concerned with how human experience of space is construed in language — i.e. how our experience of space is modelled as meaning. This is a very large topic, and, in our research group, we are exploring different aspects of it; with members of this group and with also researchers elsewhere in our informal research network, we are exploring how space is construed in different languages, and also in non-linguistic semiotic systems.

There has, of course, been a considerable body of research done on space, and in the next section we will sketch some aspects of it; but in this paper our central concern is with an area that has not yet been explored systematically in general terms — how space is construed for different purposes in different registers (with "registers" in the sense of functional varieties of language operating in different contexts of use; see e.g. Halliday et al., 1964; Hasan, 1973; Halliday, 1978; Matthiessen, 1993, 2013) — registers such as real-time direction giving (e.g. Ward et al., 1986; Michon and Denis, 2001; Ewald, 2010; Hund et al., 2012), walking or driving tours in guide books (topographic procedures), and narratives of journeys (e.g. Herman, 2001, Howald, 2010; Feiz, 2011). The underlying assumption is that languages have rich resources for construing human experience of location in, and movement through, space, and that these resources are differentially deployed in texts operating in different contexts. In other words, speakers and writers access different parts of the overall resources for construing space in solving different contextual problems. For example, in direction giving the need to represent paths is central, whereas in narratives the need to evoke the nature of a journey may come to the fore.

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In Section 2, we will locate the research we report on here against the background of research into the modelling of human experience of space in different languages, and also in other semiotic systems. In Section 3, we turn to the central task of exploring how space is construed through texts in different contexts — i.e. the task of investigating registerial variation in the modelling of space. We begin by introducing a typology of registers based on the differentiation of eight different fields of activity within context, and we then examine texts from six of these fields. In Section 4, we present a more detailed case study based on text samples from two registers, topographic procedures and narratives of journeys, and we show that they draw on the resources for representing processes of motion in different ways.

2. Research concerned with space: orders of systems and disciplines

2.1. Space in systems of different order

Space is a central feature of the human condition. It is highly complex in its own right as a *property of physical systems*. This complexity increases significantly when we also take into account the role of physical space in non-physical systems — e.g. when we consider how humans relate to and engage with space. We will say more about this shortly.

The complexity is also reflected in the *study* of space: there is a growing number of disciplines that deal with different aspects of space (e.g. Hall, 1966; Miller and Johnson-Laird, 1976; Willats, 1997; Levinson, 2003; Greene, 2004; Levinson and Wilkins, 2006; Freksa et al., 2000, 2003, 2005, 2008; Aurnague et al., 2007 and chapters therein; Barkowsky et al., 2007; Maillat, 2012; Thiengburanathum, 2013), including physics and astrophysics — with the dramatic change in the modern science of physical systems from Newton's classical theory to Einstein's relativistic model and beyond (e.g. Greene, 2004), biology (perception of space and the control of movement in space), sociology (the social construction of space), mathematics (the measurement, calculation, and modelling of space, e.g. in topology and geometry), geoinformatics (an inherently interdisciplinary science and technology for developing and using information science infrastructure to address the problems of geography, geosciences, and related branches of engineering, e.g. infrastructure engineering), linguistics (the representation of space in language), and other types of semiotic studies (e.g. the representation of space in gesture, drawings, and maps in relations to systems of projection (cf., e.g., Jiang et al., 2000; Peuquet, 2002; Wallgrün, 2004; Fibigerová et al., 2012).

We can make sense of this wide range of disciplines engaging with space in one way or another by recognizing the orders of manifestation of space in systems operating within different phenomenal realms: see Fig. 1. This diagram represents an ordered typology of systems operating in different phenomenal realms (see e.g. Halliday, 1996, 2005; Halliday and Matthiessen, 1999; Matthiessen, 2007)[1]:

- 1st order systems — **physical** systems
- 2nd order systems — physical systems + life [the ability to self-replicate, individuate, and evolve over time with genetic memory]: **biological** systems
- 3rd order systems — biological systems + value [social order: biological individuals as persons taking on distinct roles in different social networks; division of labour according to social roles]: **social** systems
- 4th order systems — social systems + meaning [semiotic order: persons operating as meaners taking on speech roles in semiotic (communication networks), creating and exchanging meaning]: **semiotic** systems

Space is, of course, a feature of first-order systems in the first instance — the "boundless, three-dimensional extent in which objects and events occur and have relative position and direction"[2] in **physical systems**. However, it is also "manifested" in higher-order systems. In **biological systems**, space is actively experienced: it is sensed and modelled by organisms through perceptual systems — they transform it into neural representations, which guide an organism's navigation around space. In **social systems**, space is given value — it is transformed into social constructs; for example, distance in space between speaker and listener is given value as a scale of intimacy extending from public via personal to intimate (see the work by Edward T. Hall, e.g. 1966). In **semiotic systems**, space is given meaning — our experience of space is transformed into shareable, interactively constructed semantic models of space, models that have been explored under the heading of "spatial ontologies" (e.g. Bateman et al., 2010).

2.2. An introductory example

Looked at "from above" in terms of the ordered typology shown in Fig. 1, i.e. from the vantage point of semiotic systems, we can see that a wide range of **semiotic resources** have evolved, or been designed, for the modelling of space. These resources

[1] Scientists from different disciplines have proposed ordered typologies that are similar in various respects. Thus the one presented here may be compared with one proposed by the astrophysicist Layzer (1990). One difference is that he groups 3rd and 4th order systems together; but from a semiotic point of view, it is important to distinguish them. In the present context, there is a crucial distinction between the social construction of space in terms of value in social system and the construal of space in terms of meaning in semiotic systems.

[2] Characterization from the Wikipedia entry on "space".