



Whatever happened to the Scene Encoding Hypothesis? Salience and pertinence as the missing links between the Usage-based Model and Scene Encoding

Simon Kasper
02/2023

Inhalt

1 Introduction.....	1
2 The Scene Encoding Hypothesis: some context and history.....	2
3 The rise of usage-based theories of language and their application	4
4 Competition or complementation between the SEH and the UBM?	5
5 “Cognitive salience”: from stopgap to a bridge between UBM and SEH?.....	8
6 Salience and pertinence as basic categories of meaningfulness	10
7 Salience and pertinence as a bridge between the SEH and the UBM.....	13
8 Conclusion	15
References.....	15

1 Introduction

Construction grammars look back on 35 years of theoretical and empirical research. Within these three and a half decades some major shifts of focus have taken place in theory and in practice. One of the, if not the, most profound shift of focus has been that from a qualitative to a quantitative approach to grammatical competence and structure. The former is represented by theoretical and empirical work in the wider context of the *Scene Encoding Hypothesis* (henceforth “SEH”; Goldberg 1995: 39) according to which grammatical structure, more precisely “argument structure”, reflects how people perceive situations and events. The latter, quantitative, approach came up in the context of the *Usage-Based Model* of grammatical structure and competence (henceforth “UBM”; cf. Langacker 2000, but also Goldberg 2006, 2019). According to that model, the structure of grammars and our grammatical competence, as well as our “output” performance, is fundamentally shaped by the quantitative properties of the linguistic input, mediated by cognitive entrenchment.

The present thinkpiece starts from the observation that the shift of focus from the SEH (section 2) to the UBM (section 3) within the research on CxG was (and the current focus continues to be) characterized by the negligence of the SEH tradition. It is discussed what is the relationship between the respective explanatory scopes of the SEH and the UBM within the larger context of cognitive constructionist linguistics (section 4). In this context I will argue that the disregard of the SEH in favor of the UBM is not primarily due to diverging theoretical assumptions, but to the practicalities of corpus-linguistic methodology. Notwithstanding, an empirical though not programmatic one-sided focus on the UBM produces theoretical problem that consists in “flat” explanations. The UBM crowd in Cognitive Linguistics has increasingly become aware of that problem which has led to the parallel increase in the prominence of the notion of “salience” within the UBM (section 5). I will argue that this notion, as it is applied in current research, is a potential bridge between the SEH and the UBM, since it may potentially (re-)introduce the neglected

phenomenal qualities into the modeling of language competence and structure. However, in its current state within the theory of the UBM, the notion of “salience” falls short of the involved cognitive and practical intricacies and thus needs a careful theoretical and empirical re-evaluation. I will attempt to indicate a potential direction of this re-evaluation (section 6). In the course of my considerations, I will show that not only the UBM needs complementation by the SEH for which salience may be the bridge, but also that the SEH, despite its principal correctness, is itself fundamentally underspecified with respect to its qualifications. The potential bridge between the UBM and the SEH via “salience” will also provide the qualifications the SEH was lacking so far (section 7).

2 The Scene Encoding Hypothesis: some context and history

With the Scene Encoding Hypothesis (henceforth “SEH”), Goldberg (1995: 39) expressed a central idea of early (*Cognitive Construction Grammar* (henceforth “CxG”), namely that

“[c]onstructions which correspond to basic sentence types encode as their central senses event types that are basic to human experience”.

When introducing the general concept a few lines earlier, Goldberg had chosen a slightly different wording, saying that “each of the basic clause-level constructions [...] can be seen to designate a humanly relevant scene.” The general idea behind the SEH is older, however; it can safely be traced back to Fillmore’s (1968) *Case Grammar* and (1977a, 1977b) *Scenes and Frames* stages of thinking. Back then, Fillmore (1977a: 61, capitals in the original) had already hypothesized that

“the function of [the CASE FRAME] [...] is to provide a bridge between descriptions of situations and underlying syntactic representations. It accomplishes this by assigning semantico-syntactic roles to particular participants in the (real or imagined) situation represented by the sentence. This assignment determines or constrains the assignment of a PERSPECTIVE on the situation [...]”

The term “perspective” here is important. With it Fillmore makes clear that the “situation” expressed by the “sentence” is not an objective state of affairs but depends on the language user’s role, position, or stance in relation to the situation. This is a major departure from what was going on in the field at the time, because many ideas about a general co-dependency between clausal semantics and syntax, which forebode the further development of the modeling of the syntax–semantics relationship to a considerable degree, go ultimately back to Gruber (1965) in particular, and, thanks to Chomsky’s *Generative Grammar*, the then-flourishing MIT milieu in general (henceforth “CL” [Chomskyan linguistics]). Stemming from the same CL milieu, Baker (1985: 57) later formulated the highly influential “Uniformity of Theta Assignment Hypothesis (UTAH)”, stating that

“[i]dentical thematic [= semantic role – SK] relationships between items are represented by identical structural relationships between those items at the level of D-structure [i.e., an initial syntactic representation prior to movement operations – SK].”



The appeal of hypotheses like the SEH and UTAH is easy to see: *they promise to uncover the relative semantic motivation of clause structures in contradistinction to the traditional assumption of the arbitrariness of signs*. De Saussure knew the concept of relative motivation of sign combinations, of course, but didn't ground it in the structure of events and situations, be they "objective" or "subjective", but rather in the idea of composition, i.e., the relative motivation of sign combinations "within" the more general arbitrariness. *What the SEH and UTAH ultimately promise, however, is an explanation of clause structures in the sense that we may be able to predict the lexical and grammatical makeup of utterances from non-linguistic cognitive and perceptual processes and the other way around.*

One of the crucial differences between the two lines of research leading to the SEH and the UTAH, respectively, is the functionalism¹-cum-computationalism-cum-modularism at the heart of CL – an assumption from which the CxG line of research has firmly distanced itself (cf. Lakoff & Johnson 1999), placing its bets on embodied realism and the cognitive and generalization commitments instead (cf. Lakoff 1990). In this research tradition (henceforth "CFL" [Cognitive-Functional Linguistics]), knowledge of language, including clause structures, and knowledge of situations and events, including those associated with clauses, share a common source, i.e., embodied experience, and common representational formats, among them modal representations like image-schemas. By contrast, CL reckons with different mental modules each of which operates via the manipulation of its own format of amodal meaningless symbols and which are connected to each other by interfaces. Furthermore, and crucially, while the amodal structures of the CL-fashioned computational mind, including the grammatical ones, are functionalist and therefore static descriptions, derivational histories between static structures and processes of meaning composition are not to be interpreted temporally and as necessarily mirroring cognitive activities. In contrast, the representations, or concepts, in CFL are modelled not as static-functional, but as "realistic" dynamic construals and conceptualizations of states of affairs, mediated by the peculiarities of the bodies of the perceivers and the embodied cognitive processes like categorization, schematization, association, profiling and so on. This leads to markedly different theoretical implications of the UTAH as a part of CL and the SEH as a part of CFL: *in the latter structural differences in clauses reflect differences in the (perceived and conceived) content structure of events or situations and in the modes and manners in which these events or situations are perceived and conceived, "modes and manners" pertaining to activities like choice of perspective, attentional focus ("profiling"), memory (concept association and retrieval) and categorization (recognizing something as something).*

The work within both lines of research has led to many insights which are widely taken as granted today and often form canonical knowledge about clausal semantics within their respective research areas. The categories which have been uncovered and which have been demonstrated to shape the grammatical realization of events and situations range from thematic (= semantic) roles over the causal structure of events, image-

¹ This functionalism as a paradigm in the philosophy of mind is not completely unrelated to, but also not to be confused with the linguistic form-follows-function functionalism which is often set in opposition to the function-follows-form formalism.

schemas, motion, space, subtle differences in agentivity, categories of affectedness and involvement to event construal, iconicity, animacy and possession and many more. The grammatical effects of these factors are the general morphological, prosodic and syntactic structure of clauses, from case assignment and agreement over word and constituent order to restrictions on argument structure.² Many theoretical claims related to these “scene-encoding” linguistic matters have been experimentally corroborated (e.g., Bornkessel-Schlesewsky & Schlewsky 2009a, Kemmerer 2014 for overviews).

3 The rise of usage-based theories of language and their application

Not long after its heyday around the 2000s, the SEH seems to have increasingly fallen in disregard or to have been neglected in favor of the uprising Usage-Based Model (henceforth “UBM”) of grammar (programmatically Langacker 2000³, Kemmer & Barlow 2000, Bybee & Hopper 2001) and its application in corpus linguistics. Usage-based cognitive and constructionist corpus-linguistic studies are legion today. The UBM has led to a “quantitative turn” (e.g., the eponymous title of Janda 2013) in Cognitive Linguistics, that stands in contrast to the more qualitative nature of the research conducted in the context of the SEH. The quantitative turn that came with the UBM is based on the assumption that

“[g]rammar is a dynamic system of emergent categories and flexible constraints that are always changing under the influence of domain-general cognitive processes involved in language use.”⁴ (Diessel 2019: 51)

Applied to the individual language user’s mastering their language, it is especially one aspect of language use that has become central to the UBM and later CxG: the statistical properties of the supposed linguistic input language users are confronted with, and in particular the type and token frequencies and the statistical preemption of constructions (cf. especially Goldberg 2006, 2019). The most important domain-general cognitive processes that “process” this input are association, categorization, entrenchment and

² See Croft (1991, 2012), Talmy (2000), Langacker (2008), Kasper (2015) and the respective chapters and entries in Evans & Green (2006), Dąbrowska & Divjak (2015), Dancygier (2018) for research in the context of CFL; see Gruber (1965), Fillmore (1968; 1977a; 1977b), Jackendoff (1972; 1983; 1990; 2002), Pinker (1989), Grimshaw (1990), Primus (1999), Hale & Keyser (2002), Levin & Rappaport-Hovav (2005), Ramchand (2008) in the more, but also less, mainstream Generative tradition.

³ This is a revision of his earlier usage-based model.

⁴ By the way, this quote contains an ambiguity in the notion of “grammar” that has been current for a long time now, namely its ambiguity between the micro-level ‘system-like grammatical “knowledge” of the individual’ (“knowledge” itself being highly ambiguous) and the macro-level ‘virtual or social, i.e., supra-individual institution’, to name just two readings among others. Both can be said to be related to “language use” somehow – the individual in relation to concrete linguistic performance, the virtual system in relation to *parole* in general and both can be said to “emerge” somehow in “language development, which in turn is driven by language use.” (Diessel 2019: 51). The pitfalls of this equivocation, whether intended or accidental, would deserve a discussion of its own. To name only one, which I call the structure/knowledge fallacy, it presumes that the results of linguistic research, reached via systematic linguistic methods ranging from reasoning via experimental hypothesis testing to statistic analyses, form the tacit knowledge of language users. The identification of scientific category systems with individual everyday knowledge is highly problematic. For instance, while individual everyday knowledge partially consists in heuristic rules of thumb and is oftentimes incoherent on the whole, this would disqualify scientific categorization. Furthermore, it harbors the risk of projecting macro-structural issues onto the micro-level (in the sense of Keller 2003).

schematization. Concerning the former two, the language user's task is to determine what in the input belongs to what, to form larger complexes (association) and to determine which category a given unit or complex in the input belongs to (categorization). The quantitative, or statistical, properties of the input are most closely linked to entrenchment. Langacker, who coined the term, characterizes its function in the following way:

“Automatization is the process observed in learning to tie a shoe or recite the alphabet: through repetition or rehearsal, a complex structure is thoroughly mastered, to the point that using it is virtually automatic and requires little conscious monitoring. [...] [A] structure undergoes progressive entrenchment and eventually becomes established as a unit.” (Langacker 2008: 16)

Thus, entrenchment strengthens memory representations and makes complex compositions available as units. *The degree of entrenchment of linguistic elements in the input is invoked to explain, among other things, the emergence of constructions (unit building), differences in grammaticality/acceptability judgments, their ease of processing/retrieval, their productivity, their preemption of alternative constructions and their susceptibility to change* (e.g., Divjak & Caldwell-Harris 2015, Schmid 2017). All these are based on categorization processes in the end. If, in addition, the type frequency of a construction is high, it becomes not only entrenched but also schematized, i.e., memory representations are formed of the abstract grammatical structures in the input, while the particulars, e.g., the lexical fillings, are disregarded.

From all this we can conclude that according to the UBM the statistical properties of the input influence via entrenchment which grammatical forms are associated lastingly with which semantic contents and construals in categorization processes.

4 Competition or complementation between the SEH and the UBM?

The (all too brief) summaries of the SEH and the UBM should serve to illustrate that they are located within similar, or even the same, overall linguistic endeavor(s), but have distinct *explananda*. Goldberg & Suttle (2010: 468) characterize the general question of this endeavor in the following way:

What is the nature of our knowledge of language? How do learners acquire generalizations such that they can produce an open-ended number of novel utterances based on a finite amount of input? Why are languages the way they are? In order to address these long-standing questions, many linguists with varying backgrounds have converged on several key insights that have given rise to a family of constructionist approaches including various versions of construction grammar. These approaches emphasize that speakers' knowledge of language consists of systematic collections of form–function pairings, or constructions, at varying levels of generality and complexity. [...] On the constructionist approach, no domain-specific, innate principles are assumed. The null hypothesis is that constructions are learned on the basis of the input, together with domain-general processes including attentional biases, principles of cooperative communication, general processing demands, and processes of categorization.



Against this background, the SEH serves to explain the relationship between semantic (“function” in the quote)⁵ and grammatical structures (“form”), i.e., between how we perceive and conceptualize situations and events on the one hand and how we encode them grammatically on the other based on (supposed) regular correspondences between substructures of both domains. The UBM serves to explain the relationship between inputs and outputs based on statistical properties and their (supposed) effects on the cognitive processes mediating them. While already leaning more to the UBM than to the SEH line of research, the quote above integrates both the SEH and the UBM foci and explananda in principle. The bridging term is that of “input” with a fitting degree of vagueness, leaving the “medial” nature of the input unspecified: it may comprise plain utterances (as in not-much-more-than-text corpora) or utterances relative to scenes, i.e., their lifeworld contexts (someone having perceived the former situation commenting *You sneezed the napkin off the table*).

The research setting most adequate to the overall endeavor, doing justice to both the SEH and the UBH, is the investigation of (mutual and cyclic) input–output relations of the kind in which language users actually find themselves living their everyday life in their lifeworlds where their utterances are embedded in their socio-cultural contexts all the time. Research practice has it, however, that the SEH and the UBM hardly ever appear together in empirical work on CxG.⁶ Rather, the research *praxis* seems to focus almost exclusively on quantitatively grounded studies using not-much-more-than-text corpora. Frequency counts and applying statistical procedures to those counts are what makes CxG easy to work with in corpus linguistics. So far, and quite understandably from a practical point of view, the SEH could not offer a similarly popular empirical procedure that would have made it similarly easily implementable in the research praxis, not to mention large data collections of authentic qualitative scene encoding suitable for quantitative analyses.

To be sure, the unification of the SEH and the UBM in practice would not only be desirable, but it would also simply be adequate to the subject-matter of the overall endeavor. The reality is that usage-based CxG too often means inferring knowledge structures (or language structures; see fn. 4 on this disjunction) or performance data from corpus frequencies too easily (cf. Blumenthal-Dramé 2012). I argue elsewhere that the one-sided reliance on the alleged relationship between frequency, entrenchment and knowledge/performance leads to *flat* (if not wrong) explanations as long as the quantitative approach is not complemented by a qualitative approach that takes the phenomenal qualities of the input (on all levels) into account (cf. Kasper 2020; Kasper [to appear a]). What I call “the homogeneity problem” in Kasper (to appear) is an example. Over 80 % of the languages in the World Atlas of Language Structures Online – many of which are genetically unrelated and without contact to each other – have the dominant order of ‘agent-

⁵ This way of rendering the construction conflates function (*valeur*) with (conceptual) content. I will use “function” here where it is common in the Cognitive Linguistics way of talking but most of the time “function” refers to conceptual content.

⁶ They do in Cognitive Grammar and in theory, where something like the SEH is implicit in the conceptual semantics, cf. Langacker (2008).



like participant > patient-like participant' in monotransitive clauses, while in only about 4 % of them the dominant order is the reverse (cf. Dryer 2013).⁷

If the processing, emergence (acquisition) and structure of constructions are explained by recourse to input frequencies and the effects of entrenchment, but where input frequencies themselves are not explained without an infinite regress via inputs and outputs, typological homogeneity across (unrelated) speech communities cannot be further explained. (Kasper [to appear])

The regress mentioned in the quote arises because what is the input to someone is the output of somebody else. If we explain the output performance by recourse to the input (maybe mediated by knowledge structures), then we must be aware that the input is again someone's output which will again be explained by their input and so on. What is explained this way is ultimately only the *structural relatedness* on some level of schematicity between constructions in the output and constructions in the input. This type of explanation is "flat" because it does not really lead "deep" into the structural makeup of constructions in the sense of its relative (semantic) motivation. What it obviously cannot explain is how the elements on the "formal pole" of the construction are related to those on the "functional pole", i.e., the elements or aspects of the situation or event perceived or conceived. To accomplish this, one has to move away from a purely quantitative approach already and factor in semantic notions, even if highly unspecific ones like "(no) synonymy" (in accounts of statistical preemption) or "semantic coherence" (like in accounts of productivity). These notions already attest a minimal sensitivity towards qualitative aspects of the elements on the functional pole in the cognitive representations of constructions. Only then somewhat "deeper" explanations become possible, especially those of constructional changes (either as competence modifications like in acquisition or as *langue* changes) and variation between languages or varieties. Even "deeper" types of explanation become possible only if scene encoding proper is taken into account. This requires the mapping between aspects, elements or sub-structures of perception and conceptualization on the one hand and grammatical elements, sub-structures or operations on the other, allowing us to test the SEH and related hypotheses referred to in section 2.

It should be clear, however, that although the UBM produces flat explanations when neglecting the qualitative account of language provided by the SEH, the SEH alone will produce a "narrow" (if not wrong) account of linguistic knowledge or of *langue* structures without the UBM. After all, this has been one reason for changing the focus from the SEH to the UBM in the first place. Explanations are narrow, if they are valid only for a part of language (here mainly argument structure) but cannot be generalized – here because many utterance types are not scene-encoding. Furthermore, overestimating the significance of the SEH for (the knowledge of) grammar means underestimating the degree of arbitrariness of grammar, and the dynamics of (mostly) arbitrary structures are exactly what the UBM is able to explain best by recourse to association, schematization, categorization, and entrenchment, i.e., matters of cognitive efficiency. As a result, then, the UBM

⁷ The WALS feature is the order of subject, object and verb. My count factors out the position of the verb and builds on Dryers semantic characterization of "subject" and "object" as 'agent-like' and 'patient-like'.

without the SEH is empty, the SEH without the UBM is blind, so to speak. Explanations overstressing the scope of the quantitatively oriented UBM are void of qualitative experiences, those overstressing the scope of the qualitatively oriented SEH are blind to the exigencies of arbitrary structures and the effects of cognitive routinization.

5 “Cognitive salience”: from stopgap to a bridge between UBM and SEH?

Admittedly, my characterization of the UBM as being purely quantitatively oriented and frequency-based has been a bit one-sided (and the same for the SEH the other way around). After all, Langacker, in his pioneering work on Cognitive Grammar, has long been emphasizing that a high frequency need not suffice for the constitution of a form–function unit in a language user’s cognition. He does state that, according to the usage-based account of grammatical knowledge, “units emerge via the progressive entrenchment of configurations that recur in a sufficient number of events to be established as cognitive routines.”⁶ (Langacker 2008: 220) But in the accompanying footnote on the same page he qualifies this statement as follows:

Under some conditions a unit (e.g. a new lexical item) can be learned from a single exposure. Thus the sheer number of usage events may be less important than some measure of cumulative psychological impact (involving additional factors like cognitive salience).

This statement is remarkable for several reasons. First and foremost, the significance of the “cumulative psychological impact” of something in the input may literally be even *more important* than its frequency. Secondly, this statement about the significance of the “cumulative psychological impact (involving additional factors like cognitive salience)” is relegated to a footnote, reflecting the sign of the times (late 2000s), namely the quantitative turn in cognitive linguistics at the expense of a more qualitative approach. Third, “cognitive salience” is established here (and throughout Langacker’s work) as a notion located *within* the UBM, and today it is generally treated as such. That is to say, “cognitive salience” is not conceived of as inherently connected to the SEH which is quite surprising as I will argue below. Fourth, Langacker neither identifies frequency alone as the cause of entrenchment, nor does he identify either frequency or “cognitive salience” as the causes, but he reckons with *both of these plus “additional factors”*. However, much of the corpus-linguistic practice within a quantitatively turned cognitive linguistics has investigated entrenchment without paying attention to “cognitive salience” (more on the notion below), and even more of it has neglected the aforementioned “additional factors”, ascribing entrenchment only to frequency and/or “cognitive salience”.

Now, what is this “cognitive salience”? For quite a long time, the notion has been a stopgap for anything that could not be reduced to frequency, resulting in a conceptual mess. It subsumes concepts from bottom-up perception, concepts from top-down categorization, concepts from different research fields and traditions, and it does not distinguish between individual linguistic experiences and conventionalized constructions when ascribing “salience” to something. As “prominence”, it hid any conceivable opposition between something sticking out from something else in any conceivable modal or symbolic format, in any higher or lower cognitive activity, or even in grammatical structures of the

langue; sometimes “salience” was attributed to the object, sometimes to the subject, sometimes to the grammar, and so on.⁸ Although there have been more sophisticated conceptions of salience (plus “pertinence”, see below) around for some time that in addition have been fruitfully applied empirically, cognitive linguistics has only recently intensified its efforts to relieve “salience” of its status as a stopgap and disentangle what is involved there (Blumenthal-Dramé et al. 2018; Schmid 2016, 2017a, 2017b; Schmid & Günther 2017), but without doing justice to the aforementioned conceptions, in which many distinctions suggested in Schmid & Günther (2017) are anticipated – among others (cf. Purschke 2011, 2014a, 2014b, 2015, 2018, and, following Purschke, Kasper (2015 [2012], 2020).⁹ What is the tidied-up notion of “salience”? According to Günther et al. (2017: 305),

salience could provisionally be defined as a multidimensional set of processes which effect that cognitively represented information (variably originating from sensory input or long-term memory) becomes selected for current processing by a particular individual at a particular point in time in a particular constellation of external (social and situational) and internal (cognitive) contexts.

Such a definition of salience remains extensionally as heterogeneous as ever, but the heterogeneity is under terminological control now (via subtypes of “salience”), which is no small accomplishment. What is still missing, unfortunately, is the re-introduction of qualities into the UBM. “Salience” is only formally determined and is still something being selected from something else, the criteria of selection remaining largely unspecified.

Thus defined, “salience” cannot serve as a bridge between the UBM and the SEH, even less if the causes of something being salient, i.e., the criteria of selection, are identified as their novelty or surprisal values and if novelty and surprisal are in turn defined by another recourse to relative frequencies. Then Langacker’s conjecture that entrenchment may be caused by a single exposure to some input cannot be true. Perhaps it is indeed false. But lived experience says it happens. And there are further reasons why a formal (and even more an ultimately quantitative) definition of “salience” lacks something.

⁸ According to Langacker, something’s being salient (or “prominent”) means something sticks out in perception or conceptualization as opposed to something else, spanning quite heterogeneous oppositions, e.g., foreground vs. background in vision, profile vs. base in constructions, something real vs. something abstract in conceptualization, a prototype (or archetype) vs. less prototypical instances of a category, and much more (cf. Langacker 2008: 66 and *passim*).

⁹ Günther et al. (2017: 296) mention Purschke (2014a) in passing, stating that he belongs to those who “define salience as a primarily or even exclusively social-affective/evaluative phenomenon, and thus propose a concept of salience that is specific to sociolinguistics in many respects [...].” This is a misrepresentation of his model which integrates, among other things, conspicuity, evaluation and subsequent action, drawing from sociological, philosophical and cognitive-psychological (bottom-up and top-down) work on the topic. Some studies in which Purschke’s approach has been fruitfully applied are Kiesewalter (2014, 2019), Hettler (2018), Kleene (2020) and Entringer (2022). At the same time, socio- or variationist linguistics is *the* prime example for the significance a usage-based conception of “salience”: salience is all about the perceptual conspicuity, evaluation, and pragmatic consequences of stimuli. What else in language is more conspicuous, subject to evaluation, and pertinent to changes in use than unexpected/novel variants that are due to social factors (in the wide sense, including variation dimensions like regional origin, education etc.) and a reflection of competence differences?

6 Salience and pertinence as basic categories of meaningfulness

The key to single-exposure entrenchment is psychological impact, and what impacts psychologically is the *meaningfulness* of something experienced, and this, in turn, refers us back to the qualities of experience. I call this phenomenon “meaningfulness” to distinguish it from the narrower “linguistic meaning”, and it encompasses all sorts of significance, importance or relevance to an organism (cf. Kasper 2020). In order to serve as a bridge between the quantitative approach of the UBM and the qualitative approach of the SEH, the definition of “salience” – and all the heterogeneous matters it comprises – requires reference to meaningfulness. Meaningfulness cannot meaningfully be reduced to relative quantities because otherwise the theory of grammatical competence and performance becomes vacuous: it loses its relevance for the language users whose knowledge and experience it is supposed to explain.

The abovementioned approaches to “salience” by Purschke and Kasper take up those parts of Alfred Schütz’ (and Thomas Luckmann’s) “structures of the life-world” (Schutz/Luckmann 1974; 1989) dealing with the individual’s “knowledge of the life-world” (including “relevance” and “typicality”) and the “province of practice” (an action-theory) and they combine this with results from cognitive psychology (of perception, action and memory), among other things.¹⁰ The crucial point in Purschke’s and Kasper’s accounts is that they do not grant the cognitive psychological account a privileged status vis-à-vis the sociological account with regard to claims of validity. They rather start with Schutz/Luckmann (1974: 3) from the assumption that

[t]he sciences that would interpret and explain human action and thought must begin with a description of the foundational structures of what is prescientific, the reality which seems self-evident to men remaining within the natural attitude. This reality is the everyday life-world. It is the province of reality in which man continuously participates in ways which are at once inevitable and patterned.

Such a description methodically precedes any empirical, cognitive-psychological or other, theory because the lifeworld experience is the *conditio sine qua non* of an adequate description of the explananda of the special theory. The identification and exposition of the cognitive-psychological explananda must not fall back behind the distinctions laid out in the lifeworld descriptions, because otherwise there is the risk that the results of the special theory cannot be traced back to people’s experience. I cannot see where cognitive linguistics has done that at this point. This concerns “salience” directly. Two examples may suffice.

For instance, in the cognitive-linguistic notion of salience the two concepts of “imposed” and “motivated thematic relevance” (Schutz/Luckmann 1974, ch. 3 B) are often conflated. The relevance (importance, significance) of a phenomenon may, on the whole, arise from two sources: on the one hand, something may grab our attention as a function of some stimulus qualities sticking out from their surroundings in relation to our perceptual apparatus; on the other hand, we may direct our attention to a stimulus quality but

¹⁰ The most important reference points are a critical philosophy of psychology (Hartmann 1998) and the action theory and philosophical program of Methodical Culturalism (Hartmann 1996; Hartmann & Janich 1996, 1998; Janich 2015)

not to others as a function of our hierarchically structured and self-imposed goals of action. Conflating these modes of attending deprives us (as linguists) of the possibility of adequately applying this distinction to questions of linguistic entrenchment. Purschke (foundational 2011) and Kasper (2015 [2012], 2020) capture this qualitative and processual difference as that between “salience” and “pertinence”, respectively. Kasper (2020: 245–246; my translation) derives the latter as follows:

We lead our wake life by pursuing purposes most of the time. This means we are doing things to bring about or maintain particular situations. [...] That what we do to bring about these situations are act(ion)s. [...] In order to effect our bigger and smaller purposes [...] [w]e need a sufficiently distinct concept of the corresponding eventuality. We must be able to distinguish the intended eventuality from the present situation to assess which actions need to be executed and how they have to be executed in order to realize the intended situation. By becoming active motorically I gradually perceive my own movement and the objects that I have previously conceptualized anticipatorily. [...] While we execute the actions to produce the desired eventualities, we confront ourselves with exactly those objects that have been part of our action plan, except that they are actually perceived now [...]. We act in the anticipated way, so that the highest-level purpose gets realized [...]. We call the objects or object features that are part of such an action plan *pertinent* in relation to a purpose. (Kasper 2020, 245–246; my translation, emphasis in the original)¹¹

Pertinence, thus characterized, is complemented by salience: sometimes we encounter objects or object features that have not been part of our action plans.

That what has not been part of our action plans and what we have not anticipatorily conceptualized, happens to us, befalls us. Among the things happening to us are our own failed actions, the actions and the behavior of others [...] but also natural events [...]. Experiences befalling us in this way effect reactions or reflexes in us. In contrast to actions they cannot be desisted from or suspended, and they are not the result of means-ends considerations. They happen and proceed automatically given particular conditions. As such they belong to (mere) behavior. Autonomous bodily processes like the vegetative ones belong to them, too. [...] When something unexpected happens to me, while I am acting to realize some intended situation I had anticipatorily conceptualized, this stimulus forces me toward a reaction, forces me to direct my attention to it and to deal with it so that afterwards I can further pursue my original purpose. [...] Dealing with this unexpected stimulus means for me that I have to insert it as a further low-level purpose into my original action plan. We call objects or object features *salient*, that grab our attention – either *per se* or away from the elements or our current action plan. (Kasper 2020: 246–247; my translation, emphasis in the original)¹²

The second example of how a lifeworld-based account of “salience” differs from the cognitive-linguistic one is closely related to this first one and arises from the “pragmatic motive” which characterizes the way we lead our lives in the lifeworld. As Schutz/Luckmann (1974: 6; italics in the original) state “our natural attitude of daily life is pervasively determined by a *pragmatic motive*. [...] I must understand my life-world to the degree necessary in order to be able to act in it and operate upon it.” The pragmatic motive defines the functions of “salience” in a crucial sense. In fact, it constitutes the basic conceptual scheme in relation to which salience and pertinence become the building blocks of meaningfulness. As Kasper puts it,

¹¹ See also Purschke (2011, ch. 2.3), Kasper (2015: 137–143).

¹² See also Kasper (2015: 127–129), pointing out that salience is a relational matter between features of an organism’s surrounding and the perceptual makeup of the organism.

in everyday life, in which we hardly ever sit there completely devoid of interest and not pursuing a purpose, we are converting salient stimuli into pertinent stimuli all the time. Put differently, we constantly insert that which happens to us unexpectedly into our purpose structures in order to remain capable of acting. (Kasper 2020: 246–247; my translation)¹³

(That is, if what is salient forces us to change our course of action at all. Not everything that is salient needs to be converted, because it need not obstruct our action at all.)

I'll give an illustration of a typical case from variationist linguistics where salience and pertinence lead to a competence change via entrenchment following a single exposure. What follows is quite common in the contact between speakers with competence differences due to different social backgrounds and with a difference in power between them. This has been extensively studied using regional variation in German. For instance, it has been part of many biographies of German speakers whose first acquired variety is a dialect that they have experienced negative feedback from school teachers for their regional variants, because normatively school is the domain of Standard German. A personal anecdote, quite typical, may illustrate this (but see Schmidt/Herrgen [2011] together with Purschke's work for a systematic account). I once wrote *neber* ('near' in a Hessian regiolect) in an essay in elementary school, which already was the attempt to accord to Standard German *neben*, my true regional variant being something like *näwwer*. My teacher didn't say anything but marked the mistake. At home some family member, proficient in both regiolect and standard, looked at the essay and laughed about my mistake, though not to ridicule me; it was the only mistake in the essay. However, I never made that mistake again. *Neber* in the perceptual context of an essay where the context is associated with Standard German norm expectations was pertinent to my teacher and my family member. The laughter in turn constituted my input. As such it was highly salient for me, and in order to never experience it again the proper use of *neben*, as a form–function pairing, became pertinent to me at once, i.e., this single negative feedback experience (for me, at least) led me to build the Standard use of the word into my future Standard German performance.¹⁴ To understand this competence modification based on a single experience one has to take both salience and pertinence into account. The laughter may have been perceptually conspicuous, i.e., salient, for me in this context. But this alone does not suffice for my competence to change. I could have continued with writing *neber* like before. The subjective relevance of this laughter, i.e., its pertinence, in terms of my self-image and the purposes I set myself to pursue, was decisive.

The characterization of “salience” as ‘salience and pertinence under the pragmatic motive’ (henceforth S&P) has been all-to-brief, highlighting only some global aspects and leaving out many finer distinctions and further dimensions of both salience and pertinence (see Schutz/Luckmann 1974, 1989; Purschke 2011, 2014a, 2014b, 2015, 2018;

¹³ In fact, even the absence of an expected (pertinent) stimulus may be salient. And even an expected (pertinent) stimulus may be salient when encountered because it may not fit expectations in all respects.

¹⁴ For details regarding this “setting”, cf. Purschke's work which is located in the context of the “linguistic dynamics” approach; cf. Schmidt (2010), Schmidt/Herrgen (2011).



Kasper 2015 [2012], 2020 for details).¹⁵ The approach as a whole holds that salience bespeaks us primarily as natural beings and serves mainly vital functions, while pertinence bespeaks us primarily as socio-cultural beings and allows us to pursue self-imposed individual or we-intentional goals (cf. Kasper [to appear b]). The intricacies of the relationship between both concepts and its anthropological embedding cannot be discussed here (but see Kasper 2020, ch. 4). Nevertheless, it should be possible by way of a conclusion to point to some major benefits of such a conception of “salience” as ‘salience and pertinence under the pragmatic motive’. The main benefit is that this conception may serve as a bridge between the two lines of research represented by the SEH and the UBM.

7 Salience and pertinence as a bridge between the SEH and the UBM

How can the S&P approach serve as a bridge between the quantitatively oriented research in the context of the UBM and the qualitatively oriented research in the context of the SEH? Salient and pertinent stimuli are meaningful. Salient stimuli automatically draw our attention to them as a function of their features and the biological makeup of our senses. They ultimately serve vital functions (such as the organism’s well-being). Pertinent stimuli are those we direct our attention to – either with full awareness or routinely¹⁶ – because they have a functional role in our course of action. They are fundamentally culturally and socially shaped. As such they are associated with relevance criteria, attitudes, different types of motivations, stereotypes and so on (cf. Purschke 2014).

The significance of S&P to the SEH is straightforward. The basis of the SEH is “scene encoding”, of course. However, “scenes” are not sufficiently structured by themselves. If they were, what happens in an organism’s environment and affects its sense organs should be the “same” for different organisms. It is not, of course. Every species has its own environment (cf. Uexküll 1926, 2010). When it comes to humans and, say, visual perception, we can in fact describe perception as similarly structured on a certain (low) perceptual level. Eventualities (as a cover term for situations, events, states, processes and activities) are structured in terms of figure–ground configurations. There are salient stimuli that stick out from their perceptual contexts as a function of their features in relation to our perceptual apparatus. But this isn’t scene encoding. If it were, we would encode any eventuality on that same (low) perceptual level. We don’t do that. We may say *Alex is preparing coffee*, although what happens on the low perceptual level is this: a hand is moving to a cup; then the hand and the cup are moving together to a coffee dispenser; then the cup is standing there; then the hand moves away and toward a water tank; then the hand and the water tank move away from the coffee dispenser and toward the faucet etc. There are no definite low-level perceptual correlates of the boundaries of the event of *Alex preparing coffee*, but *Alex is preparing coffee* binds them together all the same. This requires

¹⁵ Purschke (2011: 85–87) explicates the relationship between his S&P approach to Schutz’ (and Luckmann’s) account of relevance (Schutz/Luckmann 1974, part III B).

¹⁶ We distinguish automatic and routinized activities: Automatic ones start whenever the organism is confronted with a particular stimulus configuration, and they run through until the end, if not stopped externally. They are instances of (mere) behavior. Routinized activities are originally act(ion)s that thanks to frequent successful repetition need not be executed attentively any more. They can be interrupted and cancelled internally, i.e., by the organism if necessary.

knowledge of the action schema of making coffee which gets its identity only via culturally and individually varying criteria of pertinence operating on top of the low perceptual boundaries (cf. Kasper 2015 [2012]: 280–309). In other words, there are no sufficient criteria on the level where salience operates for the bounding of eventualities. This does not only concern eventualities. Whether we identify the cup thing as a thing, as a container, as a mug for liquids, or as something that can be used together with a hardcover book as an instrument for catching a wasp indoors can also not be settled on the low-level perceptual (salience) but on the high-level conceptual (pertinence) level. It depends on present purposes. This has huge consequences for what it means to “know” the meanings on the “functional” pole of argument structure constructions. The formal side may be identical on a schematic level, say [NPNOM V NPACC]. What is on the “function” side may range from simple (‘Alex lifting a mug’) via complex (‘Alex preparing coffee’) to extremely complex (‘Russia privatizing the Soviet industry’) eventualities that require different cognitive operations in comprehension. The message is this: Together, salience and pertinence, as the basic categories of meaningfulness, provide *the criteria* for categorization, association, and schematization activities in cognition. Whether some perceptual input is categorized as ‘Alex preparing coffee’ or as ‘something happening’ or as a sequence of low-level figure–ground configurations cannot be determined by reference to just past input quantities. These quantities do not provide sufficient criteria

- for determining what in the input is to be associated with what else,
- for determining what in the input is to be categorized *as* what,
- for determining what is to be abstracted (literally ‘drawn away’) and what is not, i.e., which features or elements of a phenomenon are “retained” across repeated instances, and which are disregarded.

The UBM is all about association, categorization, schematization, and entrenchment. If it is to refer to meaningfulness – and it should do so to avoid flat (or false) explanations – then it should also seek the abovementioned, missing criteria in salience and pertinence and not just in frequency.

But the SEH needs S&P, too, just like the UBM does. In a historical corpus study dealing with subject–object and (indirect) object–(direct) object ambiguities I have shown that such ambiguities can be successfully disambiguated by a combination of animacy and phrase order information (cf. Kasper 2020). Neurolinguistic studies indicate that people in fact do use these features (Bornkessel-Schlesewsky/Schlesewsky 2009b). What is more, I argue that this “strategy” cannot be attributed to relative frequencies of form–function pairings in the linguistic input but that this “successful” association between form and content features must be explained by recourse to the phenomenal qualities of the relationship between the involved objects in the eventuality, namely their relative degrees of animacy, and the order of their being uttered. Higher animacy and being uttered first are – very much in the spirit of the SEH – indexes of an object’s role as a responsible agent, or causer, in the expressed non-linguistic event (cf. Kasper 2015 [2012]). As such, the special role of that agent or causer object in language is a direct



reflection of its being salient in non-linguistic perception (cf. Kasper 2020, ch. 4 for attempt at explanation). The intricate relationship between semantic and formal features of ambiguous and unambiguous clauses is modelled using the S&P concepts on different levels of abstraction. Whenever such clauses show unambiguous case-marking, this formal mechanism overrides the semantic indexes, i.e., higher animacy and “coming first”. This is because case-marking, as a grammatical mechanism, is acquired by operational conditioning – a form of cultural learning, while the effects of animacy and “coming first” in events belong to our biological makeup. I further argue based on anthropological grounds that such “higher” forms of (self-)conditioning have the power to override “lower” forms of natural biases (similar to system 2 processes overriding system 1 processes in the sense of Kahneman 2012; cf. Kasper 2020, ch. 4; Kasper [to appear b]).

This last study demonstrates that there is something important missing from the formulation of the SEH: an account of what “relevant” means in “humanly relevant scenes” and what “basic” means with respect to “event types that are basic to human experience” (cf. Kasper 2015: 278–279). S&P are supposed to provide the answers to these questions.

8 Conclusion

Summing up, despite the recent popularity of the UBM in the corpus linguistic research praxis the SEH needs to be revived. Within the overall cognitive linguistic endeavor, the explanatory potentials of the UBM and SEH need to complement each other for its success. But because of their conceptual disconnection they need to be bridged. The notion of “salience”, employed primarily in the context of the UBM, lends itself to become that bridge, since one of the central mechanisms in cognitive linguistics, entrenchment, is supposed to depend on both the quantitative (frequency) and the qualitative (“salience”) properties of the language user’s input. To achieve this status, “salience” had, firstly, to be grounded in a qualitative account of meaningfulness, and, secondly, to be connected to what reads “basic to human experience” and “humanly relevant” in the SEH. Drawing on Alfred Schutz’ work on the structures of the lifeworld, I tried to reconstruct “salience” as ‘salience and pertinence under the pragmatic motive’ and attempted to demonstrate how these concepts may serve as the basic categories upon which meaningfulness rests, thereby adumbrating what “basic to human experience” and “humanly relevant” may mean. In this way the concept of meaningfulness, constituted by salience and pertinence under the pragmatic motive, may function as a bridge between the SEH and the UBM.

References

- Baker, Mark C. (1985): *Incorporation. A theory of grammatical function changing*. Dissertation, MIT. Massachusetts.
- Bornkessel-Schlesewsky, Ina/Schlesewsky, Matthias (2009a): *Processing syntax and morphology. A neurocognitive perspective*. Oxford: Oxford University Press.
- Bornkessel-Schlesewsky, Ina/Schlesewsky, Matthias (2009b): *The role of prominence information in real-time comprehension of transitive constructions. A cross-linguistic approach*. *Language and Linguistics Compass* 3(1), 19–58.



- Blumenthal-Dramé, Alice (2012): Entrenchment in usage-based theories. What corpus data do and do not reveal about the mind. Berlin/Boston: De Gruyter Mouton.
- Bybee, Joan L./Hopper, Paul J. (2001): Introduction to frequency and the emergence of linguistic structure. In: Bybee, J. L./Hopper, P. J. (Eds.): Frequency and the emergence of linguistic structure. Amsterdam/Philadelphia: John Benjamins, 1–24.
- Croft, William (1991): Syntactic categories and grammatical relations. The cognitive organization of information. Chicago: University of Chicago Press.
- Croft, William (2012): Verbs. Aspect and causal structure. Oxford: Oxford University Press.
- Dąbrowska, Ewa/Divjak, Dagmar (eds.) (2015): Handbook of cognitive linguistics. Berlin/Boston: De Gruyter Mouton.
- Dancygier, Barbara (ed.) (2018): The Cambridge handbook of cognitive linguistics. Cambridge: Cambridge University Press.
- Divjak, Dagmar/Caldwell-Harris, Catherine L. (2015): Frequency and entrenchment. In: Dąbrowska, E./Divjak, D. (eds.): Handbook of cognitive linguistics. Berlin/Boston: De Gruyter Mouton, 53–75.
- Diessel, Holger (2019): Usage-based construction grammar. In: Dąbrowska, E./Divjak, D. (eds.): Cognitive linguistics. A survey of linguistic subfields. Berlin/Boston: De Gruyter Mouton, 50–80.
- Dryer, Matthew S. (2013): Order of Subject, Object and Verb. In: Dryer, Matthew S./Haspelmath, Martin (Eds.): WALS Online (v2020.3). URL: <https://wals.info/feature/81A#2/18.0/152.9> [last accessed 2022-02-05]
- Entringer, Nathalie (2022): Vun iwwerfëlltene Bussen bis bei déi beschte Witzer. Morphologische Variation im Luxemburgischen – Eine variations- und perzeptionslinguistische Studie. Dissertation, Université du Luxembourg. Luxembourg.
- Evans, Vyvyan/Green, Melanie (2006): Cognitive Linguistics. An introduction. Edinburgh: Edinburgh University Press.
- Fillmore, Charles (1968): The case for case. In: Bach, E. (Ed.): Universals in linguistic theory. New York: Holt, Rinehart and Winston, 1–88.
- Fillmore, Charles J. (1977a): The Case for Case Reopened. In: Cole, Peter/ Sadock, Jerrold M. (Eds.): Syntax and Semantics. Vol. 8. Grammatical Relations. New York / London: Academic Press, 59–81.
- Fillmore, Charles J. (1977b): Scenes-and-Frames Semantics. In: Zampolli, Antonio (Ed.): Linguistic Structures Processing. Vol. 5. Amsterdam et al: North Holland, 55–81.
- Goldberg, Adele E. (1995): Constructions. A Construction Grammar approach to argument structure. Chicago/London: University of Chicago Press.
- Goldberg, Adele E. (2006): Constructions at work. Oxford: Oxford University Press.
- Goldberg, Adele E. (2019): Explain me this. Creativity, competition, and the partial productivity of constructions. Princeton: Princeton University Press.
- Goldberg, Adele/Laura Suttle (2010): Construction grammar. Wiley Interdisciplinary Reviews: Cognitive Science 1, 468–477.
- Grimshaw, Jane (1990): Argument structure. Cambridge: MIT Press.
- Gruber, Jeffrey (1965): Studies in lexical relations. Dissertation, MIT. Massachusetts.

- Günther, Franziska/Müller, Hermann J./Geyer, Thomas (2017): Saliency, Attention, and Perception. In: Schmid, H.-J. (Ed.): *Entrenchment and the psychology of language learning: How we reorganize and adapt linguistic knowledge*. Berlin/Boston: De Gruyter Mouton, 289–35.
- Hale, Ken/Keyser, Samuel J. (2002): *Prolegomenon to a Theory of Argument Structure*. Cambridge: MIT Press.
- Hartmann, Dirk (1996): Kulturalistische Handlungstheorie. In: Hartmann/Janich (1996), 70–114.
- Hartmann, Dirk/Janich, Peter (Hrsg.) (1996): *Methodischer Kulturalismus. Zwischen Naturalismus und Postmoderne*. Frankfurt: Suhrkamp.
- Hartmann, Dirk/Janich, Peter (Hrsg.) (1996): *Die kulturalistische Wende. Zur Orientierung des philosophischen Selbstverständnisses* Frankfurt: Suhrkamp.
- Hettler, Yvonne (2018): *Saliency, Bewertung und Realisierung regionaler Sprachmerkmale in Bremen und Hamburg*. Hildesheim et al.: Olms.
- Jackendoff, Ray (1972): *Semantic interpretation in Generative Grammar*. Cambridge: MIT-Press.
- Jackendoff, Ray (1983): *Semantics and cognition*. Cambridge: MIT Press.
- Jackendoff, Ray (1990): *Semantic structures*. Cambridge: MIT Press.
- Jackendoff, Ray (2002): *Foundations of language*. Oxford: Clarendon.
- Janda, Laura A. (Ed.) (2013): *Cognitive Linguistics: the quantitative turn. The essential reader*. Berlin/Boston: De Gruyter.
- Janich, Peter (2015): *Sprache und Methode*. Tübingen: Francke.
- Kasper, Simon (2015): *Instruction Grammar. From Perception via Grammar to Action*. Berlin/Boston: De Gruyter. URL: <https://doi.org/10.1515/9783110430158> [Originally 2012: *Grounding the linking competence in culture and nature. How action and perception shape the syntax-semantics relationship*. Doctoral dissertation, Marburg. URL: <https://archiv.ub.uni-marburg.de/diss/z2014/0392/pdf/dsk.pdf>]
- Kasper, Simon (2020): *Der Mensch und seine Grammatik. Eine historische Korpusstudie in anthropologischer Absicht*. Tübingen: Narr.
- Kasper, Simon (to appear a): *Frequency and iconicity revisited. Towards an integrative ecological perspective*. In: Wolf, Johanna (ed.): *Living Economies – Principles and Strategies of Economy in Language Processing*. Berlin: Frank & Timme.
- Kasper, Simon (to appear b): *Animal symbolis interveniens. Ein Versuch zur Anknüpfung an die philosophisch-anthropologische Sprachtheorie Arnold Gehlens*. *Internationales Jahrbuch für Philosophische Anthropologie*.
- Keller, Rudi (2003): *On Language Change: The Invisible Hand in Language*. London/New York: Routledge.
- Kemmer, Suzanne/Barlow, Michael (2000): *Introduction. A usage-based conception of language*. In: Barlow, M./Kemmer, S. (Eds.): *Usage-based models of language*. Stanford: CSLI Publications, i–xxviii.
- Kemmerer David (2015): *Cognitive Neuroscience of Language*. New York/London: Psychology Press.

- Kiesewalter, Carolin (2014): Salienz und Pertinenz. Zur subjektiven Dialektalität remanenter Regionalismen des Mittelbairischen. *Linguistik online* 66(4/14), 111–134.
- Kiesewalter, Carolin (2019): Zur subjektiven Dialektalität regiolektaler Aussprachemerkmale des Deutschen. Stuttgart: Steiner.
- Kleene, Andrea (2020): Attitudinal-perzeptive Variationslinguistik im bairischen Sprachraum. Horizontale und vertikale Grenzen aus der Hörerperspektive. Mannheim: IDS-Verlag.
- Lakoff, George (1990): The invariance hypothesis. Is abstract reason based on image-schemas? *Cognitive Linguistics* 1(1), 39–74.
- Lakoff, George/Johnson, Mark (1999): *Philosophy in the flesh. The embodied mind and its challenge to Western thought*. New York: Basic Books.
- Langacker, Ronald W. (2000): *Grammar and conceptualization*. Berlin/New York: de Gruyter.
- Levin, Beth/Rappaport Hovav, Malka (2005): *Argument realization*. Cambridge: Cambridge University Press
- Pinker, Steven (1989): *Learnability and cognition. The acquisition of argument structure*. Cambridge: MIT Press.
- Primus, Beatrice (1999): *Cases and Thematic Roles*. Tübingen: Niemeyer.
- Purschke, Christoph (2011): *Regionalsprache und Hörerurteil. Grundzüge einer perzeptiven Variationslinguistik..* Stuttgart: Steiner.
- Purschke, Christoph (2014a): I remember like it was interesting. Zur Theorie von Salienz und Pertinenz. *Linguistik online*, 66(4/14), 31–50.
- Purschke, Christoph (2014b): REACT – Einstellungen als evaluative Routinen in sozialen Praxen. In: Cuonz, Christina/Studler, Rebekka (Eds.): *Sprechen über Sprache. Perspektiven und neue Methoden der Spracheinstellungsforschung*. Tübingen: Stauffenburg, 123–142.
- Purschke, Christoph (2015): REACT – A constructivist theoretic framework for attitudes. In: Preston, Dennis/Prikhodkine, Alexei (Eds.): *Responses to language varieties. Variability, processes and outcomes*. Amsterdam/Philadelphia: John Benjamins, 37–54.
- Purschke, Christoph (2018): Language regard and cultural practice. Variation, evaluation, and change in the German regional languages. In: Evans, Betsy/Benson, Erica/Stanford, James (Eds): *Language regard: methods, variation, and change*. Cambridge: Cambridge University Press, 245–261.
- Ramchand, Gillian (2008): *Verb meaning and the lexicon. A first-phase syntax*. Cambridge: MIT Press.
- Schmid, Hans-Jörg (2010). Does frequency in text instantiate entrenchment in the cognitive system. In: Glynn, Dylan/Fischer, Kerstin (Eds.): *Quantitative methods in cognitive semantics: Corpus-driven approaches* Berlin/New York: De Gruyter Mouton, 101–133.
- Schmid, Hans-Jörg (2017a). A framework for understanding linguistic entrenchment and its psychological foundations . In: Schmid, H.-J. (Ed.): *Entrenchment and the*



- psychology of language learning: How we reorganize and adapt linguistic knowledge. Berlin/Boston: De Gruyter Mouton, 9–35.
- Schmid, Hans-Jörg (Ed.) (2017b): Entrenchment and the psychology of language learning: How we reorganize and adapt linguistic knowledge. Berlin/Boston: De Gruyter Mouton,
- Schmid, Hans-Jörg/Günther, Franziska (2017): Toward a unified socio-cognitive framework for salience in language. In: Blumenthal-Dramé, A./Hanulíková, A./Kortmann, B. (Eds.): Perceptual linguistic salience. Modeling causes and consequences (Frontiers in Psychology Research Topics), 32–36.
- Schmidt, Jürgen Erich (2010): Language and space. The linguistic dynamics approach. In: Auer, P./Schmidt, J. E. (Eds.), Language and space. An international handbook. Theories and methods, vol. 1. Berlin/New York: De Gruyter Mouton, 201–225.
- Schmidt, Jürgen Erich/Herrgen, Joachim (2011) Sprachdynamik. Eine Einführung in die moderne Regionalsprachenforschung. Berlin: Erich Schmidt Verlag.
- Schutz [Schütz], Alfred/Luckmann, Thomas (1974): The structures of the life-world. [Vol. I.] Translated by Richard M. Zaner and H. Tristram Engelhardt Jr. London et al.: Heinemann.
- Schutz [Schütz], Alfred/Luckmann, Thomas (1989): The structures of the life-world. [Vol. II.] Translated by Richard M. Zaner and David J. Parent. Evanston, Illinois: Northwestern University Press.
- Talmy, Leonard (2000): Toward a Cognitive Semantics. 2 Vols. Cambridge: MIT Press.
- von Uexküll, Jakob ([1920] 1926): Theoretical biology. New York: Harcourt.
- von Uexküll, Jakob ([1934] 2010): A foray into the worlds of animals and humans. With a theory of meaning. Minneapolis: University of Minnesota Press.