

Course: LIN624 Advanced linguistic theory: The Emergent Interface
Semester: Spring 2014
Instructor: Bohnemeyer
Text: Primary readings made available through UBlerns

Synopsis: One of the most fundamental questions of linguistic theory is that of the relation between the morphosyntactic form of linguistic utterances and their meaning. In recent decades, this question is often addressed under the computational metaphor of the ‘interface’ between (morpho-)syntax and semantics. The goal of this seminar is to discuss and explore recent research that brings evidence from **semantic typology** – the crosslinguistic study of semantic categorization – to bear on the study of the syntax-semantics interface.

The relation between form and meaning in language comprises at least the aspects of the structure of language listed below. Only (ii)-(vii) involve the **syntax-semantics interface** (SSI) *sensu stricto*:

- i. Lexicalization – the mapping between concepts and lexical items;
- ii. The mapping among ontological categories (concept classes), semantic types (combinatorially defined semantic classes), and syntactic categories of
 - a. Lexical items – ‘lexical categories’, i.e., parts of speech;
 - b. Phrasal constituents;
- iii. Argument structure – the semantic (roles) and syntactic (subcategorization/valence) combinatorial properties of lexical items;
- iv. Event segmentation and linking – the mapping of subevents and event participants into utterance constituents (including linking in complex, non-local, and elliptical structures of any kind – these phenomena have drawn more attention among syntacticians than any other aspect of the SSI);
- v. The ‘functional’ (or ‘grammatical’) category system of the language – the semantic classification of referents and speech acts expressed (obligatorily or optionally) by function words and inflections, and the syntactic (lexical or phrasal) categories the functional categories are associated with;
- vi. Semantic composition – the rules governing the interpretation of complex expressions licensed by the grammar;
- vii. The mapping between sentence and utterance meanings (information perspective, speech acts, indexicality, implicatures, presuppositions).

The seminar will focus on (ii)-(iv) in particular – the interface between (morpho-)syntax and *lexical* semantics – and on (v), but will also pay considerable attention to (i) and deal at least in passing with (vi) and (vii) as well.

The seminar will address two questions about the SSI:

- How uniform is the SSI across languages?
- To the extent that there are aspects/properties of the SSI that are uniform across languages, how are these elements of **interface uniformity** explained?

Each possible answer to the first question delineates a different range of valid answers to the second question. We will consider four competing hypotheses:

- **Linguistic Hardwiring:** Interface uniformity reflects genetically coded design universals of language.
- **Cognitive Hardwiring:** Interface uniformity is the result of natural human languages having evolved to reflect genetically based universals of nonlinguistic (neuro-)cognition.
- **Monogenesis:** Interface uniformity, to the extent that it can be observed, is primarily inherited from the common ancestor of all modern languages.
- **Emergence:** Interface uniformity is an emergent property. It is the result of a weak bias in language change that makes new expressions more likely to “catch on” and become community norms if they strike a near-optimal balance between codability and decodability and therefore in processing. At work in all languages and in communicative interactions across human populations, this weak bias ensures over time that similar ranges of meanings become codable (i.e., are lexicalized or grammaticalized) across languages and are expressed in similar ways.

The primary goal of the seminar (and the **book** that is supposed to evolve from it; cf. below under Coursework) is to explore the Emergence Hypothesis and examine the empirical case for it, based primarily on evidence from semantic typology, with heavy emphasis on evidence from the instructor’s research. It extends work by the instructor and collaborators on the role of **iconicity** in event representation (Bohnemeyer 2003; Bohnemeyer et al 2007, 2010; Bohnemeyer & Van Valin ms.), but also borrows generously from recent work by Regier and colleagues on optimality in lexicalization (Regier et al 2007; Kemp & Regier 2012).

The notion of **emergence** in language is inspired by Hopper’s (1987, 1988, 1998) ‘Emergent Grammar’, which has been supplanted in the more recent cognitive-functional literature by the (vaguer) concept of ‘usage-based’ grammatical knowledge. The Emergence Hypothesis does not entail Emergentism in Hopper’s sense, but could be understood as an attempt at a reformulation.

None of the other three hypotheses have been explicitly advocated in the form in which they are stated above. Culicover & Jackendoff (2005: 44-56, 73-88, 94-103) argue that what is called here Linguistic Hardwiring has informed much theorizing in mainstream Generative Grammar. In contrast, views close to Cognitive Hardwiring have been articulated by Berlin & Kay (1969), Kay & McDaniel (1978), Fodor (1975), Pinker (1984, 1989, 2007), Jackendoff (1999, 2002), Wierzbicka (1980, 1988), Goddard & Wierzbicka (2002), and others. Monogenesis of the SSI has not been advocated by anybody. It faces immediate empirical challenges from grammaticalization theory and the study of pidgin and creole languages and other contact varieties. We will consider it for the sake of completeness, based on related ideas in recent work by Dunn et al (2011) and Dediu & Levinson (2013).

Goals: The seminar serves the learning outcomes of the UB Linguistics graduate programs listed in the table below along with the instruments that will be used to assess the student’s success in mastering them:

Program learning outcome	Aspects of LIN 624 that support this goal	Assessment instruments
<p>Similarities and differences across languages (M.A. and Ph.D.) – Languages vary in their grammars, lexicons, sound systems, and practices of language use. Students will demonstrate understanding of phonetic, phonological, morphological, syntactic, and semantic similarities and differences among the world's languages.</p>	<p>The central topic of LIN 624 is crosslinguistic variation in the SSI, and thus also in semantics and morphosyntax.</p>	<p>Participation in in-class discussions; presentations of reading summaries; term project and term paper.</p>
<p>Theoretical foundations (M.A. and Ph.D.) – Students will demonstrate that they understand central questions that have formed the basis for various approaches to the description and modeling of human languages, as well as current issues specific to the core subfields within linguistics.</p>	<p>Students will immerse themselves into aspects of the theory of the SSI. They will develop a working understanding of how the competing schools’ theories differ from one another and how these differences are informed by divergent assumptions about language, communication, and the mind. They will also be introduced to new research and cutting-edge ideas and perspectives on the subject.</p>	
<p>Research (M.A. and Ph.D.) – Students will be able to articulate hypotheses about linguistic phenomena, identify and assemble relevant data, and analyze and assess the results.</p>	<p>Students will come to understand how crosslinguistic evidence can be exploited to adjudicate between competing theories of the SSI. They will learn to evaluate and critique existing proposals on the basis of the available crosslinguistic evidence.</p>	
<p>Methodologies (M.A. and Ph.D.) – Linguistic research involves data from a variety of sources, including gathering of acceptability or semantic judgments, lab experiments, field research, corpus studies, interviews, and use of secondary sources such as reference works. Students will be exposed to several of these methodologies and master at least one of them.</p>	<p>The seminar offers a crash course in semantic typology, focusing on methods of data collection and analysis and on epistemological questions involved in crosslinguistic semantic research. The term project will provide students with the opportunity to gather hands-on experience with the application of these methods.</p>	

<p>Professional communication skills – A. M.A. and Ph.D.: Students will attain the skills necessary to prepare written presentations on linguistic topics. B. Ph.D: Students will acquire the professional skills needed to communicate the results of their research at academic conferences and other forums, and write up their results in preparation for submission to proceedings and journals.</p>	<p>Students will present summaries of readings orally in class, accompanied by a handout they write up. They will discuss and critique both publications on the SSI (by the instructor and other authors) and their fellow students' presentations of them. They will write up the underlying idea, research protocol, and discussion of findings of their term project in a short paper.</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Presentations of reading summaries; term paper</p>
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Prerequisites: Students should benefit from prior course work in semantics, syntax, and morphology. However, such prior course work is not strictly required – especially not at the graduate level. If you have not taken any course in semantics prior to LIN 624, please talk to the instructor. The same holds if you have never taken a syntax course.

Meetings: M 2:00-4:40pm in 617 Baldy

Instructor: Dr. Jürgen Bohnemeyer – Office 642 Baldy Phone 645-0127
E-mail jb77@buffalo.edu Office hours M/F 1:00 – 2pm

Coursework: Course work will involve two kinds of reading assignments. The instructor is working on a monograph that is planned to cover much of the material to be discussed during the seminar. This material is largely available through published and unpublished articles and chapters by the instructor and other scholars. Let's call these the '**existing**' readings. The instructor will also make draft sections of the planned book available to the participants. In-class discussion will revolve around both 'existing readings' and '**draft sections**'. Every student is expected to **present an oral summary of at least one the existing readings**, accompanied by a **handout**, according to specifications by the instructor. Furthermore, participants may boost their participation grade by providing **written comments** on the draft sections.

For **full credit**, students will in addition complete a **term project**. The term projects will involve original research on the SSI. By default, the participants will gather original data from multiple speakers of a language other than their first language (exceptions may apply) or conduct a typological analysis of available data from multiple languages. The project can be self-designed (bonus points) and/or rely on one of a range of different stimulus kits to be provided by the instructor. The studies will include semantic and syntactic analysis of the collected data and write-up of a roughly 10-page summary. The overall grade will be computed as follows:

- Lit review presentation, including handouts – 25%
- Term project and paper – 50%

- In-class participation and comments on draft sections – 25%¹

Outline

Syntax of the reading assignments:

- *a; b* – read *a* and *b*
- *a; (b)* – read *a* plus optionally *b*
- *a/b* – read *a* or *b*, depending on which one was selected for discussion in class (and read the other optionally in addition if you’re interested)
- *(a,b)/c* – read either *a* and *b* or *c*, depending on which one was selected for discussion in class (and read the other optionally in addition if you’re interested)
- *a; b/c* – read *a*; in addition, read *b* or *c*.

Day	Chapter	Topic	Readings
1/27	Chapter 1	Introducing the SSI; research questions	Koenig 2005; Bohnemeyer (2013: 65-75); (Evans & Levinson 2009)
2/3	Chapter 2	Semantic typology – a crash course	Bohnemeyer (in press: ch6; 2011); Evans in press / Kay & Maffi 1999 / Lucy 1997 / Kay 2006
2/10	Chapter 3: Building blocks	Linguistic Hardwiring; Cognitive Hardwiring; Monogenesis	Goddard & Wierzbicka (2002: 41-85); (Bohnemeyer 2003a); Jackendoff & Culicover (2005: -44-56, 73-88, 94-103); (Dunn et al (2011); Dediu & Levinson (2013))
2/17		Linguistic emergentism – a reformulation; evidence from lexicalization	Hopper 1987/1998; Regier et al 2007 / Kemp & Regier 2012
3/3		Iconicity, processing, and learnability ** Deadline for picking term project topic **	Deacon 1997: 102-144; Haiman 1980 / 1983 / 2003 / Slobin 1985 / Givón 1985 / Levinson (2000: ch1)
3/5 ²		The evolution of language and cognition	Jackendoff (2002: 231-264); Bohnemeyer (2013: 75-88); (Pinker & Bloom 1990; Pinker & Jackendoff 2005)
3/10	Chapter II: The	Functional categories	Bohnemeyer 2009; Bittner 2005 / Smith, Perkins, & Fernald 2007 / Bohnemeyer

¹ Participation is assessed as follows: regular in-class participation and/or comments – A; regular attendance and occasional in-class participation/comments – B; regular attendance, little active participation/comments – C; irregular attendance, little active participation/comments: D; irregular or poor attendance, no active in-class participation or comments: F.

² I will be out of town for a conference on 2/24 and would like to make up for that class on Wednesday, 3/5, at the usual time (2-4:40pm). If a critical number of participants cannot make that date and time, we will find another solution.

	categories of grammar		2000
3/17		SPRING RECESS	
3/24 ³		Lexical categories	Bohnemeyer 2002; Evans & Osada 2005 / Schultze-Berndt 2007 / Bohnemeyer & Brown 2007 / Koenig & Michelson 2012
3/31		The type system	(von Fintel & Matthewson 2008) Bohnemeyer 2010; Bohnemeyer et al 2009; (Bohnemeyer & Romero-Méndez 2009)
4/7	Chapter III: The interface	Argument structure I: Are there universal argument structure classes?	Guerssel et al 1985; Bohnemeyer 2007a; (Pinker 2007: 77-83; Majid et al 2008)
4/14	between morpho-syntax and lexical semantics	Argument structure II: Implications for learnability ** Term project progress reports **	Landau and Gleitman (1985: 1-22; 120-156) / Pinker (1989: 94-97; 172-208; 352-374) / Grimshaw 1994; Bohnemeyer 2007b; (other contributions to Bowerman & Brown eds. 2007)
4/21		Event segmentation and linking I: the motion domain	Pawley 1989 / Givón 1991; Bohnemeyer et al. 2007; (Bohnemeyer 2003b;)
4/28		Event segmentation and linking II: causal chains; the syntax of macro-event expressions	Bohnemeyer et al 2010; Bohnemeyer & Van Valin ms.
5/5		Linking in complex, non-local, and elliptic structures ** First draft of term paper due (final draft is due 5/17) **	Two out of: Jackendoff (1990: 59-70); Givón 1980; Van Valin (2005: 205-213; 239-257); Levinson 1987; Haiman 1985; Chaves 2012 / 2013 / in press

Reading list⁴

- Ameka, F. K. & S. C. Levinson. (2007). The typology and semantics of locative predicates: Posturals, positionals and other beasts. *Linguistics* 45 (5/6): 847-871.
- Baker, M. (2003). *Lexical Categories: Verbs, Nouns and Adjectives*. Cambridge: Cambridge University Press.
- Berlin, B. and P. Kay (1991[1969]). *Basic Color Terms*. [Paperback Edition! Reprinted 1999] Berkeley, CA: University of California Press.

³ I MAY be out of town for this class as well, in which case I might teach it via Skype. Tba.

⁴ Readings will be uploaded to Ublearns under “Course Documents” as we go along.

- (2002). Review of Puetz, M. & Verspoor, M., *Explorations in Linguistic Relativity*. *Language and Society* 31: 452-456.
- Bittner, M. 2005. Future discourse in a tenseless language. *Journal of Semantics* 22: 339-387.
- Bohnmeyer, Jürgen. (2000). Event order in language and cognition. In H. de Hoop and T. van der Wouden (Eds.), *Linguistics in the Netherlands 17*. Amsterdam: John Benjamins. 1-16.
- (2002). Parts of speech in Yukatek. Talk presented at the Americanist Colloquium, Radboud University Nijmegen.
- (2003a). NSM without the Strong Lexicalization Hypothesis. *Theoretical Linguistics* 29(3): 211-222.
- (2003b). The unique vector constraint. In E. van der Zee and J. Slack (eds.), *Representing direction in language and space*. Oxford: Oxford University Press. 86-110.
- (2007a). Morpholexical transparency and the argument structure of verbs of cutting and breaking. *Cognitive Linguistics* 18: 153–177.
- (2007b). The pitfalls of getting from here to there: Bootstrapping the syntax and semantics of motion event expressions in Yucatec Maya. In Bowerman & Brwn eds, 49-68.
- (2008). *Volumes, surfaces, and extreme points: Meronymy and object-centered geometry in Yucatec Maya*. Talk presented at Northwestern University, October.
http://www.acsu.buffalo.edu/~jb77/Yuc_meronyms&FoRs_SILC_v2.pdf
- (2009). Temporal anaphora in a tenseless language. In W. Klein & P. Li (Eds.), *The expression of time in language*. Berlin: Mouton de Gruyter. 83-128.
- (2011). Semantic typology as an approach to mapping the nature-nurture divide in cognition. White paper for the initiative SBE 2020: Future Research in the Social, Behavioral & Economic Sciences. Arlington, VA: National Science Foundation.
http://www.nsf.gov/sbe/sbe_2020/2020_pdfs/Bohnmeyer_Juergen_95.pdf; last accessed 3/6/2011).
- (2013). The language-specificity of Conceptual Structure: Taking Stock. *International Journal of Cognitive Linguistics* 4(1): 65-88.
- Bohnmeyer, J. & P. Brown. (2007). Standing divided: Dispositionals and locative predications in two Mayan languages. *Linguistics* 45(5-6): 1105-1151.
- Bohnmeyer, J., E. Benedicto, A. Capistrán Garza, K. Donelson, A. Eggleston, N. Hernández-Green, S. Hernández-Gómez, J. Lovegren, C. O'Meara, E. Palancar, G. Pérez Báez, G. Polian, R. Romero, R. Tucker, and V. Vázquez. 2012. Marcos de referencia en lenguas mesoamericanas: Un análisis multivariante tipológico. *Proceedings from CILLA V: the Conference on the Indigenous Languages of Latin America*.
- Bohnmeyer, J., N. J. Enfield, J. Essegbey, I. Ibarretxe-Antuñano, S. Kita, F. Lübke, & F. K. Ameka. (2007). Principles of event segmentation in language: The case of motion events. *Language* 83(3): 495-532.
- Bohnmeyer, J., N. J. Enfield, J. Essegbey, I. & S. Kita. (2010). The macro-event property: The segmentation of causal chains. In Bohnmeyer, J. and E. Pederson (Eds.), *Event representation in language: Encoding events at the language-cognition interface*. Cambridge: Cambridge University Press. 43-67.

- Bohnenmeyer, J. & S. C. Levinson. Ms. Framing Whorf: A response to Li et al. Manuscript, University at Buffalo.
- Bohnenmeyer, J. & R. Romero Méndez. 2009. Path to second language via Conceptual Structure. Invited talk at the workshop “The Mind-Context Divide”; University of Iowa.
- Bohnenmeyer, J., R. Romero Méndez, C. O’Meara, & G. Pérez Báez. 2009. The grammar of parts, places, and paths in languages of Mexico. Paper presented at *SULA 5: Semantics of Under-Represented Languages in the Americas*. Harvard University/MIT.
- Bohnenmeyer, J. & Van Valin, R. Jr. Ms. The Macro-Event Property and the Layered Structure of the Clause. Manuscript, University at Buffalo.
- Boroditsky, L. & Gaby, A. (2010). Remembrances of Times East: Absolute Spatial Representations of Time in an Australian Aboriginal Community. *Psychological Science*. doi:10.1177/0956797610386621
- Bowerman, M. & P. Brown (eds.) (2007). *Cross-linguistic perspectives on argument structure: Implications for learnability*. Mahwah, NJ: Lawrence Erlbaum.
- Brown, P. & S. C. Levinson. (1994). Immanuel Kant among the Tenejapans: Anthropology as empirical philosophy. *Ethos* 22(1): 3-41.
- Chaves, Rui P. (2012). On the grammar of extraction and coordination. *Natural Language and Linguistic Theory* 30(2), 465–512.
- (2013). An expectation-based account of subject islands and parasitism. *Journal of Linguistics* 2(49), 285–327.
- (in press). On the disunity of Right Node Raising phenomena: Extraposition, ellipsis, and deletion. *Language*.
- Chung, S. & W. A. Ladusaw. 2003. *Restriction and saturation*. Cambridge, MA: MIT Press.
- Croft, W. (1990). *Typology and universals*. Cambridge: Cambridge University Press.
- Deacon, T. W. (1997). *The symbolic species: The co-evolution of language and the brain*. New York, NY: W. W. Norton.
- Dediu, D., & S. C. Levinson (2013). On the antiquity of language: The reinterpretation of Neandertal linguistic capacities and its consequences. *Frontiers in Language Sciences* 4: 397. doi:10.3389/fpsyg.2013.00397.
- Evans, N. In press. Semantic typology. In J. J. Song (ed.), *The Oxford handbook of linguistic typology*. Oxford: Oxford University Press.
- Evans, N. & S. C. Levinson. 2009. The myth of language universals: Language diversity and its importance for cognitive science. *Behavioral and Brain Sciences* 32: 429-492
- Evans, N. & D. P. Wilkins (2000). In the mind’s ear: The semantic perception of perception verbs in Australian languages. *Language* 76: 546-592.
- Fintel, K. von & L. Matthewson. 2008. Universals in semantics. *The Linguistic Review* 25: 139-201.
- Gentner, D. & S. Goldin-Meadow. (2004). Whither Whorf? In D. Gentner & S. Goldin-Meadow (eds.), *Language in mind: Advances in the study of language and thought*. Cambridge, MA: MIT Press. 25-46.
- Givón, T. (1985). Iconicity, isomorphism, and non-arbitrary coding in syntax. In J. Haiman ed., 187-220.

- (1991). Serial verbs and the mental reality of 'event'. In Traugott, E. C. and B. Heine (eds.), *Approaches to grammaticalization*. Vol. 1. Amsterdam: Benjamins. 81-127.
- Goddard, C. & A. Wierzbicka (eds.). 2002. *Meaning and Universal Grammar: Theory and Empirical Findings* (2 volumes). Amsterdam/Philadelphia: John Benjamins.
- Guerssel, M., Hale, K. L., Laughren, M., Levin, B., & White Eagle, J. (1985). A cross-linguistic study of transitivity alternations. In Eilfort, William H., Kroeber, Paul D., & Peterson, Karen L. (Eds.), *Papers from the parasession on causatives and agentivity at the twenty-first regional meeting*. Chicago, IL: Chicago Linguistic Society, 48-63.
- Haiman, J. (1980). The iconicity of grammar: Isomorphism and motivation. *Language* 56(3): 515-540.
- (1983). Iconic and economic motivation. *Language* 59(4): 781-819.
- (1985). Symmetry. In J. Haiman (ed.), 73-96.
- (2003). Iconicity. In L. Nadel (ed.), *Encyclopedia of cognitive science*. London: Nature Publishing Group.
- ed. (1985). *Iconicity in syntax*. Amsterdam: Benjamins.
- Hale, K. L. (1971). A note on the Walbiri tradition of antonymy. *Semantics: An interdisciplinary reader in philosophy, linguistics, and psychology*, ed. by Danny D. Steinberg and Leon A. Jakobovits, 472-482. New York: Cambridge University Press.
- Hopper, P. (1987). Emergent Grammar. *Berkeley Linguistics Society* 13: 139–157.
- (1998). Emergent Grammar. In M. Tomasello (ed.), *The new psychology of language*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers. 155-175.
- Jackendoff, R. (1983). *Semantics and cognition*. Cambridge, MA: MIT Press.
- Jackendoff, R & B. Landau. 1992. Spatial language and spatial cognition. In R. Jackendoff, *Languages of the mind*. Cambridge, MA: MIT Press. 99-124.
- Kay, P. 2006. Methodological issues in cross-language color naming. In C. Jourdan & K. Tuite (eds.), *Language, Culture and Society*. Cambridge: Cambridge University Press. 115-134.
- Kay, P. & L. Maffi. (1999). Color Appearance and the Emergence and Evolution of Basic Color Lexicons. *American Anthropologist* 101(4): 743-760.
- Kemp, C. & T. Regier (2012). [Kinship categories across languages reflect general communicative principles](#). *Science*, 336, 1049-1054.
- Koenig, J.-P. (2005). The interface between Syntax and Semantics. *The Encyclopedia of Language and Linguistics*, Second Edition. Elsevier: Oxford, volume 12. 427-438.
- Koenig, J. P. & K. Michelson. (2012). The (non)universality of syntactic selection and functional application. In C. Piñón ed., *Empirical Issues in Syntax and Semantics* 9, pp. 1–21.
- Landau, B. & L. Gleitman. (1985). *Language and experience: Evidence from the blind child*. Cambridge, Mass. etc.: Harvard University Press.
- Levinson, S. C. (2000). *Presumptive meanings: The theory of generalized conversational implicatures*. Cambridge, MA: MIT Press.

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- (2006). *Deixis*. In L. R. Horn and G. Ward (eds.), *Handbook of pragmatics*. Oxford: Blackwell. 97-121.
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- Levinson, S. C., Meira, S., & The Language and Cognition Group (2003). 'Natural concepts' in the spatial topological domain – adposition meanings in crosslinguistic perspective. *Language* 79: 485-516.
- Levinson, S. C. & Wilkins, D. P. (2006a). The background to the study of the language of space. Levinson, S. C. & D. P. Wilkins (eds.), *Grammars of space*. Cambridge: Cambridge University Press. 1-23.
- (2006b). Patterns in the data: Toward a semantic typology of spatial description. In Levinson, S. C. & D. P. Wilkins (eds.), *Grammars of space*. Cambridge: Cambridge University Press. 512-575.
- Lounsbury, F. G. (1969 [1964]). Crow- and Omaha-Type Kinship Terminologies. In S. A. Tyler (ed.), *Cognitive anthropology*. New York: Holt, Rinehart, and Winston. 212-255. [Originally published in W. H. Goodenough (ed.) (1964), *Explorations in cultural anthropology*.]
- Li, P. & L. Gleitman. 2002. Turning the tables: language and spatial reasoning. *Cognition* 83:265-294.
- Li, P., Abarbanell, L., Gleitman, L., & Papafragou, A. (2011). Spatial reasoning in Tenejapan Mayans. *Cognition*.
- Li, P., Abarbanell, L., & Papafragou, A. (2005). Spatial reasoning skills in Tenejapan Mayans. *Proceedings from the 27th Annual Meeting of the Cognitive Science Society*. Hillsdale, NJ: Erlbaum.
- Lucy, J. A. (1997) The linguistics of color. In *Color Categories in Thought and Language*. C.L. Hardin & Luisa Maffi, eds., Cambridge, England: Cambridge University Press.
- Majid, A., Bowerman, M., Kita, S., Haun, D. & Levinson, S.C. 2004. Can language restructure cognition? The case for space. *Trends in Cognitive Sciences* 8(3): 108-114.
http://www.mpi.nl/Members/StephenLevinson/PDF/2004_Can_language_restructure_cognition.pdf
- Majid, A., J. S. Boster, & M. Bowerman. (2008). The cross-linguistic categorization of everyday events: A study of cutting and breaking. *Cognition* 109: 235-250.
- MacLaury, R. (1989). Zapotec body-part locatives: prototypes and metaphoric extensions. *International Journal of American Linguistics* 55: 119-154.
- 2001. Color terms. *Language typology and language universals: An international handbook*, vol 2, ed. by Martin Haspelmath, Ekkehard König, Wulf Oesterricher, and Wolfgang Raible, 1227-1250. Berlin: de Gruyter.
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- Semantics, Syntax, Phonology, Pragmatics, Social Situations, Ethnographic Approaches, 255–268, Georgetown University Press.
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- Pederson, E., Danziger, E., Wilkins, D., Levinson, S., S. Kita & G. Senft (1998). Semantic typology and spatial conceptualization. *Language* 74: 557-589.
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- Pinker, S. & R. Jackendoff. (2005). The faculty of language: What's special about it? *Cognition* 95: 201-236.
- Regier, T., P. Kay, & N. Khetarpal. (2007). Color naming is near optimal. In D. S. McNamara & J. G. Trafton (eds.), *Proceedings of the 29th Annual Meeting of the Cognitive Science Society*.
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