

# **Sprache, Erkenntnis und Gesellschaft**

# *Linguistic turn*

- „In den 60er Jahren ... hatten wir den «linguistic turn»“ (Matussek, Peter [2004], „Der Performative Turn: Wissen als Schauspiel“, in: *Digitale Transformationen. Medienkunst als Schnittstelle von Kunst, Wissenschaft, Wirtschaft und Gesellschaft*, hrsg. v. Monika Fleischmann / Ulrike Reinhard, Heidelberg: Whois Verlags- & Vertriebsgesellschaft, S. 91-95, 91)
- Den «linguistic turn» hat es „seit den frühen 1900er Jahren“ (Jensen [2002], 26) gegeben (Jensen, Klaus Bruhn [2002], „The Humanities in Media and Communication Research“, in: *A Handbook of Media and Communication Research. Qualitative and Quantitative Methodologies*, ed. by Klaus Bruhn Jensen, London and New York: Routledge, S. 15-39, 26)

- (In den Geschichtswissenschaften) Interessenverschiebung von der Realität auf „Wörter“, „Diskurse“, „Texte“ und „Bedeutungen“
- (Toews, John E. [1987], „Intellectual History after the Linguistic Turn: The Autonomy of Meaning and the Irreducibility of Experience“, in: *The American Historical Review*, Bd. 92, Nr. 3, June, S. 879-907.

- Scholastik, J. St. Mill, Leibnitz, W. v. Humboldt...
- (Protagoras, Parmenides oder Heraklit...)

- Rorty, Hempel

- Tarski, Carnap, Quine... (Metasprache, formale Sprechweise, semantischer Aufstieg)
- Haus, Stein... vs. „Haus“, „Stein“

- Frege / Wittgenstein

- Frege etc. vs. (Universal)Hermeneutik, Semiologie,  
Dekonstruktivismus...

- S. Hampshire, “Are All Philosophical Questions Questions of Language?”, in: R. Rorty (ed.), *The Linguistic Turn. Essays in Philosophical Method*, Chicago Univ. Press, Chicago 1992, p. 284-293.
- 
- question of language / question of fact
- question of language / question of Language



- M. Black, “Language and Reality”, in: R. Rorty (ed.), a. a. O., p. 331-339.
- 
- particular grammar vs. universal grammar
- principle of isomorphism
- Is the copula superfluous?
- subject and predicate
- road leading from grammar to metaphysics: the vain hope

- W.V.O. Quine [1951], *Mathematical Logic*, Cambridge (Harvard Univ. Press), p. 24.
- use / mention
  - ‘Boston is populous’ is about Boston and contains ‘Boston’;
  - ‘ ‘Boston’ is disyllabic’ is about ‘Boston’ and contains “Boston”.
  - “Boston” designates ‘Boston’, which in turn designates Boston.
  - To mention Boston we use ‘Boston’ or a synonym.
  - “Boston” contains six letters and just one pair of quotation marks;
  - ‘Boston’ contains six letters and just one pair of quotation marks;
  - ‘Boston’ contains six letters and no quotation marks; and Boston contains some 800,000 people.

- Devitt, Michael and Sterelny, Kim, *Language and Reality. An Introduction to the Philosophy of Language* (Cambridge, Mass.: The MIT Press 1987), p. 34-35, 229-235.
- ordinary language philosophy: dissolving philosophical problems
  - “When the naturalistic philosopher points his finger at reality, the linguistic philosopher discusses the finger.”
  - Philosophy as grammatical therapy
- conceptual analysis
  - „... the *a priori* parts of the theory, reflecting meaning links that can be revealed in analysis, will ... be less interesting than the empirical parts...”
  - “... the conceptual analysis view works against the critical examination of folk theory.”
  - “Philosophical problems are not ... pseudo problems, and analysis has little ... to do with solving them.”

# Sprache und Weltbild (Sapir/Whorf-These und ihre Kritik)

- Hansen, Klaus P. [(1995) 2003], *Kultur und Kulturwissenschaft. Eine Einführung*, Tübingen und Basel: Francke, 77-89.
- Hansens Buch als Beispiel für konfuse Auffassung der betreffenden Probleme:
  - 77f.: Sind Unterscheidung von Farben und sprachliche Erfassung der Unterscheidung als dasselbe Problem zu betrachten? Sind Beziehungen zwischen den Dingen weniger real als die Dinge selbst?
  - 78: Leben Mitglieder verschiedener Sprachgemeinschaften in „verschiedenen Wirklichkeiten“?
  - 81f.: Liegen die Beweise für die Sapir-Whorf-These „in Hülle und Fülle auf der Straße“? Was bedeutet es, „mit Hilfe der Sprache“ werde „Ordnung geschaffen“...?
  - 83, 89: Was bedeutet es, dass mit Hilfe der Sprache „reale Wirklichkeit“ in „Lebenswirklichkeit“ verwandelt wird? Sind Denken und Sprache „identisch“?

- McNeill, N. B. [1972], “Colour and Colour Terminology”, in: *Journal of Linguistics*, Vol. 8, No. 1, S. 21-33.
- Challenging the *universalistic* explanation of Berlin & Kay, McNeill advocates *linguistic relativism*, claiming that colour terms are *culture specific*.
- Does the empirical material gathered by her in fact support such position? What are – according to this material – the crucial instances the respective differences in colour terms are functionally linked with? Does it make sense to use the notion of “culture” as the basic *explanatory category* in this context? What can the alternative notion(s) then be?

- Bulmer, Ralph [1967], „Why is the Cassowary Not a Bird? A Problem of Zoological Taxonomy Among the Karam of the New Guinea Highlands“, in: *Man, New Series*, Bd. 2, Nr. 1 (March), S. 5-25.
- Why do the Karam people place cassowaries in a different category than other birds?
- Is the cassowary a bird or not?
- Do the Karam people, according to their specific taxonomy, live in a “deferent world” than we do or not?

- Herrnstein, Richard J. [1984], „Objects, Categories, and Discriminative Stimuli“, in: *Animal Cognition*, ed. by H. L. Roitblat / T. G. Bever / H. S. Terrace, Hillsdale – London: Lawrence Erlbaum Associates, Publishers, S. 233-237, 256-259
- 233f.: How are (a) linguistic abilities, (b) classification, (c) discrimination related to each other?
- 236, 257f.: What is the (adaptive) function of categorization? How are categorization and language related to each other? What are the corresponding limits of the animal-machine analogies?

- Millikan, Ruth Garret [1984], *Language, Thought, and Other Biological Categories. New Foundations for Realism*, Cambridge, Mass. – London: The MIT Press, S. 296, 306-307
- 296, 306f.: What is the nature of the identity of a thing and how it is related to (a) language and (b) stimulations?



- Atran, Scott / Medin, Douglas [2008], *The Native Mind and the Cultural Construction of Nature*, Cambridge, Mass. – London: The MIT Press, S. 47
- 47: Where does the coincidence of folk-biological and scientific taxonomic systems emerge from? What (with respect to the problem of the relationship between language and categorization) does follow from the fact of erosion of taxonomic knowledge/skills in modern societies?

- Bisiach, Edoardo [1988], „Language without Thought“, in: *Thought without Language*, ed. by Lawrence Weiskrantz, Oxford: Clarendon Press, S. 464-484
- 466, 472: language is not an autonomous *form of representation*, since it lacks any independent *data base* of its own
- 467: functioning of language is dependent on a visuo-spatial analogue
- 473ff.: also abstract thinking relies on non-linguistic representations
- 479: the acquisition of native language evolves with the acquisition of knowledge which enters our thoughts

- Tomasello, Michael [1999], *The Cultural Origins of Human Cognition*, Cambridge, Mass. – London: Harvard University Press, 94f., 182-189
- 94: language is just as little an evolutionary cause of human cognition as money is an evolutionary cause of human economic activity
- 183: that all languages of the world are causative is a historical result of the role of causal cognition, and not a foundation of it
- 184: each culture has its own modes of causal explanation
- 185: quantitative discriminations in non-linguistic infants, mammals and birds (without understanding the conservation of quantity)
- 187f.: linguistic communication does not create abilities for classifications and relational thinking, but makes them more potent

- Bunge, Mario [1974], *Treatise on Basic Philosophy*. Bd. 2. *Semantics II: Interpretation and Truth*, Dordrecht et al.: Reidel, 189-190
- language is a tool of communication which neither does entail any ontology (metaphysics), nor does it influence perception and conception, nor can command of a language substitute knowledge
- Bunge, Mario [1983], *Treatise on Basic Philosophy*. Bd. 5. *Epistemology & Methodology I: Exploring the World*, Dordrecht et al.: Reidel, 120-124
- life and knowledge mold language rather than the other way round
- literacy is the watershed

- Carruthers, 2002, „The Cognitive Functions of Language“, in: *Behavioral and Brain Sciences*, Vol. 25, No. 6, S. 657-672, 675-677, 679-685, 687-688, 690-691, 693-695
- 1. Introduction:
- **Cognitive vs. communicative conception of language**; the bad press of the first is due to its excessive use by philosophers and social scientists; freed from it, the cognitive conception is not without merit
- 2. Weak claims
- 2.1: However, the cognitive role of language is **developmental**, that is, diachronic and not synchronic
- 2.2: Also issues due to acquiring this instead of that language refer to effects of **attending people to different things** and don't show that language itself is involved in their thinking

- 3. Strong claims
- 3.1: Strong claims of Wittgenstein, Davidson, Dummett etc. are to be abandoned; thought is **conceptually independent** of natural language, but some types of thought may de facto involve language
- 3.2-3.3: Regarding language as the **medium of human thinking** (Whorf, Dennett) cannot be upheld too; much hominid thinking is **independent even of proto-language**
- 3.5: Opposing Whorf and the idea of language and mind as cultural constructs doesn't preclude **some version of cognitive conception of language**

- 5. Language as the medium of non-domain-specific thinking
- 5.1: All **non-domain-specific** reasoning of **non-practical** sort depends on language, irrespective of whether this reasoning is conscious or not; representations stripped of all phonological features still consist of natural language lexical items and syntactic structures
- 5.4: Natural language is the vehicle of thought about **exact numbers**, but not for representing **approximate numerosity** (a capacity shared with other animals)
- 6. Ramifications and implications
- 6.3: **Abductive principles** are universal among humans; in contrast with other areas of cognition the **naïve performance** is here not at variance with our **best normative principles**

- Open Peer Commentary:
- Baumeister/Vohs (675-676): brain evolved, meaning was discovered, language was invented; radical view opposing Sapir/Whorf; concepts and their relationships lie “**out there**” as an **aspect of the environment**; language is the **best tool to process** them; mathematics and logic are **the same** here and on the other side of the galaxy
- Bermúdez (676-677): the role of **relative clause** (*A that b*) for a domain-general use of language
- Bryson (679-680): special things about language: (1) association with **cultural knowledge**, (2) **indexicality** (a compact way to refer to a concept)
- Chater (680): logical form interfaces with language, but it is not a **linguistic level of representation**; if thought were bounded by language then **learning language would be impossible**; only **conscious propositional thought** implicates language, since language is the only means for its **external representation**



- Clark (681): words and sentences serve as simple, quasi-perceptual **marker-posts for attention-based coordination**; linguistic vehicles make **thinking about thinking** possible; the **perception-and-attention-based** picture of the role of language in thought dispenses with the apparatus of modules, mentalese and compositional inner codes
- Dale/Spivey (681-682): mental states are **dynamic and continuous** rather than **discrete**, and have only occasionally a **semantically component structure**; the modular theory of mind is problematic; we don't need an **exclusive linguistic switchboard**, since visual perception, audition, motor cortex etc. also integrate information across modalities
- Dominey (683-684): cross domain interaction does not rely exclusively on a propositional LF-like data structure, but makes also use of **analogous reasoning** based on mapping of the target problem onto a **nonpropositional** spatial image schema of the analog problem
- Evans/Over (684-685): language is the medium of **explicit representation**; with it we can therefore formulate rules and principles that **apply generally** (and not only in a domain-specific manner)
- Gauker (687): no **conceptual thought** without language; language is the very medium of conceptual thought, and therefore communication does not consist in revealing conceptual thoughts existing before its linguistic explication; rather, language is a **tool of interpersonal cooperation** by which people can **constrain one another's action and steer a common course**

- Hampton (688): the role of language consists in **abstracting**, providing a bridge between a “messy” representation of a concept built around experience and action in the world, and the “**clean**” **representation of a concept** (improved in the course of the development of logic and science) as well as in **testing and challenging** the reasoning of others
- Hurford (690-691): the modularity hypothesis is **nonparsimonious** and **raises more problems than it solves**
- Nelson (693-694): language is a **cross-domain** communicative and cognitive representational system made possible by a preexisting **non-domain-specific** conceptual system; together they compose a **dual representation** cognitive processing system
- O’Brien/Opie (694-695): words are not the medium we *think in*, they are a **tool we think with**

# Denken ohne Sprache? Erkenntnis bei Menschen und Tieren

- Terrace, Herbert S. [1985], „Animal Cognition. Thinking Without Language“, in: *Philosophical Transactions of the Royal Society of London*, Series B, Bd. 308, Nr. 1135, S. 113-128
- 113: Cartesian vs. Darwinian approach
- 116: Grammatical competence is absent in apes. However, and contrary to Chomsky, grammatical competence is not more significant for the evolution of human intelligence than the deceptively simple ability to use a symbol as a name.
- 118: Owing to social interactions (between the infant and the parents), the child learns the conventions of reference, first non-verbally and then at a verbal level.
- 119f.: Sheer naming doesn't presuppose grammatical rule. The functional value of syntax emerges from the desire to inform about a relationship between objects or actions, or about some attribute of an object or about past or future events.
- 125f.: Animals can form representations. However, unlike humans, and due to biological constraints, their representations are not verbal. There are strong grounds against the Cartesian contention that animals cannot think. But the open question is how does animal thinking without language proceed?

- Glock Hans-Johann [2005], "Begriffliche Probleme und das Problem des Begrifflichen", in: *Der Geist der Tiere. Philosophische Texte zu einer aktuellen Diskussion*, hrsg. v. D. Perler und M. Wild, S. 153-187
- 160: Welche Art *dass*-Sätze sind auf die Tiere anwendbar bzw. nicht anwendbar?
- 163: Denken dass  $p$ , wird so getestet, dass der Unterschied zum Denken, dass  $q$  ermittelt wird.
- 165ff.: „Mentale Repräsentationen“ ersetzt durch „höhere mentale Fähigkeiten“. Menschen sowie Tiere beziehen sich auf die Welt direkt durch die Ausübung ihrer mentalen Fähigkeiten und nicht durch deren „innere“ Stellvertreter. Mentalistische Auffassung von Begriffen ist unvereinbar mit ihrer objektiven Natur. Daher wird der Besitz von Begriffen über den Besitz der Fähigkeit zur Klassifikation erklärt, ohne auf einen Lingualismus zurückgreifen zu müssen.
- 170ff.: [Zum Problem der Zuschreibung von Gedanken an die Tiere] Dass-Sätze beziehen sich ebenso wenig auf echte Gegenstände wie Quantoren. Begriffe sind nicht Bausteine, sondern Abstraktionen von Gedanken. Zuschreibungen von Gedanken basieren nicht auf psychischen Komponenten, sondern auf Wahrnehmungsfähigkeiten, Verhaltensweisen etc. Inhalt der Zuschreibung wird vom Zuschreibenden diktiert.

- 178: Dispositionen vs. Fähigkeiten. Im Gegensatz zu Unterscheidungen setzen Klassifikationen eine entsprechende Fähigkeit voraus.
- 179: Besitz von Begriffen hängt nicht von der Sprache ab, sondern von selektiver Wahrnehmung sowie vom Verhalten, das als absichtlich und normativen Unterscheidungen unterworfen gelten kann.
- 184f.: [Gegen das holistische Verständnis von Begriffen] Begriffe sind an kein bestimmtes Netz von Überzeugungen gekoppelt. Die betreffenden Netze können größer oder kleiner sein, je nachdem welche Art Subjekte es jeweils betrifft.
- 187: Das biologische Fundament des Denkens (Besitz von Bedürfnissen, Wahrnehmung der Umgebung, Einflussnahme auf die Umgebung durchs Handeln) wird vom Mensch und Tier geteilt. Durch die Sprache wird das Denkpotehtial gesteigert.

- Allen, Colin / Savidel, Eric [2005], "Die Evolution der Referenz", in: *Der Geist der Tiere. Philosophische Texte zu einer aktuellen Diskussion*, hrsg. v. D. Perler und M. Wild, S. 334-356
- 334: Referenz ist die grundlegende Funktion der Sprache, geht stammesgeschichtlich der Sprache voraus und trifft auch auf Tiersignale zu.
- 341f.: Einfachste Form der Referenz: „Mimetische Referenz“; Versuch des Organismus, die Muskelkraft des anderen Organismus für eigene Zwecke zu benutzen; Täuschungsverhalten; keine arbiträre Beziehung zwischen Signal und Referent
- 343: „Stellvertretende Referenz“: Signale lösen dieselben Reaktion wie die Referenten aus, doch mittels eines anderen kognitiven Mechanismus; Schritt zur arbiträren Beziehung zwischen Wörtern und Referenten; Vorteile für den Signalgeber (Täuschungsverhalten)
- 344: „Begriffliche Referenz“: Signal löst nicht dieselbe Reaktion aus, die sein Referent auslösen würde.
- 351f.: Täuschende Signalverwendung bei den Tieren (und Menschen) – Bedingung dafür besteht darin, die Referenz als direkt anwesend, anstatt als abwesend zu behandeln

# Sprache als Schlüssel zur Gesellschaft?

- Ergänzung: Geertz, Clifford [1973], *The Interpretation of Cultures: Selected Essays*, New York: Basic Books, 89
- 
- Culture is “a historically transmitted pattern of **meanings** embodied in **symbols**, a system of inherited conceptions expressed in **symbolic forms** by means of which men communicate, perpetuate, and develop their knowledge about and their attitudes toward life”.

- Dennett, Daniel C. [1988], „Précis of *The Intentional Stance*”, in: *Behavioral and Brain Sciences*, Vol. 11, No. 3, S. 502-504
- 
- False doctrine of humans as “**Unmeant Meaners**”
- **Natural selection** is the ultimate source of meaning
- You can't have realism about **meanings** without realism about **functions**



- Gellner, Ernest (1978), „The New Idealism - Cause and Meaning in the Social Sciences“, in: *Positivism and Sociology*, ed. by A. Giddens, Hampshire: Gower, S. 129-156
- Current form of **anthropomorphism** (in social and human sciences): understanding social life through human concepts
- **Interpretation** of meanings vs. causal **explanations**; “having meaning” vs. being caused
- Meaning and “forms of life”
- *Reductio ad absurdum* of Wittgenstein in Winch

- Gellner, Ernest [1992], *Reason & Culture. The Historic Role of Rationality and Rationalism* (Oxford and Cambridge: Blackwell), S. 116-123
- Wittgenstein turning himself **upside down**
- Conflict between *Gesellschaft* and *Gemeinschaft*, and preference for the latter expressed under the camouflage of a theory of language
- Extending an account of the languages of primitive man to all linguistic and conceptual systems, Wittgenstein's programme recommended a collective infantile regression for all mankind

- Searle, John R. [2010], *Making the Social World. The Structure of Human Civilization*, Oxford et al.: Oxford University Press, S. 84-89
- Austin: How to Do Things With Words
- Searle: How Language Enables Us to Create Social Institutions
- 84-88: Creating institutional facts by representing them as existing
- The reality of government, private property, marriage, money... as essentially linguistic, as a standing (permanent) speech act affixed to the object
- Making something “counting as”: Status Function Declaration
- 85-86: I create a right of private property by representing myself as having it – by declaring “This is my house”
- Creating money by representing it as existing
- 89: Misconceived example of creating property by speech acts; where there are in fact neither genuine property rights at issue, nor any linguistic components necessarily involved: A glass of beer being put in front of someone

- Smit, J. P. / Buekens, Filip / du Plessis, Stan [2011], „What is Money? An Alternative to Searle’s Institutional Facts“, in: *Economics and Philosophy*, Bd. 27, Nr. 1, S. 1-22
- Talking of “institutional facts” overcomplicates ontology
- Reductive analysis: institutional facts can be reduced to natural facts
- Such facts can be fully analysed in terms of actions and incentives
- Traffic lights, borders, money
- Whether “collective intentionality” or any special ceremony had been involved is irrelevant
- Instead of “X counts as Y in C”, “X that S is incentivized to act in manner Z towards”
- When in ordinary life we talk about money, borders and property, we are fundamentally talking about the incentivization of actions

- Aleksandrowicz, Dariusz [2011], *Kultur statt Wissenschaft? Gegen eine kulturalistisch reformierte Epistemologie*, Berlin: Frank & Timme, S. 123-150
- Sitzungseröffnung, Ernennung...
  - Nicht Äußerungen bringen solche Sachverhalte zustande. Es gibt sozial definierte Prozesse, Kontexte, Verfahren für das Zustandekommen von solchen Sachverhalten. In ihnen treten u. a. sprachliche Äußerungen als funktional untergeordnete Aspekte zutage.
- 
- Trauungsakt, *Casus belli*, Taufvorgang
  - Die Rolle von sprachlichen Äußerungen ist sekundär und kontingent
- 
- Einkaufsliste, Kochrezept
  - Der „Welt-zu-Wort“-Übereinstimmung geht eine dem entgegengesetzte Übereinstimmung voraus

- Angelköder, Vogelscheuche
  - Analogie zu „institutionellen Fakten“ bei sprachlosen Wesen
- Preis, Geld
  - Sie kommen nicht allein aufgrund von „Status-Funktion-Deklarationen“ zustande
- Übernatürliche Deklarationen

# Sprache im evolutionären Kontext

- Tomasello, Michael [2008], *Origins of Human Communication*, Cambridge, Mass. – London: The MIT Press, S. 7, 14, 19, 23, 26, 28f., 38, 58f., 61, 71, 82, 92f., 100, 134, 163, 170, 213f., 216f., 239, 241, 313 f., 317, 321-327, 330, 339, 341-345
- **Intentional vs. non-intentional** signals in the biological world
- Acts of pointing in apes serve only **imperative**, and never **declarative** or **informative** function
- To understand human communication we cannot begin with **language**

- Human communication emerges from human **cooperation**
- Linguistic and pre-linguistic communication depend on **joint attentional** frame
- Pointing and linguistic utterances have the same **information structure**
- Cooperative communication emerged due to **collaborative** activities, and then was co-opted to use outside them, incl. **noncooperative** (selfish, deceptive, competitive) purposes



- Cultural **group selection** → within-group conformity, between-group difference → only humans developed systems of communication (language) that are effective not with all members of the species, but only within particular cultural groups
- Language as cultural **isolating mechanism**

- Sequences of gestures and parsing experience into events and participants → **grammar of requesting** → **grammar of informing**, and **grammar of sharing and narrative** (concerning referents displaced in time and space)
- Vocal conventions emerged from natural tendencies to follow the gaze direction of others and interpreting their actions as intentional
- Grammatical dimension of human cooperative communication originated by a means of a **drift into arbitrary** from the **restricted context** of pointing and pantomiming within collaborative activities

- Would human language have evolved from **competition** instead of **cooperation**, it would be fundamentally different (being no language as we know it)
- Language is not an object but a form of **social action**. It underlies the unique ability of humans to conceptualize the world in terms of **different perspectives** on the same entity

- Barwise, Jon and Perry, John [1983], *Situations and Attitudes*, Cambridge, Mass. – London: The MIT Press, S. 3-20, 29-34, 42-45, 94, 119, 265-271, 274f., 279f., 293-295
- What underlies the specific ripping of the same reality apart and why is it not due to language?
- What is „meaning“? How are „natural“ and „linguistic meaning“ related to each other? What is the relationship between *information* and *language*?
- In what sense do *situations* contain *information* about one another?
- What are the crucial ideas of the *ecological approach* to language?
- In what sense does *communication* exhibit a *higher level* attunement to the conditions of the environment?

- Devlin, Keith and Rosenberg, Duska [1993], "Situation Theory and Cooperative Action", in: Peter Aczel et al. (eds.), *Situation Theory and Its Applications. Vol. 3*, Menlo Park et al.: CSLI, S. 222f., 229, 233, 237, 242-254, 257-263
- All communicative acts involve a situation that the act is *about*.
- *Constraints* are links between situation types providing a tunnel that *channels the activity* of an agent. *Nomic, conventional, and linguistic* constraints.
- To communicate efficiently, speaker and listener enter into a *cooperation* that depends on their *shared experience* of the world. *Social interaction* is a fundamental phenomenon, and language is *derivative of it*.
- Meaning as a *relation between two* [types of ] *situations*: the one in which an expression is uttered and the one it describes. Sentence meanings are a particular instance of *constraints*.
- Constraints function by relating *regularities* and *uniformities* across actual situations.

- Millikan, Ruth Garret [2004], *Varieties of Meaning*, Cambridge, Mass. – London: The MIT Press, S. 127, 131, 135, 157, 159, 168f., 177f., 181, 185, 187-189, 200, 212 f., 217-228
- 127, 131, 135: What means *understanding language*? (What is necessary and what is not necessary with respect to this process?)
  - Basic concepts: „representations“, “speaker’s mind“, „things in the world“
- 157, 159, 168f., 217ff.: What are the differences between *animal signals* and *human (linguistic) representations*?
  - Basic concepts: „affordances“, “pushmi-pullyu representations“, “procedures” vs. “facts”, “self”, “representations for guiding motions” vs. “for inference”, “using” vs. “recognizing an object”

- 177f. , 181, 185: What does the development from *P-P representations* to representations of *detached facts* depend on?
  - Basic concepts: “what-channel”, “where-/how-channel”, “partial affordances”, “procedural” / “declarative learning”
- 187-189: How does *Pavlovian conditioning* and *conditioning in general* work?
  - Basic concepts: „learning about conditional probabilities“ / „learning how to behave“

- 200, 212 f., 228: What is the difference between *representations of time* in animals and in humans?
  - Basic concepts: “representing time” / “representing space”, “goal states” vs. “affordances”, “historical time”, “finding” vs. “constructing sequence”, “planning”
- 221: What are the chief *linguistic correlates* of the genuinely *human mode of cognition*?
  - Basic concepts: “subject-predicate structure”, “sensitivity to negation”, “displaying contrariety”



- 222f.: What does *agreement in judgement* consist in?
  - Basic concepts: “possibility of disagreement”, “internal” vs. “external negation”
- 225f.: How does language contribute to the *perception of the world*?
  - Basic concepts: “direct perception”, “theoretical judgement”, “transmission thereof”

- Noble, William [1993], “What Kind of ‘Approach to Language Fits Gibson’s Approach to Perception?”, in: *Theory & Psychology*, Vol. 3, No. 1, S. 57-61, 66-75
- 66: What is the difference between the capacity to go “hunting for” or “foraging for” something and the capacity to predate, graze or scavenge?
  - Basic concepts: “communicative signs used symbolically”, “interpreting meaning as indexical”, “responding to indexical signs”
- 67: What are the mode of operation and the function of language from the ecological point of view?
  - Basic concepts: “lawful constraints”, “conventional constraints”, “expliciting knowledge”, “perceptual contact with the surrounding”

- 69f.: What implies characterizing language as a “tool”?
  - Basic concepts: “referential acts”, “extensions of body”, “means of representation”, “affordances of signs”
- 71: What is the possible origin of *pointing* and how it is related to the *symbolic use of signs*?
  - Basic concepts: “throwing”, “inscribing of manual gesture”, “context of immediate reference”
- 72f.: How is language bound up in universal ecological circumstances and what follows from it?
  - Basic concepts: “indirect perception”, “representational system” “ecological constraints”, “possibility of carefree use”, “using to misrepresent”

- Reed, Edward S. [1995], “The Ecological Approach to Language Development: A Radical Solution to Chomsky’s and Quine’s Problems”, in: *Language & Communication*, Vol. 15, No. 1, S. 1-26
- Why are Chomsky’s und Quine’s questions wrongly stated and what is the alternative account of language development offered by the ecological approach?
  - Basic concepts: “populated environment”, “ecological information”, “action schemata”, “Field of Free and of Promoted Action”, “interactive routines”, “structured events”, “indicational, generative and predicational skills”, “relational terms”, “acquiring language” vs. “participating in the linguistic community”

- Donald, Merlin [1991], *Origins of the Modern Mind. Three Stages in the Evolution of Culture and Cognition*, Cambridge, Mass. – London: Harvard University Press, S. 120f., 126, 140, 144, 148-152, 166-176, 180, 193, 197, 200, 209f., 212-219, 225f., 233, 236, 244ff., 268, 273-275, 315f., 323, 335, 342-345, 349, 355, 358, 367, 382
- 120f., 126, 140, 144, 148-152: *episodic culture*
- Where lies the chief difference between the culture of apes and of humans and why it cannot be bridged by language alone?
  - Basic concepts: cognitive adaptations, vicarious servicing of social relationships, episodic culture, episodic – procedural – semantic memory

- 166-176, 180, 193, 197, 200: *from episodic to mimetic culture*
- What does the transition consist in and how is language connected to it?
  - Basic concepts: intentional representation, cognitive egocentrity,
- 209f., 212-219, 225f., 233, 236, 244ff., 268: *from mimetic to mythic culture*
- What does this transition rely on and how is language connected to it?
  - Basic concepts: mythical thought, possession of symbols vs. construction of mental models, auditory-object constancy,

- 273-275, 315f., 323, 335, 342-345, 349, 355, 358: *ESS and theoretic culture*
- What are the crucial aspects of the respective transition?
  - Basic concepts: demythologization, theoretization, engrams vs. exograms, formal education
- 367, 382: *consciousness*
- What is wrong in the classificatory schemes of 19<sup>th</sup>-century biology?
  - Basic concepts: anatomy, mental architecture