

## **Major Theories and Theorists**

Here are some thumbnail introductions to major theorists and associated theories that I find useful in my own work. New researchers are well advised to at least be familiar with all these names, and hopefully with at least one major idea from each. You can decide which ones are worth more time, and some of them, like C.S. Peirce, M. Foucault, B. Latour, or M.A.K. Halliday easily require years of study to go beyond a few key ideas. See also my Recommended Readings, particularly for earlier work, such as classical philosophy.

### ***Theory of Complex Self-organizing Systems***

Traditional European philosophy has favored theories in which causality is the dominant explanatory principle: things happen because someone, or by extension something, makes them happen. It is clear that this reflects a fantasy, probably particularly masculinist, of power over life, the world, and especially other humans. But causality has rarely provided adequate accounts of most systems because they consist of many interacting parts and the behavior of the system as a whole, and often of the individual parts, is a complex aggregation of the interactions of all the parts. No part controls the whole, or can even control another part outside the influence of the rest of the system. Such systems are said to be 'self-organizing' and the behavior of aggregates of components is said to be 'emergent'. In these systems, which certainly include living organisms, ecosystems, and social or ecosocial systems, there are no isolated controlling agencies. There is no all-powerful father, boss, or king. There are no control hierarchies among components: no generals, captains, and soldiers.

The modern theory of self-organizing phenomena has several roots: cybernetics, which did look for control hierarchies, but quickly saw more complex behavior; organismic biology, especially the early traditions of "holism" that opposed the "reductionism" of physics; ecosystem theory; the autopoiesis theory of Varela and Maturana; auto-catalytic and cross-catalytic reaction theory in chemistry; mathematical ecology; cellular automata theory; thermodynamics and statistical physics of irreversible processes; and the mathematics and physics of non-linear equations.

Key names and ideas include:

Stuart Kauffman -- cellular automata, evolutionary and developmental biology

Stanley Salthe -- developmental and evolutionary biology, origins of life, hierarchical levels in complex system

Ilya Prigogine -- thermodynamics and statistical physics of irreversible process; origins of complexity

Gregory Bateson -- cybernetic models of ecosocial interactions, meta-learning

Francisco Varela and Umberto Maturana -- autopoietic systems theory

Howard Odum -- systems ecology

H. Ross Ashby -- cybernetics

Also: Norbert Wiener, J. Doyne Farmer, H. Poincare, L. van Bertalanffy, R. Thom, N. Luhmann, Heinz von Foerster

## ***General Social Theory***

All events in an ecosocial system take place in a sociological and cultural context as well as an ecological context. A general theory of social relations is a necessary part of an ecosocial-semiotic theory. No adequate theory exists, primarily because it is not possible to construct such a theory from inside the system: all social theorists are enmeshed in the social relations they describe; we cannot escape being part of a gender system, a class system, a specific cultural-historical epoch, etc. But some theories are more useful than others.

A general social theory usually identifies the categories of persons constructed by the practices of a community, and specifies the relations among these categories in terms of power, prestige, and specialized function within the community. It then tries to explain how these categories and relationships function, how they came to be established historically, what keeps them going, and how they are always changing. An ideal theory relates the global-scale phenomena of the community to the local-event scale phenomena (e.g. gender and class to conversation and action). All existing macrosocial categories are subject to radical critique and should not be taken as absolute, merely as indications of the existence of macrosocial phenomena.

The principal, useful social theories and their basic principles and formulators are:

Neo-Marxism: class-based analysis; K. Marx, L. Althusser, A. Gramsci

M. Foucault: discursive formations, archeology, power relations in historical context

P. Bourdieu: habitus, structuration, capitals, fields; comprehensive except for historicity

B. Latour: actant networks, heterogeneity of types and scales; very sophisticated

N. Luhmann: systems theory, discourse; more cybernetic than self-organizational

C. Geertz: thick descriptions, hermeneutic ethnography; phenomenological approach

Ethnomethodology: primarily a microsocial theory, but very useful, also with roots in phenomenological philosophy (E. Husserl); A. Schutz, H. Sacks, A.

Cicourel, E. Schegloff, and related work by E. Goffman

See Also: A. Giddens, B. Bernstein, R. Harre

## ***General Semiotics***

Semiotics is the theory of the production and interpretation of meaning. Its basic principle is that meaning is made by the deployment of acts and objects which function as "signs" in relation to other signs. Systems of signs are constituted by the complex meaning-relations that can exist between one sign and another, primarily relations of contrast and superordination/subordination (e.g. class/member, whole/part). Signs are deployed in space and time to produce "texts", whose meanings are construed by the mutually contextualizing relations among their signs.

There are two major traditions in European semiotics: F. de Saussure (Swiss-French), semiology; and C.S. Peirce (Anglo-American), semiotics. Saussure's approach was a generalization of formal, structuralist linguistics; Peirce's was an extension of reasoning and logic in the natural sciences.

Subsequent theorists of importance include: L. Hjelmslev, R. Barthes, G. Bateson, J. Lacan, S. Freud, B.L. Whorf, B. Malinowski

Also: U. Eco, J. Baudrillard, M. Serres, J. Lemke, M.A.K. Halliday, T. van Leeuwen, N. Goodman

### ***Social Semiotics***

General Semiotics tends to be formalistic, abstracting signs from the contexts of use; Social Semiotics takes the meaning-making process, "semiosis", to be more fundamental than the system of meaning-relations among signs, which are considered only the resources to be deployed in making meaning. Social semiotics examines semiotic practices, specific to a culture and community, for the making of various kinds of texts and meanings in various situational contexts and contexts of culturally meaningful activity. Social semiotics therefore makes no radical separation between theoretical and applied semiotics and is more closely associated with discourse analysis, multimedia analysis, educational research, cultural anthropology, political sociology, etc.

Principal developers of Social Semiotics include: M.A.K. Halliday, R. Hasan, J.R. Martin, J.L. Lemke, G. Kress, R. Hodge, T. van Leeuwen, P. Thibault, T. Threadgold, L.M. O'Toole

### ***Multimedia Semiotics***

Multimedia semiotics is based on the principle that all meaning-making, because it is a material process as well as a semiotic practice, necessarily overflows the analytical boundaries between distinct, idealized semiotic resource systems such as language, gesture, depiction, action, etc. Every material act and sign can be, and usually is, construed in relation to more than one system of sign relations (e.g. a written word is both a linguistic sign and a visual orthographic one; a spoken word is also construed in relation to its non-linguistic acoustical qualities; an image is interpreted both visually and usually also linguistically; etc.). Therefore it becomes important to study how different sign-systems are physically and semiotically integrated in texts and multimedia productions of various kinds.

One approach is to analyze various sign-systems separately and then study their integration, particularly emphasized are linguistic, gestural, graphical-pictorial, musical, and motor-actional semiotic systems. The greatest progress has been made for visual semiotics, especially in the work of: T. van Leeuwen, G. Kress, L.M. O'Toole, E. Tufte, S. Eisenstein, R. Arnheim, R. Barthes, C. Metz, J. Bertin

A second approach is to attempt to directly analyze the interconnections among signs belonging to different systems as they are deployed in particular texts, which is the one I usually take.

### ***Embodied and BioSemiotics***

Social Semiotics already emphasizes the role of materiality in sign processes, but some other traditions also focus on this, notably Biosemiotics (Jesper Hoffmeyer) and various traditions about embodiment of meaning-making, which might be seen as starting with Freud, but is more recently associated with Maturana and Varela, with the semantic theories of G. Lakoff (which I find somewhat too reductionist), and with the so-called corporeal turn (see work by Maxine Sheets-Johnstone).

### ***Functional and Systemic-Functional Linguistics***

Functional linguistics opposes itself to formal linguistics in much the same way that social semiotics contrasts with general or formal semiotics. Functional linguistics looks at language as a system of resources shaped by the functional uses of these resources in particular cultures over history. Its unit of analysis is text-in-context. It seeks to describe and explain how particular linguistic units and formal relationships are deployed to make possible the construal of particular meanings.

There are many traditions of functional linguistics. A simplified story is that they originated in Eastern Europe where Russian formalism was always more concrete and sociologically aware of context than was the West European variety. From this eastern formalism came the Moscow school functionalism (V. Propp, V.N. Voloshinov, M. Bakhtin, R. Jakobson), and the Prague School functionalists (V. Mathesius, J. Mukarovsky, F. Danes), which then migrated by way of B. Malinowski to England, where it developed into British functionalism (J.R. Firth, M.A.K. Halliday, J. McH. Sinclair), and also via Germany to the U.S. (E. Sapir, B.L. Whorf, M. Silverstein, J. Gumperz, D. Hymes) where it flourished more in anthropology than in linguistics itself. The English branch came via Halliday and his partner R. Hasan to Australia, and with M. Gregory to Canada. J.R. Martin studied with Gregory and Halliday and also emigrated to Australia. I met Halliday and worked with him, Hasan, and Martin in Sydney, where there developed additionally the so-called Newtown Semiotic Circle, including T. Threadgold, G. Kress, P. Thibault, and others, which developed the Social Semiotics model as a generalization of Halliday's social linguistics. Other branches of functionalism are Danish (L. Hjelmslev), French (A. Martinet, C. Hagege), Dutch (T. van Dijk), and German-Austrian (W. Dressler, R. Wodak). There are close associations between functionalism and sociolinguistics (e.g. W. Labov, J. Gumperz, J. Fishman) in many traditions, as there are more generally between functional linguistics and anthropological linguistics (J. Irvine, S. Gal, Stanton Wortham, John Lucy, among many others).

Systemic-functional linguistics (SFL) is the variant developed by Michael A.K. Halliday and is probably the most fully elaborated and useful system for

discourse analysis and various areas of applied linguistics. It has more distant affinities to tagmemic linguistics (K. Pike) and stratificational linguistics (H.A. Gleason). There is also a variety of computational linguistics deriving directly from Halliday, developed by C. Matthiessen and colleagues in Australia and R. Fawcett's group in Wales (see also E. Hovy, William Mann).

### ***Discourse Analysis***

Because the most developed branch of semiotics is the study of language signs and their use, it is possible to study the sign relations within texts (i.e. discourse semantics) and between texts (i.e. intertextuality) in great detail; this is very useful as a beginning in the study of other, especially multimodal or multimedia phenomena.

The origins of discourse analysis lie in classical Rhetorical Theory (Aristotle, Cicero, Longinus) and its successors. Modern discourse analysis derives initially from the formalist, structuralist work of V. Propp on the morphology of Russian folktales, the forerunner of Genre Theory. It was further developed by the Russian and Prague schools of functional text analysis, both for literary and nonliterary genres of writing, and to a small extent also for speech (e.g. J. Mukarovsky, R. Jakobson, V.N. Voloshinov, M.M. Bakhtin, V. Mathesius).

Useful developments in linguistic discourse analysis are mostly based on the ordinary language philosophy movement traced to L. Wittgenstein and later J.L. Austin and on the functional linguistic traditions in the U.S. (E. Sapir, B.L. Whorf, D. Hymes, M. Silverstein, J. Gumperz) and in England (J.R. Firth, M.A.K. Halliday, J. McH. Sinclair), Canada (M. Gregory, English), and Australia (J.R. Martin, R. Hasan).

The major approaches within Discourse Analysis in the Systemic-Functional and Social Semiotics traditions, and their key developers are:

Register theory: variation of text with context; Halliday, Gregory, Hasan, Martin

Genre theory: specialized text-types; Propp, Bakhtin, Hasan, Martin

Intertextuality: text-text relations; Bakhtin, J. Kristeva, R. Barthes, Lemke, Thibault

Text semantics: meaning made beyond the sentence; Halliday, Gregory, Lemke, Martin

Discursive formations: Foucault Thematic analysis: Lemke, Hasan, Halliday

Cohesion analysis: Hasan, Halliday Speech act analysis: Austin, Hasan, Martin, Thibault

Attitudinal-Evaluative meaning: Bakhtin, Lemke, Martin, Thibault

Conversation analysis: Sacks, Schegloff, S. Eggins, E. Ochs, J. Bruner

Narrative analysis: Propp, Mathesius, Bakhtin, A. Greimas, W. Labov

Theme-Rheme analysis: Halliday, P. Fries

## ***Postmodernism and Critical Theory***

These are broad rubrics for intellectual movements rather than specific theories, but they are also essential parts of social semiotic analysis. Postmodernism derives from Post-Structuralism and Deconstructionism, which were initially criticisms of the mostly French Structuralist movement of the 1960s. Critical Theory derives from neo-Marxism and Feminist theory, extended to include Post-colonial theory and Queer theory.

Structuralism was an off-shoot of general semiotics and formal linguistics and proposed that there were systematic abstract relations-of-relations among the many sign-elements of human culture, whether in kinship relations and village planning (Claude Levi-Strauss), cognitive developmental operations (Jean Piaget), or linguistic phonology (Roman Jakobson). These patterns of relations could often be expressed mathematically in terms of abstract group theory and other algebraic structures. It was also employed by Roland Barthes (literary semiology) and Jacques Lacan (psychodynamics). This view, while basically correct, was too narrow and was criticized for being too static and synchronic (Bourdieu), too ahistorical (Foucault), and too definitive (Jacques Derrida).

Derrida in particular mounted a radical philosophical critique in which he pointed out that the very act of meaning making always presupposes an unanalyzable ground of the possibility of meaning and of sign systems, and that the dialectic of sign and ground produces an inherent instability or indefiniteness in any meaning. These were the Post-Structuralist and Deconstructionist critics. Post-structuralism was very quickly succeeded by a more similar but more general critique of the master cultural narratives, metaphors, and assumptions of European (and European-American) culture (F. Lyotard), including those underlying the previous critical tradition of Marxism and neo-Marxism (Baudrillard, deCerteau). The Postmodernist movement made common cause with other new critiques, from non-European cultures, especially post-colonial ones, feminist critiques, and later gay and Queer Theory critiques. Some of these movements also allied themselves with neo-Marxism, as Critical Theory. The term postmodernism is no longer much in fashion, but the basic ideas remain central to understanding the politics of meaning.

Perhaps the most characteristic tenet of postmodern critical work is that everything which European philosophy and science has held to be fundamentally true at an abstract or programmatic level (ontology, epistemology, metaphysics, logic) is in fact a contingent, historically specific cultural construction, which has often served the covert function of empowering members of a dominant social caste at the expense of Others. It dismantles the most foundational procedures and assumptions whereby prior European philosophical traditions sought to establish universal truths or principles. It is fundamentally a revolutionary political movement, argued in intellectual terms.

Some useful sources: M.Foucault, J.-F. Lyotard, J. Baudrillard, M. deCerteau, G. Deleuze, B. Latour, D. Haraway, J. Butler, M. Serres, F. Jameson, H.K. Bhabha

## ***Activity Theory and Actant-Network Theory***

Relatively newer additions to the ecosocial dynamics toolkit are ***Cultural-Historical Activity Theory***, associated with the work on A.N. Leontiev, an admirer of the revolutionary Russian psychologist L.S. Vygotsky, and the much more recent ***Actant-Network Theory*** (aka Actor-Network-Theory), which derives mainly from the work of Bruno Latour. Familiarly known respectively as CHAT and ANT.

***Activity Theory*** essentially begins as a social-ecological psychology in which the unit of analysis is human activity. An activity derives its unity from the fact that all actions belonging to it tend toward some object/objective or goal. The notion of an activity is similar to activity-type in social semiotics or action genre in another terminology. While social semiotics does not accept intentional goals as a valid principle for defining actional units, it does agree with the developments of CHAT in the direction of understanding semiotic mediation (signs) in the same terms as artifact mediation (tools) in human activity. The later version of the theory has been developed particularly by Yrjo Engestrom. Vygotsky emphasized originally the role of language in meaning making, later generalized to the role of discourse in mediating action (e.g. A.R. Luria). Ecosocial Dynamics tends to see the unity of action as deriving mainly from habits at the level of the individual, which derive in turn from actional social formations or socioculturally recognized activity-types, experienced repeatedly in life. The two views however are compatible, especially if one allows in CHAT the notion that goals are retrospective constructions and that the actual material objectives of our actions are emergent in the actor-object-context dynamical system.

Social semiotics attempts to join with CHAT in avoiding a top-down determinism from the level of social formations: we do have a measure of creative agency, within the constraints and affordances of social formations such as Discourses, activity-types, class-specific habitus, etc. Foucault argues for the illusory character of agency on the historical timescale, but we can, with Bakhtin, allow it (and even celebrate it) at the dialogic or interactional timescale. The important issue for sociocultural theory is how some innovations at the local scale of events can propagate and become more typical cultural options at the social-historical scale. By and large this scaling-up itself depends on already existing macro-scale relations, but nonetheless surprising and emergent formations do appear, and their appearance may be triggered by, or at least traceable-in-retrospect to individual local innovations, especially innovations in genres and repeatable or generalizable social-interactional practices, such as communication or social activities. Across an individual lifetime, there is a similar logic for social learning and unique individuation.

One strand within CHAT research tends to focus on individual development in the context of local social interaction. In another, the unit of analysis is rather the activity itself, with a focus on its community history and how it comes to be part of the repertory of an individual. A fully sociocultural version of CHAT attempts to link subjects-in-development not only with the social activities that link us to other subjects, but also to the mediating artifacts, tools, and symbolic systems of

our communities, and to relevant larger scale cultural and social formations (e.g. norms and values, ways of speaking and acting).

Key figures include: L.S. Vygotsky, A.R. Luria, A.N. Leontiev, Y. Engestrom, M. Cole, J. Wertsch, E.V. Ilyenkov

***Actant-Network Theory*** has its origins in studies of the networks of interdependent social practices that constitute work in science and technology. Latour recognized that semiotically both human actors and nonhuman participants (whether artifacts or naturalized constructs like bacteria) were equally actants in the sense of Greimas' narrative semiotics: they were defined by how they acted and were acted on in the networks of practices. The important fact here is not that humans and nonhumans are treated symmetrically (a given in social semiotics and ecosocial dynamics) but that they are defined relationally as arguments or functors in the network, and not otherwise. This leads to a relational epistemology which rejects the naive positivist view of objects or actors as existing in themselves prior to any participation in ecosocial and semiotic networks of interactions (including the interactions by which they are observed, named, etc.). ANT has much in common with Ecosocial Dynamics, but adds one crucial observation: that the usual view of dynamical systems assumes that they have a local topology, and so events nearby in space and time are more relevant than those at a distance, leading to neat separation of scales of processes. ANT notes that the topology of networks is in general non-local, and further that semiotic artifacts are often the 'boundary objects' that mediate non-local, scale-breaking interconnections. This leads to a powerful generalization of ecosocial systems theory to include network topologies (and the rarer laminar topologies) and makes possible a general inquiry into scale-respecting vs. scale-breaking dynamics (i.e. heterochrony).

In addition to Latour, key figures in ANT include: M. Callon, J. Law, M. Lynch, S. Woolgar, and S.L. Star.