

Media Semiotics – An Overview*

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Summary: Traditionally, the occupation with media in general as well as with media products/texts takes a prominent position within the field of applied semiotics. Accordingly, we find a great number of semiotically based analyses of media texts both in academic research and in university class rooms, and, over the years, many concepts and notions from semiotics have migrated into communication and media studies.

The paper starts with a brief survey on the way “media semiotics” is dealt with in several semiotic reference books (handbooks and encyclopaedia) and proceeds then to a discussion of the relations between semiotics and media studies and the definitions of some core notions like “medium”. Finally, there is an overview of the developments in the various areas from movies to advertising, from television to digital media.

Zusammenfassung: Die Beschäftigung mit Medien ganz allgemein bzw. mit Medienprodukten/-texten nimmt traditionellerweise einen prominenten Platz innerhalb der angewandten Semiotik ein. Sowohl in der akademischen Forschung als auch in einschlägigen Lehrveranstaltungen findet sich eine große Zahl semiotisch basierter Analysen von Medientexten, und mit den Jahren sind viele ursprünglich semiotische Konzepte und Begriffe in die Kommunikations- und Medienwissenschaften hinübergewandert.

Der Beitrag beginnt mit einer kurzen Übersicht wie das Thema Mediensemiotik in den Semiotikhandbüchern und Enzyklopädien behandelt wird und setzt mit einer Diskussion einerseits der Beziehungen zwischen Semiotik und Medienwissenschaften und andererseits der Definitionen einiger zentraler Termini wie z.B. „Medium“ fort. Am Ende steht ein Überblick zu den Entwicklungen in den verschiedenen Bereichen von Film bis Werbung, von Fernsehen bis digitale Medien.

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When somebody is interested in a topic, she or he will look it up either in books or, choosing the more recent and increasingly popular way to get information, on the internet. A not too sophisticated web search with the two keywords “media” and “semiotics” renders more than 83,000 results (almost a moderate figure compared to some 328,000 results in the case of a search for “semiotics” alone). This number will diminish drastically after a quick check, since the majority of the first some fifty addresses (normally visited) refer either to the few books, which have the words “media semiotics” in the title, or to web pages offering sort of

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directories with links to ever the same handful of sites. So the reader seeking for information will certainly return to more conservative sources, that is printed material, and she/he will look up the entries in diverse dictionaries and encyclopedias, and the respective articles on medium, media studies or media semiotics in introductory works. Such a survey renders not only the information needed, but, moreover, these texts also reveal to what extent the field in our case, media semiotics, is recognized and appreciated as an individual area of semiotic research, or, more generally, whether it is present at all in the consulted texts, and how the topic is dealt with in the pertinent literature.

Our knowledge seeking novice, however, will be in trouble. Looking for definitions of, or at least descriptive passages about, media semiotics as a distinct field of semiotic research, analyses and theorizing will not bring much help, since the search does not result in the expected explanations. The same goes for the search for “medium” or “media” which is, again, not very promising. This lack of entries is definitely not caused by a lack of interest of semioticians in the field covered, or, even worse, a neglect of the notion as somewhat irrelevant to semiotics. A possible explanation lies in the comparably late process of academic autonomy and independence semiotics has gone through. Like all disciplines, or even sub-disciplines and paradigms, semiotics has its own set of notions, the definitions of which sometimes overlap and coincide with those found in neighboring and adjacent disciplines, in other cases they differ extremely from those generally known. To construct a concise terminological building in its own right, semiotic dictionaries and handbooks have to concentrate on the core terms. Although the process of mediation is by definition fundamental to semiotics and thus a pivotal area of semiotic reasoning, a crucial topic of semiotic research, and despite the interest in the field and the wide-spread use of the notion, “*medium*” as such is not a genuinely semiotic concept. After all, how is *media semiotics* (or, more generally, *medium*) dealt with in some of the standard reference works published in the last two decades?

Searching for “media semiotics”, or: how informative are handbooks and encyclopaedias?

One of the first reference works to start with when searching for notions and concepts is certainly the three-volume *Encyclopedic Dictionary of Semiotics* (Sebeok 1986). The second volume contains an article titled “Medium”. Unfortunately, the one and a half pages give no information whatsoever on medium, let alone media semiotics, since they are dealing with nothing but the notion referred to in the subtitle: “Message”. This is somehow strange as there is another entry explicitly titled “Message/Medium” which in turn discusses nothing but Marshall McLuhan’s view of the “medium/message” complementarity.

Though comparably small in size, the *Glossary of Semiotics* (Colapietro 1993) is usually a good spot for a first check on notions. With regard to our subject, the reader is less successful since the book has not a single entry on medium or media, let alone on media semiotics.

Another possible source is the index to the first 100 volumes of *Semiotica*, (1997). It offers a “Subject Index: Scientific Fields” which, although quite detailed, does not even list the category key word *medium* or *media*. Looking more closely through the list of fields reveals, however, that the observation must not be read as a lack of papers on media topics: there are 2 articles subsumed under the heading “communication”, 28 under “cinema”, some 40 more under “film”.

The same happens to the reader with the *Encyclopedia of Semiotics* (Bouissac 1998), at least at first sight: she/he will not find an individual article on medium or media. Thanks to the index other entries can be checked to find something on the “ideological role of media”, on “transformations”, “violence”, and “women in media”. In addition, *Media* is generally cross-referenced to *Mass Communication* which has an entry. Further articles are dealing with “semiotics of advertising”, cartoons, cinema, comics, communication, computer & computer-mediated communication, film semiotics (plus additional entries on: grande syntagmatique, imaginary signifier, and Christian Metz), mass communication, photography, pictorial semiotics.

The *Handbuch der Semiotik* was first published in 1985 in German; in 1990, a heavily revised English version, the *Handbook of Semiotics*, appeared, which was the basis for the 2nd German edition (Nöth 1985/1990/2000). The 1990 English version grouped several chapters dealing with topics usually subsumed under “media” under the heading “Aesthetics and Visual Communication”. It is only the 2nd German edition which features a chapter IX. explicitly titled “*Mediensemiotik*”. The areas presented are: media, image, image and text, maps, comics, photography, film, and advertising. The subject index, however, enumerates several other instances where the notion *media* is discussed. Taking up ideas first presented in his introductory contributions to two collective volumes (Nöth 1997b, 1998), Nöth starts his chapter IX.1. on “media” with some general observations on the relationship between semiotics and the media, naming both early examples of semiotic studies of media texts and several strains and ideas within semiotics adopted for media studies. He then continues with three subchapters dealing with: “themes of media semiotics”, “signs, medium and the media”, and “signs, reality and hyper reality”.

Like many other volumes, the *Encyclopedic Dictionary of Semiotics, Media and Communications* (Danesi 2000) has no description of the field of media semiotics, but, of course, it includes an entry on *medium* which will be discussed below since it offers a concise definition of, and approach to, the notion.

Semiotik/Semiotics, subtitled *Ein Handbuch zu den zeichentheoretischen Grundlagen von Natur und Kultur/A Handbook on the Sign-Theoretic Foundations of Nature and Culture*, is so far the largest (and most recent) reference work (Posner/Robering/Sebeok 1997-2004). Because of the overall structure of the handbook, the central article on the topic in volume 3 has the term in question – media semiotics – only in the subtitle (and unlike “semiotics of culture” or “cultural semiotics”, the notion is not listed in the index either). However, the text on “Semiotic aspects of mass media studies: Media semiotics” (Wolf 2003) gives a good overview on the relationship between the two adjacent, or even overlapping, fields. Starting from the history of mass media studies, Wolf

continues to outline the main areas of mass media research, and recent trends. When it comes to the actual relationship, he proceeds from a strong focus on Eco's theoretical models of the code, as well as the discussion of the reciprocal expectations and changing semiotic paradigms to the interconnection between semiotics and British cultural studies. The last part shows "thematic areas where integration between semiotics and mass media studies is more advanced and is required by the media under examination" (Wolf 2003: 2932), like the "textual structures and utterance processes", or "cognitive activities of the media audience" (Wolf 2003: 2933). Wolf ends with "open questions on the research agenda" (Wolf 2003: 2934), which will be presented later on. Within the same chapter XIV of the third volume of *Semiotik/Semiotics*, presenting the relations between "semiotics and individual disciplines", there is also a contribution on "Semiotische Aspekte der Filmwissenschaft: Filmsemiotik" (Kloepfer 2003). Concerning "medium" the handbook contains several articles which mention the notion even in the title. Chapter 2 of the first volume, for instance, is already titled "Aspects of semiosis – channels, media, and codes", and among others it features "Technische Medien der Semiose" (Böhme-Dürr 1997), and "Social media of semiosis" (Threadgold 1997). At the end, in vol. 4, which offers a chapter on "selected topics of semiotics", there is also an article on "Multimediale Kommunikation" ("multimedia communication"; Hess-Lüttich/Schmauks 2004). Thanks to the detailed "index of subjects" the reader is able to look up some further contributions where "medium" or "media" are discussed.

Finally, there are some textbooks, introductory works, collective volumes, or larger chapters in more general overviews of semiotic studies which carry the formula "media semiotics" in their title. The earliest publication was, most probably, a German collective volume, titled *Semiotik und Massenmedien* (Bentele 1981). The various articles focused on different media and the analyses of media texts. Approximately a decade later, Ernest W.B. Hess-Lüttich (1990) dealt with "Massenmedien und Semiotik" in the context of "semiotics in the individual sciences".

Semiotics of the Media. State of the Art, Projects, and Perspectives (Nöth 1997b) contained a large number of the papers presented in Kassel at the 1995 conference on the semiotics of media, and thus certainly counts among the earliest volumes to focus entirely on this field.

Two more introductory publications are, finally, *Media semiotics. An introduction* (Bignell 1997) and *Understanding Media Semiotics* (Danesi 2002). The latter volume defines the field in a first approach in the following way: "The primary object of media semiotics is to study how the mass media create or recycle signs for their own ends. It does so [...] by asking: (1) what something means or represents, (2) how it exemplifies its meaning, and (3) why it has the meaning that it has" (Danesi 2002: 34).

Looking only for the explicit naming of semiotics in the title, however, might exclude several publications which without telling so, proceed from semiotic concepts, like, for instance, a collection of early papers from the Birmingham Centre for Contemporary Cultural Studies (Hall et al. 1980). The same applies to

volumes on special topics, as for instance, narrativity, edited or written by semioticians (cf. Kloepfer/Möller 1986; Cobley 2001).

1.2 Semiotics of the media and/or media semiotics

Many semioticians seem to agree upon the view that there is no unified media semiotic approach (cf. Bentele 1981: 26; Hess-Lüttich 1990, 177; Nöth 1997a: 1); the more so since media studies themselves are rather a vast and diversified field of research than a single discipline, on the one hand, and, on the other hand, semiotics cannot be regarded as a unified single paradigm discipline either. The semiotic enterprise is made up of different schools and traditions, starting from the big divide between the philosophic or Peircean or American line of triadic concepts of semiosis and the linguistic or Saussurean or continental line of binary sign models. Evidently, these two and many other semiotic models and theories found their way into the study of media.

The special kind of relationship between semiotics and media studies seems to be of particular interest for both disciplines. The fact that the history of semiotic studies of media and media texts goes back at least to the 1960s shows that semiotics has been there long before the media studies hype has commenced. Nonetheless, semiotics has not always been valued as an approach fruitful for media studies (or at least not all over the world).

A second reading of the various introductory texts on media semiotics which were written in the late 1980s and 1990s also reveals how the relation has changed during the last years. Hess-Lüttich (1990) observes a certain skeptical attitude toward semiotics among the various disciplines that share the research object "mass media":

Zu sehr sind die Medienforscher noch ihren jeweiligen Fachtraditionen verpflichtet und verhaftet, als daß sie die integrierende Kraft semiotischer Theorienbildung methodisch zu nutzen gelernt hätten. In Literaturwissenschaft wie Publizistik wird gegen die Semiotik zuweilen als 'Mode' polemisiert, ihre zweitausendjährige Geschichte verkennend. (Hess-Lüttich 1990: 203)

In the mid-1990s, Nöth discussed the variety in the geographical distribution of media semiotics:

While in countries like Italy (especially under the influence of Umberto Eco), France, Spain, and Brazil, the terms 'semiotics' and 'media studies' are often almost used synonymously, in Germany and in the English speaking countries, the semiotics of the media has been considered as less central in media studies. (Nöth 1997a: 6-7)

Great Britain however, and British cultural studies deserve a separate discussion: to a large degree they focus on media and they are rooted in semiotics.

More generally it can be observed that in the last years semiotics has finally found its way into general media and communication studies even in German speaking countries, as university curricula, reading lists and undergraduate text books can show. Depending on the viewpoint – from the side of semiotics or from that of media studies – the question which of the two is considered just an auxiliary discipline or method, and questions of dominance and subordination are,

of course, answered quite controversially. Winfried Nöth titled his contribution in the 1998 volume even “Die Semiotik als Medienwissenschaft” (or “Semiotics as a media science par excellence” as he named the relation in his introduction to *Semiotics of the Media*, Nöth 1997a: 5), and considered semiotics to be the fundamental discipline for media studies. Accordingly, his enumeration of topics dealt with in media semiotics is by far the most comprehensive, and almost co-extensive with that of semiotics in general, since it comprises themes like:

Kommunikation, Kognition und Emotion, Mediensemiose und «Realität», Referenz und Selbstreferentialität, Wahrheit, Mythos und Ideologie, Information, «Objektivität» oder Manipulation und schließlich auch die evolutionsgeschichtlichen Wurzeln der Zeichenproduktion und -rezeption in den Medien. (Nöth 1998: 53)

Analogous to the distinction between semiotics of culture and cultural semiotics, the semiotically rooted occupation with the media goes in two directions: (i) the semiotic exploration of media genres and texts (or, how semiotics can be used for the analysis of movies, ads, or newspapers, as it is sometimes stated in media studies textbooks); and (ii) a semiotic theory of (mass) communication and media. Both in general recognition and in the literature, the first one is by far more present and touches each and every mass medium used, from the more traditional ones to latest electronic developments in information and communication technologies. Nevertheless, it is exactly the latter field in which the modelling and conceptual quality of semiotics is able to contribute to the further development of media studies: semiotics is not just another discipline dealing with a particular object (which in the case of semiotics is vast enough: signs and sign processes of all kinds), but it is always and at the same time a meta-discipline reflecting on concepts, paradigms and approaches. In this sense, media semiotics is not only reflecting on media and media texts, but it is also able to offer the forum for the dialog between media studies and semiotics and to cogitate on their relation and their tasks.

(Mass) communication processes from a semiotic point of view

Since the relation between both communication studies and media studies and semiotics has to be regarded as rather intricate, it might be advisable to choose a common topic as the appropriate point of departure to discuss the role of semiotic studies and models with regard to media (studies), namely the communication process.

When we proceed from Jakobson’s statement that “[t]he subject matter of semiotic is the communication of any messages whatever” (Jakobson 1973: 32), semiotics and communication/media studies are neighboring disciplines which share at least one research object: communication. This does not imply, however, that semiotics can or should be reduced to the study of communication, because it is equally concerned with signification (cf. Prieto 1968; Mounin 1970), or significative and cognitive processes (cf. Nöth 1985/2000: 235). Krampen made

yet another clarification concerning the particular relation between communication and semiosis which is needful:

A communication process in which a sender transmits second hand experiences to a receiver is a sign process *par excellence*. In this sense, models of communication processes are always models of semioses, but not *vice versa*. (Krampen 1997a)

Accordingly, the discussion of “communication” is often included when semioticians analyze sign processes. One of the authors for whom communication is a central concept is Charles W. Morris (1946). Alongside the divide between communication and signification, Umberto Eco offers a discussion on communication in his *Trattato di semiotica generale* (1975, 1976).

Looking back at the more than one hundred years of history of contemporary semiotics (if the two and a half millennia of occidental history of dealing with semiotic questions at large is not taken into account!) clearly shows that the pre-occupation of semiotics with communicative processes is not a recent phenomenon and has started decades before Shannon & Weaver formulated their communication model with sender and receiver in 1949. As early as 1906, Ferdinand de Saussure (1916) has presented his view on the communicative situation (i.e. the *speech circuit model*) which, contrary to the 1940s diagram, implied already the three fundamental dimensions: the semantic dimension or the constitution of meaning, the pragmatic dimension showing sign producers in action, and the dialogic dimension of message exchange. Unfortunately, the speech circuit model was hidden within Saussure’s courses on linguistics and hardly received outside this discipline. Communication studies would have started differently, if the ruling paradigm would have come from semiology. The fault is certainly not with Shannon or Weaver but rather with some followers who eagerly took the model as a ready-made device and insufficiently adopted it for human communication. As a consequence, generations of students in communication and media studies were treated with technicistic concepts based on a short-sighted transmission model of communication.

Semiotics has to offer more than one model of the communication process or of the sign process, of *semiosis*, to use a more general term (for an extensive discussion of the diverse views of semiosis as well as a complex and comprehensive semiotic matrix cf. Krampen 1997a & 1997b). Although formally created for language both Karl Bühler’s tripartite organon model (1934: 28) and its expansion in Roman Jakobson’s communication model (1960) have to be mentioned. Especially the latter schema, combining *six constitutive factors* of communication, which are paired with six equivalent *functions*, was and still is quite influential in the discussion of nonverbal communicative and media processes. Looking through the publications, the application to domains as different as architecture and advertising can be found. The most recent example is the discussion of Jakobson’s concepts with regard to new media and multiagent environments (Petric/Tomic-Koludrovic/Mitrovic 2001). Relying on the systemic quality of Jakobson’s thinking, Itamar Even-Zohar adapted the schema to the literary (poly)system (cf. Even-Zohar 1990: 31), which could be considered to be just a special case of media systems in general.

On the other hand it seems that over the years communication studies has developed a strong tendency to deal with aspects that are clearly associated with semiotics. According to Berger & Chaffee,

communication science seeks to understand the production, processing, and effects of symbol and signal systems by developing testable theories, containing lawful generalizations, that explain phenomena associated with the production, processing and effects (Berger/Chaffee 1987: 17).

Looking carefully at the wording (and the concepts referred to) reveals, however, that the way scholars in communication science intended to handle the topic is again not a qualitative one. They rather aimed at empiricist approaches delivering quantifiable results. From the side of semiotically oriented researchers the situation is, of course, described quite differently, even if they proceed from the same observation, thus preparing the ground for a sign-theoretic foundation of the study of communication processes. In his article in *Semiotik/Semiotics* on “semiotic aspects of mass media studies”, Mauro Wolf stated:

Indeed, there was a strong need in communication studies to focus on the complex nature of the communicative process, and semiotics was better suited than psychology or sociology to understand this element of crucial relevance in mass communication processes. (Wolf 2003: 2930)

Among the reflections semiotics can indeed offer is a differentiated view of the communication process as sign process. Looking through the diverse definitions of communication to be found in the various encyclopedias, glossaries and text books, we can see that many scholars in communication studies include signs and sign production in their formulas. Accordingly, the focus on Man as a producer and recipient (or re-producer) of the message, which is necessarily and always conveyed in form of sign vehicles or signifiers or representamina or signantia (depending on the semiotic theory adopted), is no longer mistaken for a restriction since it includes per definition an antireductionist approach compared to shortsighted technicistic models.

The view of communication as semiosis is not confined to only meaning-oriented considerations as opposed to society-oriented approaches, because in semiosis three moments are interconnected: the production/constitution of meaning (*semantic* dimension); the structure of the message (*syntactic* dimension); and the usage of the message including attitudes and actions resulting thereof (*pragmatic* dimension). The most explicit integration of social aspects can be found in *Ferruccio Rossi-Landi's* socio-semiotic theory of *social reproduction* in which communication is defined as sign exchange. For Rossi-Landi, social reproduction always comprehends “three indissoluble correlated moments”: *production / exchange / consumption*. Exchange “is always, at the same time and constitutively, external material exchange, that is, the process of exchanging not signs but bodies [and] sign exchange, that is communication, including as such within it: *sign production, sign exchange* in the strict sense, and *sign consumption*” (Rossi-Landi 1975: 65; cf. 1985: 38).

Switching from conceptualization and modelization to observation and analysis, the researcher is confronted with many different areas of

communication. The study of communication deals with a vast field of quite different types of communication, or communicative situations, with quite different means of communication involved and used to convey messages and meaning.

As a result of the importance of the sign system *language*, there can hardly be an analysis of verbal communication without semio-linguistic concepts, starting from the situation, the course of the conversation, the various registers used, or the content of the utterance. In much the same way, a great deal of the publications on *nonverbal communication* is rooted within semiotics, like the research on “body language” or proxemics. As soon as we transcend the domain of communication between human beings and turn to *man-machine-communication* we have to consider intricate relations and overlaps between semiotics and cognitive sciences, or AI-research, respectively. Finally, with the area of *mass communication* we enter the diffusion zone between communication and media studies. Looking at the various subfields of mass communication research, additional connections can be found, like the transition from research on subconscious effects to the occupation with the recipients’ competence in handling mass media. From the point of view of semiotics, processes of mass communication are also semiotic processes like any other communication. When split into the partial processes involved and analyzed in detail, however, the degree of complexity appears to be much higher. Krampen distinguishes the subsequent and simultaneous phases and the various channels used, and he concludes that

a mass communication event is a supersemiosis Σ constituting a matrix of semioses Z , modeled by semiotic matrices, with n kinds of channels [...] during m kinds of stages in the production of a mass communication event (e.g. acquisition, editing, elaborating, sequencing or layout, sending or printing, etc.). (Krampen 1997b: 96)

When it comes to the question of the proportion of semiotic theories and analyses within *media studies* proper, or the specific relation of the two disciplines, the answer can only be found after a closer look at the entirety of semiotic approaches (including closely related concepts) and their respective historic influence (cf. Wolf 2003).

Medium – channel – code: concepts and notions revisited

As stated earlier, “*medium*” is not part of the set of semiotic notions proper. Nevertheless, it is widely used also within semiotic texts and thus deserves some attention, the more so, since one of the tasks semiotics is specially apt for is the theoretic reflection and a systematic reconsideration of pivotal concepts and models in media studies, like channel or medium (cf. Wulff 1978). Several different disciplines are occupied with the study of media, media texts, media institutions, etc. As a consequence, the notion of *medium* is in itself an iridescent notion. Unfortunately, the degree of usage in communication and media studies does not always correspond to that of pertinent definitions of the notion. In his entry on

“*Multimedia Communication*” in the *Encyclopedic Dictionary of Semiotics*, Hess-Lüttich thematizes this problem:

Medium’s widespread usage in mass communication and psychology, in economics and cybernetics, in physics and philology, make it difficult to agree on an integrated basis for founding a category of material transmission of social meaning. (Hess-Lüttich 1986: 574)

Apart from the general quoting of the Latin origin of the term (*medius* = between, the middle), the solution offered by many authors seems to be rather a description resorting to everyday experiences (and uses) of the term and the enumeration of examples than a definition *sensu stricto*. Texts which try to cope with the term medium usually start from the physical meaning of the word (that is, the contact matter or physical substance), only to add in the next sentences that it is generally used for the means of communication.

The “Glossary” for the first Elsevier *Encyclopedia of Language and Linguistics* (ELL), which names two definitions, is an example for the contextually explicable restriction to the latter:

medium 1 The means used in a communication, i.e. whether it is spoken, written, symbolic, color coded, etc. e.g., *phonic, aural, visual medium*. 2 A *channel* of communication as in mass media. (ELL: 5144-5145)

Mass media in turn are defined as “[t]he (mass produced) media (see *medium* 2) which seek to communicate with a mass audience, e.g. television, newspapers” (ELL: 5144).

Following a widespread classification, we can distinguish between primary media (which are entirely based on the abilities of our body and function without technical equipments), secondary media (the sender uses some kind of machines), and tertiary media (both sender and receiver have to rely on technical equipment) (cf. Pross 1972); recently, the tripartite scheme has been augmented by a quaternary type, which comprise the digital media. Another tripartite scheme is presented in the *Encyclopedic Dictionary of Semiotics, Media and Communications* (Danesi 2000). Danesi opens the entry with general definitions: “1. any means, agency, or instrument of communication; 2. the physical means by which a sign or text is encoded (put together) and through which it is transmitted (delivered, actualized)” (Danesi 2000: 141-142). In the added explanatory notes, he then proceeds from pre-writing media for communication (oral-auditory and pictographic), and discusses the alphabet in terms of a Kuhnian *paradigm shift*. After briefly discussing McLuhan, and describing how each medium implicates knowledge of specific kinds of codes which the medium itself determined to be deployed, Danesi offers three more entries on *three different types* of medium (and the respective examples) which should be distinguished in the analysis. (i) The *artifactual medium*: “artifactual means or mode of encoding and decoding a message”, like books, paintings, sculptures, or letters; (ii) the *mechanical medium*: “mechanical means or mode of transmitting a message”, that is telephones, radios, television sets, computers, videos; and (iii) the *natural medium*: “natural means or mode of encoding and decoding a

message”, like the voice (speech), the face (expressions), the body (gesture, posture, etc.) (Danesi 2000: 142).

In spite of such differentiated views, today the notion of medium is often used just in the plural and thus confined to denominate the means of mass communication. One of these definitions of *mass media* is included in the entry on *Mass Communication* of the 1998 *Encyclopedia of Semiotics*, considering them to be

channels of communication, located at the institutional and corporate levels of society that use large-scale high-technology methods to supply standardized communication products to widespread heterogeneous audiences. (Fulton 1998: 389)

There are also more encompassing descriptions, where the concept of (mass) media includes such different instances of the communication or sign process as the channel (and thus also the physical substrate used for transmission), the entire apparatus, the sender (often in the form of an organization or institution), the codes, and the signs (and sign systems) used. According to such a multifaceted view, Karin Böhme-Dürr defines medium in her *Semiotik/Semiotics* article on technical media in the following way:

Der Begriff „Medium“ bezieht sich [...] auf *Kommunikationsmittel*, also auf die Mittel zur Weitergabe von Zeichen. Kommunikationsmittel sind zum einen technische Geräte (Instrumente, Apparate) und zum anderen Zeichenkörper (= Zeichenträger). (Böhme-Dürr 1997: 358)

In order to make this somehow very general and unspecific definition operational, she distinguishes three clusters conforming to the various disciplines dealing with it: the concept of media as used (i) in the social sciences, (ii) the natural sciences, and (iii) the technological media concept (cf. Böhme-Dürr 1997: 358).

A sharp contrast to rather vague descriptions is the very differentiated classificatory grid of sub-conceptions offered by Roland Posner. Proceeding from the actual use of the notion both in everyday language and in the pertinent literature he distinguishes six different uses of the notion medium based on the kind of sign processes involved: (i) the biological concept, which characterizes the sign systems according to the body organs and sense modalities involved in production, distribution and reception of signs (eyes/visual media; ears/auditive media; nose/olfactory media; taste/gustatory media; skin/tactile media); (ii) the physical concept, which characterizes the sign systems based on the chemical elements and the physical conditions; (iii) the technological concept, based on the technical means and apparatuses used; (iv) the sociological concept, covering social institutions that organize the biological, physical and technical means; (v) the culture-related concept, which characterizes the sign systems according to the aims of the messages conveyed by them; and (vi) the code-related concept, which characterizes the sign systems according to the rules to correlate messages and sign vehicles (Posner 1985: 255-257). On the one hand, this plurality of concepts is only helpful when the various notions and the correlated media concepts and criteria are kept apart for the sake of precision and clarity. On the other hand, it has to be clear that the differentiation of these six media conceptions is only made for analytical reasons; with regard to the actual process

they have to be viewed together since they appear simultaneously or consecutively, much in the same way as Krampen has defined the mass communication process as a supersemiosis.

Another point of departure for a truly *semiotic reconsideration* of the concept of the medium, could be a statement Charles S. Peirce made (presumably in 1905) in which he even equals sign and medium: "A sign is plainly a species of medium of communication." (Peirce MS 283: 125) In 1906 he goes one step further and writes: "All my notions are too narrow. Instead of 'Sign', ought I not to say Medium?" (Peirce MS 339). With one exception, however, this use became not the current one. Laying stress on the specific quality of the sign as mediator between object and interpretant, the notion introduced by Max Bense and Elisabeth Walther instead of sign or representamen is *Mittel* or *medium* (For her discussion of "medium", cf. Walther 1997).

To make the situation even more complicated, "medium", which is in itself already a multifaceted term, is always accompanied in the pertinent literature by several other notions which are only partly core concepts of semiotic theory.

"Channel", though widely used today, is one of these notions coming from neighboring disciplines. Originating from information-theoretical texts, it has entered also the (media) semiotic discourses. The problem, however, lies not in the term as such but in a synonymous use of channel and medium (as analyzed in Wulff 1978), which does not contribute to clarify the various elements and phases of the process. Unfortunately, since all terms in question have diverse meanings, even semioticians are sometimes not very precise in their respective use of the notions. When Thomas A. Sebeok, for instance, discusses how a source is linked with a destination, he describes it as "a sort of medium, or channel, a passageway through which the two are capable of establishing and sustaining their communicative exchange" (1991: 27).

With "code" the case is even more complicated, since it is likewise part and parcel of the terminology in several disciplines dealing with media and communication. "Code" is often confined to transformation rules or the rules of correlating the elements of two different systems (the *s-codes* in Eco's terminology). Sometimes a code is regarded as a "set of substitution equations relating significata to signs or signifiers" (Watt & Watt 1997: 408). Eventually, the term code is often used co-extensive with *sign repertoire* or even *sign system*, like for instance in the Jakobson model discussed above.

Although "*sign system*" is a central semiotic term, the definitions vary in the different schools and currents. The widest and most fruitful conception of *sign system* with regard to media semiotics is offered by the Italian semiotician and philosopher Ferruccio Rossi-Landi. In his definition, a sign systems contains

at least one code, that is the materials on which one works, and the instruments with which one works; but it also contains the rules to apply the latter on the former (the *locus* of the rules is double: in a way they are in the code, but the more they are in the one who uses it), the channels and the circumstances that allow communication, and moreover the senders and receivers who make use of the code. A sign system thus includes also all the messages which are exchanged or can be exchanged within the universe instituted by the system itself. (Rossi-Landi 1985: 242)

Because of its encompassing character, Rossi-Landi's view of sign systems is certainly applicable to (complex) media.

Media semiotics: Fields of research

As already indicated, semiotics has contributed its share to the study and analysis of media texts at least since the 1960s. This is evidenced by the remarkable amount of works in applied semiotics that can be subsumed under the heading "media semiotics". To establish some kind of order among the hundreds of works related to, and the various ways semioticians are dealing with, the media, two directions can be taken: (i) to follow the usual listing of (mass) media, and (ii) to discuss some topics, media semiotics is especially interested in and apt for. In the final overview I will combine both approaches.

Advertising

was a preferred area from the very beginning, and the various publications show the variety of semiotic models and concepts which are used to deal with the verbal and visual messages encoded in promotional texts. One of the first and still most famous papers dealing with print ads is definitely Roland *Barthes'* analysis of a French magazine ad for Panzani pasta sauce (1964). Proceeding from the objects depicted (an open string bag with spaghetti packages, a tin of pasta sauce, a sachet grated parmesan, and assorted fresh vegetables: tomatoes, onions, peppers, a mushroom etc.) he develops the levels of signs involved (fresh products, *italianità*, complete meal, still life, etc.) and the three types of messages: a *linguistic*, a *coded iconic* (symbolic), and an *non-coded iconic* (literal) message.

Following the line Barthes has opened with the title of this paper, that is "Rhetoric of the image", Umberto *Eco* adapted the classic rhetorical figures to visual texts and used them to analyze advertisements (Eco 1968/1972). (With regard to *pictorial rhetorics*, the work of the Belgian *Groupe μ* figures among the most prominent.) One of the best known theoreticians in the field of advertisement was Jean-Marie *Floch* who also worked in practice. His analyses of ad messages are based on a complex network of semiotic squares in the Greimasian tradition. Even though a lot of papers are rooted in the semiologic or semio-linguistic tradition, the Peircean trichotomy of *icon*, *index*, and *symbol* has definitely found its way into the general analytic tool set. Accordingly, the concepts are at the basis of many a publications on posters or print advertisements. Apart from rhetoric or narrative analyses of ad messages, or those offering critical views concerning the myths and ideologies diffused through ads, there is yet another field of semiotic research and reasoning that is closely related to advertising: *marketing* and *consumer research* (cf. Umiker-Sebeok 1987; Floch 1990; Mick 1997).

Visual semiotics

is a well-established field in its own right since many years (Sonesson 1989). Although it cannot be reduced to media texts in the narrow sense, since works of fine art belong also to the topics investigated, it has to be included in such an overview. There are several groups of visual texts which have a long history of semiotic analysis, like photographs, cartoons, or comics (Eco 1984, 1994). One of the classic domains of semiotic investigation is the relation between *images and words* (the accompanying verbal texts), be it in advertising, graffiti, popular prints, or newspapers (Schnitzer 1994). For both areas semiotic associations were founded many years ago: the International Association for Visual Semiotics/Association Internationale de Sémiotique Visuelle and the International Association for Word and Image Studies, respectively.

Film & television semiotics

Despite the reservations some film theorists have about subsuming film theory under the trendy label of media studies, film semiotics has to be considered an important part of the media semiotic endeavor. Since the 1960s, a large amount of theoretical reflexion on film is based on *film semiotic* theories and analyses, and both central theoretical concepts and models of analysis in film and television are of semiotic origin. Accordingly, film semiotics plays also an important role within applied semiotics in general.

The film semiotic discourse dates even further back than media semiotics in general, and it unfolded in several phases which are characterized by changing paradigms, thus showing that there is no such thing as a monolithic, unified film semiotics (in the same way as we should speak of “semiotics” rather in the plural than in the singular). The plurality of film semiotic approaches, concepts and models mirror the plurality of schools and currents which are today subsumed under the general label “semiotics”. The earliest period is constituted by the writings of the Russian Formalists (Boris M. Ejchenbaum, Viktor B. Shklovskij, Jurij N. Tynjanov) of the 1920s who can be regarded as film semioticians *avant la lettre*. In their individual publications as well as in the programmatic collection *Poetika kino* (1927) they focused on questions of film as language (discussing a syntax – “film sentence” – and semantics of film) and on literary, in particular poetic, features of film. The fundamental distinction between *syuzhet* (plot) and *fabula* (story) goes back to their writings.

A first phase of a broader semiotically based reflexion on film starts almost simultaneously with the first proliferation and organizational establishment of general semiotics in the middle of the 1960s (the International Association for Semiotic Studies IASS-AIS, for instance, was founded after several years of preparatory conferences in Paris in 1969). The major topic discussed in these years was the question whether *film* can be considered a *language* (in the sense of *langue* or *language system*) and, accordingly, be analyzed within the framework of semio-linguistic models (mostly in the Saussurean tradition). The search for the smallest units and a double articulation in the linguistic sense culminated in the

well-known discussions between Eco and Pasolini at the 1965 and 1966 Pesaro film festivals. A first answer was given by Christian Metz who considered cinema as a language without language system (cf. Metz 1968/1974: 65) and presented a differentiated theory of (general and particular) cinematographic codes and non-specific codes (Metz 1971).

The 1970s and early 1980s, the second stage, are characterized by a stronger orientation towards film reception and the recipients, based on (at least) two different paradigms: psychoanalytic and Marxian models in the tradition of Lacan and Althusser respectively. (With regard to the psychoanalytically inspired film semiotics one influential publication has to be cited: Metz's *Le signifiant imaginaire* [1975/1977].) In addition, this is also the period of the bloom of British film and television studies which to a great deal focused on the socio-cultural positioning of the recipient and the role it plays in her/his reception and constitution of meaning.

In the third phase, finally, the film semiotic discourse in the 1980s and 1990s, we find a real plurality of approaches, concepts and models and a proliferation of semiotic writings in film and television studies. On the one hand, film semiotic reflections (both theoretical and analytical) entered a positive exchange with several neighboring disciplines and related fields (like feminist theories as well as models rooted in narratology or discourse and text theory). Another strong field, with which also general semiotics started to get in contact, is constituted by the cognitive sciences; accordingly, we can speak of the beginnings of a cognitive turn in film semiotics in these years. On the other hand, classical semiotic paradigms were taken up again and developed in new directions, like in neo-formalist or semio-pragmatic approaches. Part of this trend is also a reconsidering of those concepts and models from general semiotics which have so far not been adapted to film theoretic contexts. One way is to go back to the "founding fathers", as for instance Charles S. Peirce, and their writings which were also subject to changed readings and interpretations during the last decades. Since the 1960s, a few (film) theorists (like Peter Wollen [1969] or Gilles Deleuze [1983; 1985]) have dealt with his thought, and some of Peirce's concepts, like the trichotomy of *Icon-Index-Symbol* belong to the standard terminology in film and media studies. Nevertheless, a close reading of Peirce's works will certainly bring helpful inspirations for film studies. One example of the application of Peircean semiotics to film are the works of Werner Burzlaff who examines montage and stylistic devices on the basis of the Peircean phaneroscopy (cf. 1992). But there are many more semiotic/semiophilosophic texts from the various traditions, schools and currents which could contribute to a reflexion on film. Birgit Recki, for instance, presents Ernst Cassirer outside the philosophical circles to a public interested in film studies and adopts aspects from his *Philosophie der symbolischen Formen* for her discussion of film as an artistic medium (2004).

Digital media / hypertext / computer / internet

"New Media", as they were called in the 1990s, or "digital media", hypertextuality and virtual environs/virtual reality constitute the most recent fields of research in

media semiotics. One of the earliest presence of this field was the 1995 conference (cf. Nöth 1997b). Papers in this area are dealing with various topics: the fundamental questions of representation in the digital age; whether the computer can be regarded as a (semiotic) medium (Santaella 1998; cf. Andersen/Holmqvist/Jensen 1993); the production and reception of hypertexts (Landow 1994); the (narrative) structure of computer games (Wenz 1998); or the semiotic analyses of expert systems. However, semioticians in this field are not only occupied with the analysis, but even with the sign-theoretically reflected production of multimedia applications or websites (Stockinger 1993; Stockinger de Pablo/Fadili/Stockinger 1998). Both directions, semiotic theory and semiotically rooted practice, as well as their integration can be found at the annual *COSIGN Conference on Computational Semiotics for Games and New Media* (cf. <http://www.cosignconference.org>).

Across the media – topics and approaches

In addition to the strictly medium-based studies and the fundamental questions of *representation* and *signification* with regard to media, or the particularity of the *sign systems* used for media semioses, there are some specific fields media semiotics has dealt with throughout the decades.

Media texts are increasingly characterized by *intertextuality* and *intermediality*, respectively, which are areas of genuinely semiotic research. The scholar most often quoted in connection with “intertextuality” is Julia *Kristeva* who is credited to have coined the term in her essay “Bakhtine, le mot, le dialogue et le roman” (1967; 1980). Topics of research closely related to intertextuality are questions of reflexivity and self-awareness of/in media texts. Of particular interest is the ever increasing number of self-reflexive media texts, that is media texts dealing with, and occasionally criticizing, their own medium (institution) and its conditions and modes of production, and sometimes even reflecting on their own status as a medium text. *Multimediality*, on the other hand, exceeds both the question how individual texts can be related to each other, and how multimodality can be achieved in texts (cf. Hess-Lüttich/Schmauks 2004).

Another area of semiotic analysis which touches several different media is constituted by the stories, the *narrative*.

Finally, semiotics is not only concerned with syntactics and semantics, with formal questions, and with the structural properties of media texts. From the very beginning of the semiotic enterprise, there was always a strong focus on the *pragmatic dimension* of sign processes and their role within a socio-cultural context, in short: a socio-semiotic view on the topic. Given the increasing mediatization of our world, and the role globalized communication and media (texts) play in our today’s societies (in particular their omnipresence and the merging of telecommunication technologies and media), this is a feature which makes semiotics particularly important, also for the future. Pragmatics asks about sign work, about the production and reception (or re-production) of texts, about the use and misuse of signs and sign systems, about the ideological implications of messages transmitted, and about the way people can be trained to handle

these messages in order to resist manipulative tendencies and to learn to cooperate for a better future, as it was foreseen already by Morris (1946), or formulated more recently by Petrilli and Ponzio in their *semioethics* (2005).

References

- Andersen, Peter Bøgh; Holmqvist, Berit & Jens Jensen (eds.) (1993). *The computer as medium*. Cambridge–New York: Cambridge University Press
- Barthes, Roland (1964). "Rhétorique de l'image". *Communications* 4: 40-51
- Bentele, Günter (ed.) (1981). *Semiotik und Massenmedien* (= Schriftenreihe der Deutschen Gesellschaft für Publizistik- und Kommunikationswissenschaft 7). München: Ölschläger
- Berger, Charles R. & Steven H. Chaffee (eds.) (1987). *Handbook of Communication Science*. Newbury Park, CA: Sage
- Bignell, Jonathan (1997). *Media semiotics. An introduction*. Manchester: Manchester University Press
- Böhme-Dürr, Karin (1997). "Technische Medien der Semiose". In Posner/Robering/Sebeok 1997-2004, I: 357-384
- Bouissac, Paul (ed.) (1998). *Encyclopedia of Semiotics*. New York–Oxford: Oxford University Press
- Bühler, Karl (1934). *Sprachtheorie: Die Darstellungsfunktion der Sprache*. Jena: Fischer
- Burzlaff, Werner (1992). "A Peircean Theory of Film/Une théorie peircienne du film". In: Deledalle, Gérard (gen.ed.), Balat, Michel & Janice Deledalle-Rhodes (eds.). *Signs of Humanity / L'homme et ses signes. Proceedings of the IVth International Congress / Actes du IVe Congrès Mondial. International Association for Semiotic Studies – Association Internationale de Sémiotique, Barcelona/Perpignan, March 30-April 6, 1989* (= Approaches to Semiotics. 107). Berlin: Mouton de Gruyter, vol. 2, 849-862
- Cobley, Paul (2001). *Narrative*. London & New York: Routledge
- Colapietro, Vincent M. (1993). *Glossary of Semiotics* (= Paragon House Glossaries for Research, Reading, and Writing). New York: Paragon House
- Danesi, Marcel (2000). *Encyclopedic Dictionary of Semiotics, Media, and Communication* (= Toronto Studies in Semiotics and Communication). Toronto: University of Toronto Press
- Danesi, Marcel (2002). *Understanding Media Semiotics*. London: Arnold
- Deleuze, Gilles (1983). *Cinéma 1: L'image mouvement*. Paris: Minuit; Engl. transl. *Cinema 1: The movement-image*. Minneapolis: University of Minnesota Press 1986
- Deleuze, Gilles (1985). *Cinéma 2: L'image – temps*. Paris: Minuit; Engl. transl. *Cinema 2: The time-image*. Minneapolis: University of Minnesota Press 1989
- Eco, Umberto (1968). *La struttura assente*. Milano: Bompiani; German rev.ed. *Einführung in die Semiotik*. München: Fink 1972
- Eco, Umberto (1975). *Trattato di semiotica generale*. Milano: Bompiani; Engl. transl. *A Theory of Semiotics*. Bloomington, IN: Indiana University Press 1976
- Eco, Umberto (1984). *Apokalyptiker und Integrierte. Zur kritischen Kritik der Massenkultur*. Frankfurt/M.: Fischer
- Eco, Umberto (1994). *Apocalypse Postponed*. Bloomington, IN: Indiana University Press
- ELL = Asher, R.E. (Ed.-in-Ch.) & J.M.Y. Simpson (co-ord.ed.) (1994). *The Encyclopedia of Language and Linguistics (ELL)*. London: Elsevier 1994; "Glossary M": Web online: <<http://www1.elsevier.com/homepage/about/mrwd/ell2/Glossary%20M.pdf>>; downloaded: 2003-11-19 [glossary front page: <<http://www1.elsevier.com/homepage/about/mrwd/ell2/ELL1Glossary.htm>>; visited: 2005-05-27]
- Even-Zohar, Itamar (1990). *Polysystem Studies = Poetics Today* 11(1)
- Floch, Jean-Marie (1990). *Sémiotique, marketing et communication*. Paris: PUF; Engl. transl. *Semiotics, Marketing and Communication*. London: Palgrave & MacMillan 2001
- Fulton, Helen (1998). "Mass communication". In Bouissac 1998: 389-393
- Hall, Stuart et al. (eds.) (1980). *Culture, Media, Language. Working Papers in Cultural Studies, 1972-1979*. London: Hutchinson, 2nd ed. 1981, 3rd ed. 1984
- Hess-Lüttich, Ernest W.B. (1986). "Multimedia communication". In Sebeok 1986, II: 573-577

- Hess-Lüttich, Ernest W.B. (1990). "Massenmedien und Semiotik". In: Koch, Walter A. (ed.). *Semiotik in den Einzelwissenschaften*. Bochum: Brockmeyer, I: 176-213
- Hess-Lüttich, Ernest W. B., & Dagmar Schmauks (2004). "Multimediale Kommunikation". In: Posner/Robering/Sebeok 1997-2004, IV: 3487-3503
- Jakobson, Roman (1960). "Linguistics and poetics". In: Sebeok, Thomas A. (ed.). *Style in Language*. Cambridge, MA: MIT Press, 350-377
- Jakobson, Roman (1973). *Main Trends in the Science of Language*. London: Allen & Unwin
- Kloepfer, Rolf (2003). "Semiotische Aspekte der Filmwissenschaft: Filmsemiotik (Semiotic aspects of film studies: Semiotics of the cinema)". In: Posner/Robering/Sebeok 1997-2004, III: 3188-3212
- Kloepfer, Rolf & K. D. Möller (eds.) (1986). *Narrativität in den Medien* (= papmaks 19). Mannheim: MANA / Münster: MAkS
- Krampen, Martin (1997a). "Models of Semiosis". In: Posner/Robering/Sebeok 1997-2004, I: 247-287
- Krampen, Martin (1997b). "Semiosis of the mass media: Modeling a complex system". In: Nöth 1997b: 87-97
- Kristeva, Julia (1967). "Bakhtine, le mot, le dialogue et le roman". *Critique* 23(239): 438-465; Engl. transl. "Word, Dialogue, and Novel". In: Kristeva, Julia (1980). *Desire In Language: A Semiotic Approach to Literature and Art*. Leon S. Roudiez (ed.). New York: Columbia University Press
- Landow, George P. (ed.) (1994). *Hyper-Text-Theory*. Baltimore: Johns Hopkins University Press
- Metz, Christian (1968). *Essais sur la signification au cinéma I*. Paris: Éditions Klincksieck, 2nd ed. 1971; Engl.transl.: *Film Language. A Semiotics of Cinema*. Chicago: University Press of Chicago 1991, 1st ed.: New York: Oxford University Press 1974
- Metz, Christian (1971). *Langage et cinéma*. Paris: Larousse; new augm. ed.: Paris: Éditions Albatros 1977
- Metz, Christian (1975). "Le signifiant imaginaire". *Communications* 23: 3-55; Engl.transl. "The Imaginary Signifier". *Screen* 16(2): 14-76
- Mick, David Glen (1997). "Semiotics in Marketing and Consumer Research: Balderdash, Verity, Pleas". In: Brown, Stephen & Darach Turley (eds.). *Consumer Research: Postcards from the Edge*. London: Routledge, 249-262
- Morris, Charles William (1946). *Signs, Language, and Behavior*. New York: Braziller
- Mounin, Georges (1970), *Introduction à la sémiologie*. Paris: Minuit
- Nöth, Winfried (1985). *Handbuch der Semiotik*. Stuttgart: Metzler; 2nd rev.ed.: Stuttgart & Weimar: Metzler 2000; Engl.ed. *A Handbook of Semiotics*. Bloomington, IN: Indiana University Press 1990
- Nöth, Winfried (1997a). "Introduction". In Nöth 1997b: 1-11
- Nöth, Winfried (1998). "Die Semiotik als Medienwissenschaft". In Nöth & Wenz 1998: 47-60
- Nöth, Winfried (ed.) (1997b). *Semiotics of the Media. State of the Art, Projects, and Perspectives* [= Approaches to Semiotics 127]. Berlin–New York: Mouton de Gruyter
- Nöth, Winfried & Karin Wenz (eds.) (1998). *Medientheorie und die digitalen Medien* (= Intervalle 2). Kassel: Kassel University Press
- Peirce MS = Peirce, Charles Sanders (1963-70). *The Charles S. Peirce Papers*. 33 reels, microfilm edition. Cambridge, MA: The Houghton Library, Harvard University Library Microreproduction Service
- Petric, Mirko; Tomic-Koludrovic, Inga & Ivica Mitrovic (2001). "A Missing Link: The Role of Semiotics in Multiagent Environments". In: Clarke, Andy; Fencott, Clive; Lindley, Craig; Mitchell, Grethe; & Frank Nack (eds.): *Proceedings COSIGN 2001. 1st Conference on Computational Semiotics for Games and New Media, Amsterdam, 10-12 September 2001*. Amsterdam: Centrum voor Wiskunde en Informatica, 108-112; web online: "<http://www.cosignconference.org/cosign2001/papers/Petric.pdf>" [last visited: 2003-08-22]
- Petrilli, Susan & Augusto Ponzio (2005). *Semiotics Unbounded. Interpretive Routes through the Open Network of Signs*. (= Toronto Studies in Semiotics and Communication). Toronto: University of Toronto Press
- Posner, Roland (1985). "Nonverbale Zeichen in öffentlicher Kommunikation". *Zeitschrift für Semiotik*, 7(3), 235-271

- Posner, Roland, Klaus Robering & Thomas A. Sebeok (1997-2004). *Semiotik/Semiotics. Ein Handbuch zu den zeichentheoretischen Grundlagen von Natur und Kultur/A Handbook on the Sign-Theoretic Foundations of Nature and Culture*. Berlin & New York: de Gruyter, 4 vols
- Prieto, Luis (1968). "La sémiologie". In: Martinet, André (ed.). *Le langage*. Paris: Gallimard, 93-114
- Pross, Harry (1972). *Medienforschung*. Darmstadt: Habel
- Recki, Birgit (2004). "Überwältigung und Reflexion. Der Film als Mythos und als Kunst". In: Waniek, Eva; Nagl, Ludwig & Brigitte Mayer (eds.). *Film Denken | Thinking Film. Film & Philosophie*. Wien: Synema, 71-91
- Rossi-Landi, Ferruccio (1975). *Linguistics and Economics* (= Janua Linguarum, Series Maior 81). The Hague: Mouton
- Rossi-Landi, Ferruccio (1985). *Metodica filosofica e scienza dei segni. Nuovi saggi sul linguaggio e l'ideologia* (= Studi Bompiani – Il campo semiotico). Milano: Bompiani
- Santaella, Lucia (1998). "Der Computer als semiotisches Medium". In: Nöth/Wenz 1998: 121-158
- Saussure, Ferdinand de (1916). *Cours de linguistique générale*. Bally, Charles & Albert Sechehaye (eds.). Lausanne & Paris: Payot
- Schnitzer, Johannes (1994). *Wort und Bild. Die Rezeption semiotisch komplexer Texte*. Wien: Braumüller
- Sebeok, Thomas A. (1991). *A Sign is Just a Sign*. Bloomington, IN / Indianapolis: Indiana University Press
- Sebeok, Thomas A. (ed.) (1986). *Encyclopedic Dictionary of Semiotics*. Berlin: de Gruyter
- Semiotica* (1997), Index to *Semiotica* Volumes 1-100 (1969-1994)
- Shannon, Claude E. & Warren Weaver (1949). *The Mathematical Theory of Communication*. Urbana: University of Illinois Press
- Sonesson, Göran (1989). *Pictorial concepts. Inquiries into the semiotic heritage and its relevance for the analysis of the visual world*. Lund: Lund University Press
- Stockinger de Pablo, Elisabeth; Fadili, Hammou & Peter Stockinger (1998). "SémioNet. Spécification, production et implémentation de services d'information en-ligne". In: Bernard, Jeff & Gloria Withalm (Hg.). *Kultur und Lebenswelt als Zeichenphänomene. Akten eines internationalen Kolloquiums zum 70. Geburtstag von Ivan Bystřina und Ladislav Tondl, Wien, Dezember 1994* (= S-Addenda). Wien: ÖGS/ISSS, 177-234
- Stockinger, Peter (ed.) (1993). *Explorations in the World of Multimedia = S – European Journal for Semiotic Studies* 5(3)
- Threadgold, Terry (1997). "Social media of semiosis". In: Posner/Robering/Sebeok 1997-2004, I: 384-404
- Umiker-Sebeok, Jean (ed.) (1987). *Marketing and Semiotics: New Directions in the Study of Signs for Sale*. Berlin: Mouton de Gruyter
- Walther, Elisabeth (1997). "The sign as medium, the medium relation as the foundation of the sign". In Nöth 1997b: 79-85
- Watt, Gavin T. & William C. Watt (1997). "Codes". In: Posner/Robering/Sebeok 1997-2004, I: 404-414
- Wenz, Karin (1998). "Narrativität in Computerspielen". In: Schade, Sigrid & Christoph Tholen (Hg.). *Konfigurationen: Zwischen Kunst und Medien*. München: Fink, 209-219
- Wolf, Mauro (2003). "Semiotic aspects of mass media studies". In: Posner/Robering/Sebeok 1997-2004, III: 2926-2936
- Wollen, Peter (1969). *Signs and Meaning in the Cinema*. London: Secker & Warburg, 2nd ed. 1972; Bloomington, IN: Indiana University Press / London: British Film Institute 1998, 4th ed.: revised & enlarged
- Wulff, Hans J. (1978). "Medium und Kanal". In: Dutz, Klaus D. (ed.). *Zur Terminologie der Semiotik I* (= papmaks 10). Münster: MAKs Publikationen 1986, 3rd ed., 47-71