Reimagining semiotics in communication

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Abstract

Semiotics, in - or as an approach to - communication studies has had mixed fortunes. On the one hand, it has been supposedly superseded by interpretational and more reader-centred research. On the other hand, it has lingered on as a perspective in which signs and texts have been taken as empirical phenomena that demand to be studied regardless, as well as an outlook that comprises nonverbal as well as verbal signification. Yet, in both cases, the kind of semiotics envisaged by communication and media studies is often a throwback to a fashionable heyday when superficial understandings of semiotics were standard in heavily-used textbooks (Fiske 1982; Dyer 1982; Hartley 1982; etc.). The contribution on semiotics for the volume *Reimagining Communication* will review these traditional perspectives on semiotics localised in communication study but will mainly propose an emerging perspective for the field (Self 2013). In particular, this contribution will outline the ways in which semiotics is a steadfast anti-psychologism characterized by its concern with the suprasubjectivity of the sign relation. It will be shown that this nevertheless comprises cognizance and incorporation of matters central to the communication process: interpretation and the vagaries of context. It will suggest that contemporary semiotics, with its perspective on communication across species and in machines, heralds new vistas for communication study beyond the realms of anthropocentrism.

Introduction

Any lay definition of communication is likely to put 'meaning' at its very centre. Such a definition, provided by humans, would no doubt take human interaction as its paradigm and the casual or formal transfer of meaning in such interactions as natural, inevitable and straightforward. The question of meaning in the scientific study of communication, by contrast, has been riven by profound difficulties. 'Meaning' has been the site of an enduring dilemma regarding the possibility of it ever becoming an entity susceptible of rigorous interrogation. At the seat of this dilemma are the troublesome components that are at play in any act of meaning. If meaning is to be investigated as an organic phenomenon, circulated and disseminated by living beings, then the key to meaning is surely to be found in the dispositions of those beings as they transmit or receive meaning. Even if such beings are conceived as *traversed* by meaning, the question of whether meaning as an occurrence is left untouched in meaningful interactions is very much moot. Alternatively, it is possible that meaning is not to be considered as a phenomenon or process that traverses its participants. A corollary of this is that meaning is only to be found through the study of what it constitutes for the living beings that enact it.

Put another way, either meaning is a process or quantity that exists outside of its bearers or, on the other hand, it is to be found within - or at the very least, is inexorably bound up with – its bearers' dispositions. Any putatively scientific study of communication, one which wished to avoid speculations or assumptions about the psychology of individuals and groups, would therefore have to eliminate from the equation the conduit *for* and the terminus *of* meaning, as well as any biases accruing to them. Indeed, there has been a

continuing thread through communication study in the last century in which meaning itself has been completely, deliberately and heuristically omitted from considerations.

Probably the originator of that thread is the work of information theory and that of Claude Shannon in particular. Shannon presented a highly influential model of the communications process in which 'transmission' is the key feature. An information source in the model, with a message, uses a transmitter to produce a signal, which is receive, by a receiver, which delivers a concomitant message to a destination. Although Shannon [1948: 379] does concede that the matter of signification, significance or meaning is prevalent in communication, ultimately he considers it extraneous to the task of measuring information. As Lanigan (2013: 59) writes,

> The *meaning* of human interaction is the paradigm for all theories and models of communication. Yet semantics—interpreted meaning—is irrelevant for studying information as a mathematical phenomenon—signal behavior—in electrical engineering. Unfortunately, the warning by mathematician Claude Shannon (1948, 1993a,b,c), inventor of information theory, against drawing analogies between information and communication *processes* has been ignored for decades (Gleick 2011: 242, 416). The meaning problem was suggested to Shannon by Margaret Mead during his first public lecture on the theory at the Macy Foundation Conference on Cybernetics held 22-23 March 1950 in New York City. In short, information theory studies the signifying physical properties of electrical signals, whereas communication theory studies the meaning of human interaction

What Lanigan points out, here, is the tendency of meaning to impinge, broadly in an unwarranted fashion, on issues of information theory. Equally, it might be argued, information theory perspectives have impinged upon the central issues of meaning in communication theory. That is to say, there is a temptation to omit or overlook humans' (or other organisms') predispositions amidst the flow of meaning in communication.

In what follows, it will be argued that semiotics has harboured the potential to settle some of the issues featured in the dilemma of meaning, issue that have bifurcated the fields of communication study and information theory. As an 'approach to meaning', semiotics' progress has sometimes been blighted by a penchant for assuming that the participants in meaning are generally to be considered as stable entities, mere channels for meaning. Criticisms of this approach have tended to emphasize the importance of readers' or audiences' meanings which semiotics has supposedly, at different times, neglected unduly. As will be shown, such criticisms were not entirely cogent because they were focused on, at best, a mid-most target for appraising meaning: a quasi-sociological audience, stable and cognitively independent in its implementation of meaning. Meanwhile, semiotics developed a much more sophisticated perspective in which communication was not to be taken as a perdurable process but, instead, was distributed across species, ineluctably tied to cognition and capable of definition in a fashion that was reconcilable, if not of a piece with, the scientism of information theory. Meaning, as central to communication, was recast neither as a fully material fixed entity, nor as simply the sum of humans' (or other organisms') dispositions. This is not to argue that the development of a new perspective on semiotics in communication was teleological, a narrative of progress in which there is learning from past mistakes. Rather, the reimagining of semiotics has grown out of the false starts,

misinterpretations and detours that have characterized semiotics' fate in the study of communication. It is instructive to consider some of those now.

Founding studies of meaning

One of the founding, landmark texts on the issue of meaning is closely tied to the enterprise of semiotics in the twentieth century. Following on from articles which appeared as early as 1910, C. K. Ogden and I. A. Richards published in the UK *The Meaning of Meaning* (1923), an attempt to set out a scientific investigation of meaning contributing to a "science of Symbolism" (1923: v). Interestingly, Ogden and Richards already envisage that their study implicates cognition rather than just communication since their investigations "arise out of an attempt to deal directly with difficulties raised by the influence of Language upon Thought" (v). In an eclectic mix of references, including supplementary essays by Malinowski and Crookshank, Ogden and Richards attempt a comprehensive overview, in a manner that is almost inconceivable to the contemporary academy, of words, symbols and perception in the question of meaning. In one sense, their remit is to broaden the attempt of Bréal (1900) to establish a new area of semantic studies. This involves not just a theory of the sign and reference, although Ogden and Richards do offer that. Arguably, what is interesting for the current discussion is that *The Meaning of Meaning* also attempts to address meaning as a cognitive process, as opposed to a "volitional" or communicative process (1923: 50-76). Already haunted by the figures of two of semiotics' founders, Welby and Peirce (Petrilli 2009, 2015), in this way the volume provides an important staging post in the route to contemporary semiotics, despite the misquoting and misinterpretation of Peirce in particular (Fisch 1986 [1978]: 345).

Perhaps even more well-known than Ogden and Richards in communication study is the foundational separation of syntactics, semantics and pragmatics in 'semiotic' (Morris 1938: 52). The division corresponds to, respectively, the relationship between signs, the relationship between signs and their objects, and the relationship between signs, their users and the general context in which signs are implemented (Cherry 1978: 233). There have been questions over whether this subdivision is efficacious and, indeed, whether it is not undermined by itself being subject to a large series of subdivisions (see Lieb 1971). Certainly, the division has been taken up in linguistics, where pragmatics has become a major industry, with academic journals, books, professorial appointments and degree courses, in contrast to semantics (whose star has been in decline or collapsed into pragmatics) and syntactics (which, as a named field, never really took off). Yet, the key issue for communication in this subdivision concerns not so much the division itself as where it has been put to work. Morris (1938: 3) introduced the term 'semiosis' to designate the process "in which something functions as a sign". This was not a question of linguistics. Indeed, Morris was very careful to ensure that his terminology – sometimes derived from Latin, sometimes derived from Peirce – evoked semiosis beyond the human. This is not a small point since it is the junction by which one route for investigating communication has been taken and one route has been neglected.

Just two years after Morris' formulation, far from fledgling Anglophone communication theory, geographically and intellectually, Jakob von Uexküll published his 'Bedeutungslehre' as part of *Treatises on Theoretical Biology and its History as Well as on the Philosophy of Organic Natural Sciences* (1940). Translated into English as 'The theory of meaning' in 1982 at a moment of burgeoning interest in von Uexküll's work in semiotics, the

50+ page essay presented the question of meaning from the standpoint of non-human animals' habitats and niches. Crucial to his discussion of meaning is the observation that animals live in relation to objects. That is, there can be no 'neutral object' for non-human animals; rather, such creatures are always in a relation to the objects that they encounter. Non-human animals do not theorize objects nor do they consider their mechanisms. Instead, the implications of objects are always accommodated to the specific senses harboured by the animal and the specific niche which it inhabits. From this observation arises von Uexküll's term, *Umwelt*, which is often translated from German as 'environment' but in this context refers to the animal's sensorium. The notion of *Umwelt* suggests that all species live in an 'objective world' that is constructed out of their own signs, the latter being the result of their own sign-making and receiving capacities. The theory of meaning that von Uexküll laid out here and in other works suggested that the key to understanding meaning was certainly to assess how it was lodged in the bearers of meaning, but also how it concerned objects that existed independently of those bearers. In addition, of course, von Uexküll showed how meaning is a cross-species phenomenon, heralding a departure from some of the anthropocentrism that characterised much communication study in the twentieth century. Such anthropocentrism was particularly in question across disciplines by the time that 'The theory of meaning' was published in a new translation in 2010.

As foundations for semiotics and for an understanding of meaning in communication study, all three of these perspectives held great promise. *The Meaning of Meaning*, Morris' *Foundation of the Theory of Signs* and 'The theory of meaning' all posited, in different ways, that communication was not a matter of pre-formed individual humans manipulating freely available signs. Instead, signification was presented as a cognitive process which already determined how semiosis – an array of dynamic signs rather than a single isolable sign – worked to produce meaning for the participant in that semiosis. In the latter two of these foundational texts, meaning and semiosis were presented in their accrual across species rather than just in the human. Despite the flurry of high-profile reviews of *The Meaning of Meaning* and its continued existence as a reference point for individual observations about signification (Gordon 1997), its disparate perspectives have not really furnished scholars with the resources for an umbrella movement or specific current of thought in the academy. The syntactics/semantics/pragmatics distinction has remained a reference point; yet, as noted above, semantics has largely been collapsed into pragmatics, syntactics is not a named sub-discipline and pragmatics has been largely pursued in linguistics, with only infrequent ventures beyond (e.g. Wharton 2009). In Relevance Theory, pragmatics commenced an elementary interest in cognition (Sperber and Wilson 1986). Von Uexküll's theory of meaning implicates human and non-human animal cognition. This work was kept alive by semiotics, particularly in the writings of Thomas A. Sebeok, especially after 1979. Von Uexküll was also of interest to the followers of Deleuze and Agamben, as is evident from the editorial material that accompanies the 2010 translation of 'The theory of meaning' along with *Forays into the Worlds of Animals and Humans*. What interested both sets of aficionados of the work of von Uexküll was the conception of signification beyond the realms of the human. In the mainstream of communication study, this concern had certainly been in play since Shannon and had developed in relation to machines throughout the 1950s and after with the Macy Conferences on cybernetics (Dupuy 2000) and in relation to animals in the growth of animal communication studies from the late 1950s onwards (Maran 2011). Yet where cybernetics did embrace other species' communication in addition

to machine communication, it did so in terms of systems rather than in respect of meaning processes.

The unifying perspective on these pressing matters for communication was only to arrive in the guise of contemporary semiotics. What impeded the arrival of that perspective constitutes an instructive set of circumstances in respect of communication study in general.

Semiotics in communication study: false starts, misinterpretations and detours

Most accounts of semiotics in communication study trace the former's beginnings to the work of the Swiss linguist, Ferdinand de Saussure. Interestingly, the foregrounded topic in such tracing is 'meaning', a term and concept that Saussure fastidiously avoided in his *Cours de linguistique générale* (*Course in General Linguistics* 1916; translated into English in 1959 and 1983) Based on the notes of his students, since Saussure died before he could conceive the volume, Saussure's *Cours* projects 'semiology', "a science *which studies the role of signs as part of social life*" (1983: 15; italics in the original). Rather than just tracking the ways in which signs have been used to refer from objects from one epoch to the next, semiology was to institute a 'synchronic' interrogation of the very conditions upon which signs operate. Despite this call for a general sign science, Saussure focused on the isolated linguistic sign, a "two-sided psychological entity", not a "link between a thing and a name, but between a concept and a sound pattern" (1983: 66). The sound pattern and concept he named, respectively, the *signifiant* and the *signifié*, noting that they were bound in a manner that was not pre-ordained but, rather, *arbitrary*.

Effectively, this arbitrariness is the crucial component in the forging of a code theory from Saussure's *Cours.* Such a theory was by no means inevitable: indeed, since the discovery of Saussure's original notes for his course at the University of Geneva, his entire *oeuvre* has undergone a reassessment which indicates that semiology could have been somewhat different (see Bouissac 2010; Harris 2006; Sanders 2004). Yet, his emphasis on the language system (*langue*) underlying sign use - the sum of differences that occur between linguistic signs - meant the *Cours* became involved in the question of meaning. For Saussure, there was a need to eschew the idea of 'meaning' because of the temptation to assume a natural connection between signs and their objects. What Saussure insisted, instead, was that signs exist in a system of 'values' which are generated by each sign's encompassing of an arbitrary relation between sound pattern and concept which then stands in opposition to all other signs. Actual instances of linguistic communication facilitated by *langue*, and which Saussure gave the name *parole*, are the beneficiaries of these oppositions and differences. Put another way, instances of *parole* came to be seen as generated by the underlying system of differences that was *langue.* Although the *Cours* itself did not formulate the matter in such simplistic terms and although early semiology tried to account for some of the vagaries of the *langue*/*parole* couplet, it was nevertheless tempting to see signification as 'coded', with a system allowing certain codings to exist and not others.

One of the pioneers of semiology whose work is still considered standard in undergraduate courses in communication study was Roland Barthes. *Elements of Semiology* (1964, translated into English 1967) and *Mythologies* (1957, translated into English 1973)

enacted Saussurean theory with reference to, respectively, the 'fashion system' and general instances of popular culture. In the latter volume, specific 'mythologies' in popular culture - the haircuts of the Roman characters in Mankiewicz's film of *Julius Caesar*, wrestling, *steack frites*, striptease, the face of Greta Garbo, the New Citroën and the brain of Einstein – were presented as instances of *parole* emanating from a basis in a general 'myth' or *langue*. In short, this kind of semiology promoted the scrutiny of surface phenomena in order to reveal deeper, hidden agendas or, alternatively, attempted to reveal the 'code' beneath the manifest 'message'.

The influence of this early incarnation of semiology should not be underestimated. It almost made Saussurean sign theory synonymous with the analysis of everyday phenomena, transforming quotidian trifles into complex *texts* to be decoded by competent readers. The idea of the text, a complex systematic whole inculcating specific readers or audiences, passed from the initial formulations of Barthes (1977a [1971]) and Lotman (1982 [1977]) into the vocabulary of communication study and literary criticism and then into common parlance. The notion of the text might be the most enduring contribution of semiotics to communication study. Certainly, it was fundamental and, for all the talk of the singular sign in commentaries on semiotics, the conception of semiosis, the text or a collection of signs is dominant in properly informed discussions by semioticians. As Umberto Eco writes, "a single sign-vehicle conveys many intertwined contents and therefore what is commonly called a 'message' is in fact a *text* whose content is multileveled *discourse*" (1976: 57). The 'message' is clearly associated with information and its concern with the process of transmission, independent of any accrual of meaning. The 'text' does have affinities with the concept of the 'message', therefore; yet it also features the undertones of what Barthes (1977a [1971]) calls the 'work' or the opus which suffused the humanities and framed messages in terms of authorial intent, richness of allusion and, often, the possibility of full transmission or pure communication.

Nevertheless, the principal bearing of the concept of the text is towards a synchronic, disinterested perspective concerned not with the value or import of any communication but, rather, with the mechanics by which it constructs meaning. Furthermore, as the other semiotician and inaugurator of the concept of text, Juri Lotman (1982), stressed, as an entity, the text is, in its very nature, *for someone* and can *become for someone*. It invites, in its very fabric, specific modes of reading; as such, the text *presupposes* the reader. As Barthes (1981: 42), was to put it, with slightly more of a literary slant,

> If the theory of the text tends to abolish the separation of genres and arts, this is because it no longer considers works as mere 'messages', or even as 'statements' (that is, finished products, whose destiny would be sealed as soon as they are uttered), but as perpetual productions, enunciations, through which the subject continues to struggle; this subject is no doubt that of the author, but also that of the reader. The theory of the text brings with it, then, the promotion of a new epistemological object: the reading (an object virtually disdained by the whole of classical criticism, which was essentially interested either in the person of the author, or in the rules of manufacture of the work, and which never had any but the most meagre conception of the reader, whose relation to the work was thought to be one of mere projection).

As is so often the case in semiotics - and is certainly so in its more glottocentric variant, semiology – this quote presents a theory in which the reader or reading is to be considered a component of meaning.

The method of uncovering the 'myths' of popular culture, plus the ideological positions of the reader that they assumed, became so influential that by 1971 Barthes had almost disowned it. In an essay looking back at *Mythologies* (1977b [1971]; see also Cobley 2015), he suggested that casual or folk myth criticism had become so pervasive that it was practically becoming a myth itself. This did not prevent Barthes' early semiology remaining on the syllabi of degree courses in subjects like Communications, Cultural Studies and Media Studies, where first year undergraduates would learn to criticize what now seem some of the more brazen ideological claims of popular culture. Indeed, semiological myth criticism is ideally suited to first year undergraduate syllabi: it provides a simple method and enables the student to expose some of the fallacies that are circulated in everyday life. Yet, in the study of communication, it is supplemented by and extended in a more varied approach. So, often, semiology is part of a package which includes such methods as quantitative content analysis, theories of readership, media policy study, theory of ideology and so forth. What is often overlooked is that, irrespective of the need to be supplemented, in and of itself semiological myth criticism is burdened and impeded by its own promulgation of the idea that communications are, firstly, codes that are easily discerned and, secondly, produce specific readings but are susceptible of decoding by fully autonomous humans. As a theory of meaning, it is somewhat wanting.

By contrast, Eco's influential volume, written in English in 1976 as *A Theory of Semiotics* and based on his *Trattato di semiotica generale* (1975), offered a much more nuanced understanding of coded meaning. By way of a discussion of key milestones in twentieth-century sign theory, including Peirce, Ogden and Richards and Hjelmslev, plus an informed discussion of contemporary communication and information theory, Eco showed that 'code' ultimately implied determinate meaning but also allowed for flexibility in certain areas. He begins his discussion of codes with the example of an engineer in charge of a water gate between two mountains who needs to know when the water level behind the gate is becoming dangerously high. The engineer places a buoy in the watershed; when the water rises to danger level, this activates a transmitter which emits an electrical signal through a channel which reaches a receiver downriver; the receiver then converts the signal into a readable message for a destination apparatus. Thus, under the designation 'code', the engineer has four different phenomena to consider:

a) a set of *signals* ruled by combinatory laws (bearing in mind that these laws are not naturally or determinately connected to states of water – the engineer could use such laws to send signals down the channel to express passion to a lover);
b) a set of states (of the water); these could have been conveyed by almost any kind of signal provided they reach the destination in a form which becomes intelligible;
c) a set of behavioural responses at the destination (these can be independent of how a) and b) are composed);
d) a rule coupling some items from the a) system with some from b) and c) (this rule establishes that an array of specific signals refers to specific states of water or, put another way, a syntactic arrangement refers to a semantic configuration; alternatively, it may be the case that the array of signals corresponds to a specific

response without the need to explicitly consider the semantic configuration) (Eco 1976: 36-7).

For Eco, it is only the rule in d) which can really be called a code. Nevertheless, he notes the combinatory principles that feature in a), b) and c) are often taken for codes. Examples include 'the legal code', 'code of practice', 'behavioural code'. Most importantly for the study of meaning in communication, Eco emphasizes that 'code' is a 'holistic' phenomenon in which a rule binds not just the sign-vehicle to the object to which it refers but also binds it to any response that might arise irrespective of the reference to the object becoming explicit. So a), b) and c) are to be taken as '*s*-codes' – systems or 'structures' that subsist independently of any communicative purpose. They can be studied by information theory, but they only command attention from communication science when they exist within a communicative rule or code, d) (Eco 1976: 38-46).

What can be seen from this is that the 'behavioural response' or, in more anthropocentric communication terms, the interpretation, is built into the semiotic definition of code proper offered here. Arguably, Eco had been an adherent of this premise more explicitly and even earlier than Barthes, for he had written on the principle at length in his book *Opera aperta* (1962) which went into numerous editions and appeared in an English version in 1989. Much of Eco's later work on the relations of text, interpretation and over-interpretation (for example, 1990) stemmed from the interests first formulated in *Opera aperta.* Already, there were several analyses of television in that volume, as well as a chapter on openness, information and communication, topics to which he was to return in *A Theory of Semiotics*. The influence of Eco's combination of semiotics, information and communication theory and the various formulations he germinated was to be profound for communication study (Corner 1980; Jin 2011). The influence began, as is often the case, on a local level. Eco was invited to give a paper at the Centre for Contemporary Cultural Studies at Birmingham University, featuring a semiotic inquiry into the television message, which he wrote up for publication in the Centre's Occasional Papers series (Eco 1972). Along with his paper asking 'Does the public harm television?' (Eco 1973, later re-published in Eco 1994), Eco's insights had considerable impact on subsequent papers in the series, such as Dave Morley's 'Reconceptualising the media audience: towards an ethnography of audiences' (1974) and, most crucially, Stuart Hall's 'Encoding and decoding in the television discourse' (1973; often reprinted in truncated form – for example, Hall et al 1981).

Encoding and decoding: the text and the reader

Hall's essay was not solely an exercise in semiotics. It was a synthesis of Eco, Barthesian semiology, Gramsci's hegemony theory, a concept of state apparatuses derived from Althusser, plus themes in the sociology of Frank Parkin – and it focused, particularly, on violence on television. From Parkin came the inflection in sociological terms of the reader originally conceived by semiotics. Thus, Hall posited 'dominant', 'negotiated' or 'oppositional' readings – that is: a reading position that accepts the instilled codes that dominate the media text; one that accepts some of the codes but rejects or is unsure of others; or one that strenuously rejects them. Indeed, the typology echoed Lotman's (1974: 302). "Non-understanding, incomplete understanding, or misunderstanding" in communication through texts. Later work by Morley on the reception of television

programmes (1980) explicitly implemented the dominant/negotiated/oppositional trichotomy as did Hobson's (1982) qualitative study of UK soap opera viewers. The general encoding/decoding model of Hall, with its programme for quasi-semiotic investigation of the message or text or encoding of media output coupled with studies of specific audiences' differential decodings, inspired work in the field for over two decades. Subsequent studies included Morley (1986, 1992), Ang (1984, 1991, 1996), Radway (1984) Seiter et al (1989), Lull (1990), Gray (1992), Gillespie (1995), Hermes (1996), Nightingale (1996) plus a revivified part-Uses and Gratifications cross-cultural study of *Dallas* viewers by Liebes and Katz (1993).

What is characteristic of much of this work is that it sought to provide a fuller picture of reader or audience activity than that which was afforded by the semiotic 'reading off' of audience positions from the configuration of the text. In truth, Hall's encoding/decoding model was still very much a 'reading off'; but it was hoped that when ethnography of real audiences was introduced into the equation, the possibility of moving towards a more watertight appraisal of texts' bearings (especially political ones) was available to the field. These studies effectively aimed to procure greater depth in the understandings of audience responses to texts, a 'thicker' description (Geertz 1993) in ethnographic terms, which would reveal the political co-ordinates of meaning and the text-reader interaction. As will be seen, below, this strand of work embodied a critique of semiotics for being excessively fixated on the meaning of the text to the detriment of the meaning whose potential was actualised by readers. Put another way, the discussion of codes was thought to be in need of superseding by the ethnographic extension of the encoding/decoding model. As John Corner (1980: 85) observed at the inception of such work

> It cannot be denied that the term [code] has been used most frequently in some of the most exciting and suggestive work to be carried out in that broad area of inquiry. Here, Hall's papers over the past ten years constitute an outstanding example. What I think can be concluded is that many instances of its present use do not deliver what is promised and sometimes obscure what it is a prime intention of any cultural research to make clear - that is, how social meanings get made.

What Corner's statement reveals, quite clearly, is a largely sociological agenda for the question of both meaning and reading - an agenda that semiotics was repeatedly criticized for not pursuing. Such an agenda is not invalid, of course, and it is capable of producing important insights. Yet, from a contemporary semiotic perspective - bearing in mind, also, that the theory of meaning in media and communication studies has not moved much further forward since this period - it is itself open to criticism. The encoding/decoding approach to such communications as those offered by television programmes was rapidly coming into question with the advent of post-internet media in the early twenty-first century, especially Web 2.0. These latter putatively entail more *demonstrable* activity (interactivity, for example) which suggest that the text/audience relationship can once more be measured in terms of *use* (click-throughs, favourites folders, history, for example – see Livingstone 2004). Thus, the reader as conceptualised by Big Data, upon whom it is much more economical to generate research, might be as complex as the reader envisaged by ethnography. Yet, arguably, what the reader in the encoding/decoding model and Big Data have in common are the concealment of affective or emotional dispositions in communication. The latter might reach into the private space of media use; but it can only read off click-throughs. This seems to suggest that associated communications research is

straying further and further away from the possibility of grasping what might constitute meaning.

The other, related and extended, criticism, from a contemporary semiotic perspective, is that the ethnographic development of the encoding/decoding model simply was not readerly enough. It yielded data on what people said about their reading of texts, but took this largely at face value as 'specimen' data (Alasuutari 1995) such that the focus was on what respondents said rather than what responders *meant*. However concerted the attempt at thick description might be, it was itself forced to 'read off' codes from the anthropological or sociological evidence of readership. Moreover, it was forced to do that as if the readings of audiences were fully autonomous, engagements with codes by readers who were not pre-constituted by any cognitive priming, coded or otherwise. In short, the encoding/decoding model did not really get to grips with reading or with meaning and it left a legacy for communication study which tended to preserve the notion of code or determinate meaning.

This was not the only factor in the sealing of semiotics' fate in communication study, but it was an important one. In the period of popularity attendant on Hall's model, semiotics had become extremely fashionable in the field of communications. In the Anglophone world, semiotics was becoming even more closely associated with communication study than it had been with literary study. Yet, being in fashion is perilous because it entails the grim possibility of going out of fashion. In the immediate wake of encoding/decoding, there were numerous English language primers and teaching books in communication (Fiske and Hartley 1978, Williamson 1978, Fiske 1982, Dyer 1982) which rode the wave of fashion but, in retrospect, prevented the latter-day developments of semiotics from contributing to communication study. These texts conventionalised a series of distortions of the founding texts in semiotics, among which were: the misleading rendering of *signifiant*, *signifié* and *signe* as 'signifier', 'signified' and 'sign', following the translation of Saussure's *Cours* into English in 1959 and before the time of Harris' superior, 1983 translation of the *Cours*; the re-orientation or misconstrual of the *signifiant* as 'material' (rather than psychological), with slippages from 'sound pattern' to 'sound' (Culler 1975; Coward and Ellis 1977; Hall et al 1981 – see Cobley 2006); and, possibly the most damaging distortion - the clumsy and desperate conflations of Peirce and Saussure. Following Roman Jakobson's formulations on the Peircean theory of the sign (1965, taken up especially in Peter Wollen's *Signs and Meaning in the Cinema* (1969), Peirce's icon/index/symbol trichotomy of signs was cast in Saussurean guise. This was exacerbated by Hawkes (1977) book in the same UK tradition that spawned Wollen's, Fiske's *Introduction to Communication Studies* (1982) - "What Saussure terms iconic and arbitrary relations between signifier and signified correspond precisely to Peirce's icons and symbols" (1982: 46) – and Dyer (1982) where "Indexical, iconic and symbolic signs", said to enact relations between "signifier and signified" (Dyer 1982: 99), get their own section in a chapter in which there is absolutely no mention of Peirce (see Cobley 2019).

These last points may seem premature since Peirce has not really figured in this discussion thus far. In another way, however, they are appositely placed since Peircean semiotics has offered a much different perspective on meaning from that engendered by the encoding/decoding model. This would not be apparent if one was presented with the single trichotomy of icon/index/symbol, grafted onto the arbitrary sign as derived from Saussure, in a euphoric dream of the possibility of uncovering the code for everything.

Towards the end of his life, Eco stated quite bluntly in an interview that he and his fellow workers in cognate fields such as communications during the 1960s and 1970s had "pissed code" (Kull and Velmezova 2016). They had been incontinent with respect to their conviction that code could solve the mysteries of meaning. Since that time, Eco, in addition to all the other things he did, became a committed scholar of Peirce, working, notably and fittingly, on the subjects of cognition and animal communication.

Meaning, cognition and Peircean semiotics

Even before the encoding/decoding model was formulated and while some communication theorists were pissing code, semiotics had developed a much more ambitious project which is now beginning to bear fruit in communication study. The fashionable moment of semiology was superseded by a broader tradition of semiotics which became ever more visible after the establishment of the International Association for Semiotic Studies in 1969. With Émile Benveniste as the first President, one of the prime movers in establishing the Association was the Hungarian polymath, Thomas A. Sebeok, who himself grappled with the question of code in semiotics. Starting with post-war communication and information theory, Sebeok devoted increasing attention to non-human communication as he developed 'zoosemiotics'. Initially he proceeded with a concept of code drawn from an information theory-inflected post-Saussurean linguistics. By the time of his final book (2001), however, he repeatedly made reference to the five major codes: the immune code, the genetic code, the metabolic code, the neural code and, of course, the verbal code. His other references were to codes in a very weak sense, but the first four in this clutch were significant because, as well as being the codes that Eco (1976: 21) had declared to be outside the remit of semiotics, they indicated much more expansive thinking. In considering non-human communication or semiosis at large, beyond the human, codes and meaning had been put into perspective. The big codes, in life, were largely invariant; the vagaries of meaning in the codes of human culture, by contrast were, as Hector Barbossa would say in *Pirates of the Caribbean* (2002), "more what you'd call 'guidelines' than actual rules" or, as Eco would phrase them, "s-codes". As early as 1972, Sebeok noted that the "need for different kinds of theory at different levels of 'coding' appears to be a pressing task" (1972: 112), thus posing a pivotal question that is cognate with communication theory minus the anthropocentric trappings: "What is a sign, how does the environment and its turbulences impinge upon it, how did it come about?" (1972: 4).

Such a non-anthropocentric outlook is of a piece with Sebeok's position as one of the foremost promoters of the work of the American logician, scientist and philosopher Charles Sanders Peirce in. Peirce's semiotics, was fastidiously developed – despite his "Sop to Cerberus" (see Cobley 2019) – with a view to its applicability to all realms rather than just Saussure's target for semiology of signs "*as part of human social life*". The most striking difference between the sign in Saussure and that in Peirce, however, seems to be a mere formal matter: it is that the latter envisages a trichotomy consisting of a Sign or 'Representamen', an Object and an 'Interpretant'. The three-fold sign derives from a tradition of thinking much different from that of the relatively recently developed linguistics and, indeed, the history of thought as conceived since the Enlightenment. A little like a *signifiant* being tied to a *signifié*, in Peirce's terms Representamen (a sign-vehicle) can stand for an Object (something in the mind or something in the world). This kind of relationship is frequently considered to characterize the sign, a 'relation' between some ground and some

terminus. Yet such a relationship, *qua* sign, had already been discovered to be false by the late Latin thinkers. Peirce's advance in sign theory, an advance that is integral to his semiotics being relevant to all nature, was to add a third term.

Peirce's third component, the Interpretant, is carefully named. It is not an "interpreter" - in other sign theories, such an entity would be an agency *outside* the sign as a whole. Instead, it carries out two functions. Firstly, it sets up the sign relation: it is the establishment of a sign configuration involving Representamen and Object. When a finger (Representamen) points at something (Object), this is only a sign configuration if some link between the pointing digit and the something that is 'pointed to' is made. This making of the link is the Interpretant. If the finger pointed but was placed behind its owner's back, concealed from anyone else in that space, then there is no sign configuration however much the finger points. Put another way, no Interpretant is produced. The second feature of the Intrepretant consists in the way that any person looking at what the finger points to is bound to produce another sign (e.g. the finger points at the painting on the wall and the onlooker says: "Vermeer"). So the Interpretant is another Representamen, "an equivalent sign, or perhaps a more developed sign" (*CP* 2.228). In Peircean semiotics, the Interpretant is that which the sign produces, its "significate effect" (CP 5.475): that other sign is usually - but not always - located in the mind.

There are, then, two points to note with respect to these features of Peirce's sign. The first is that it leaves no room for the usual criticism of semiology or the two-sided sign, that an interpreter or reader is needed in order to be able to understand how meaning and communication work. That requirement is already satisfied by being built in to the formulation of the sign. The second is that signs are not really isolable. When the Interpretant becomes in itself a sign or Representamen, "becoming in turn a sign, and so on ad infinitum" (*CP* 2.303), the sign exists in a *network* of Interpretants (*CP* 1.339) whose bearing is determined by prevailing circumstances. This entails that the sign or semiosis, in terms of meaning, is thoroughly contextual. It does not follow, though, that semiosis is unrelentingly malleable, as some tendencies in communications, media and cultural studies might have it. In reimagining the role of semiotics in communication, these technical aspects of Peirce's sign theory are of considerable importance. The interpretant is an act of sign processing conceived in non-anthropocentric terms; signs and meanings are continuous; sign users are *in media res*, always within semiosis and not outside, manipulating it; and semiosis is a cognitive process such that cognition does not precede acts of sign use.

The fixity and rule-bound conception of code is loosened in Peircean semiotics which emphasizes, instead, the work of the interpretant. Sebeok's later work, for example, even treats the term 'code' as a mere synonym for 'interpretant' (see, for example, 2001: 80 and 191 n. 13) as part of a pluralistic conception of codes which was coupled with an as yet unspecified determining role of the genetic master code. Peirce's triadic version of the sign, his typologies of sign functioning and the design of his sign theory to cover all domains, provided the groundwork for Sebeok (and others) to make his work amount to an outline of the way that semiosis is the criterial attribute of life (see Sebeok 2001; cf. Petrilli and Ponzio 2001). Semiotics, in this formulation, is not just a method for understanding some artefacts of interest to arts and the humanities. The study of signs has been re-thought in recent decades as the human means to think of signs *as* signs, whether they are part of communication in films or novels, the aggressive expressions of animals or the messages that pass between organisms as lowly as the humble cell. As Sebeok demonstrates (1997), when one starts to conceive of communication in these places then the sheer number of

transmissions of messages (between components in any animal's body, for example) becomes almost ineffable. This amounts to a major re-orientation for communication. To be sure, the communication that takes place in the sociopolitical sphere is of utmost importance: the future of this planet currently depends on it. However, the model of communication put forth by contemporary semiotics insists on the understanding that human affairs are only a small part of what communication study's proper object is. Considering the role of the communicator, for example, Self (2013: 362) has suggested that Actor Network Theory, posthumanism and contemporary semiotics have problematized the human communicator, with biosemiotics and cybersemiotics in particular manifesting "structural interpretations that do not depend upon the centrality of a human communicator to the production of meaning within the system". He adds: "Thus, at the beginning of the 21st century the powerful communicator remains but has been repositioned into larger constellations of social, structural, and semiotic forces that lie beyond any individual or institution".

A constellation larger still, underpinning those that Self notes, is nonverbal communication. From his zoosemiotic period onwards, Sebeok continually attempted to draw the attention of glottocentric communication theorists to the larger framework in which human verbal communication is embedded. He warned of the "terminological chaos in the sciences of communication, which is manifoldly compounded when the multifarious message systems employed by millions of species of languageless creatures, as well as the communicative processes inside organisms, are additionally taken into account" (1991: 23). Since the overwhelming amount of communication in the known universe is nonverbal, as opposed to a seemingly massive but relatively minuscule amount of verbal communication, the massive growth in the study of nonverbal communication since the 1960s (see, for example, Weitz 1974, Knapp 1978, Kendon 1981, Poyatos 1983; Hall 1990; Beattie 2003; the *Journal of Nonverbal Behavior*, 1976-present) has been very much warranted, even if much of it focuses on human nonverbal communication and lacks the breadth that semiotic or even proto-semiotic (see Ruesch and Kees 1956) studies have demanded. Also, there has been broad interest in the status of the animal and its forms of communication which has developed in the last twenty years (e.g. Baker 2000; Fudge 2004) as well as the accelerated interest in the relation of the human to machines evinced in posthumanism (see, for example, Wolfe 2003, 2010). None of these, though, have been as ambitious as biosemiotics (Sebeok and Umiker-Sebeok 1992; Hoffmeyer 2008, 2010; Kull 2001, 2007; Barbieri 2007), with its laying bare that the objects of biology are thoroughly characterized by communicative processes.

Semiotics beyond the human: where is 'real' meaning?

What the fast-growing field of biosemiotics has made clear concerns precisely the key issues that have been central to the present reimagining of semiotics in communication: that semiosis cannot be conceived separately from cognition; that semiosis is continuous across all domains of life besides the human, a fact that has consequences for how communication is theorised; that the possibility of interpretation is part and parcel of semiosis, rather than outside it; and, with reference to the *Umwelt*, meaning is neither a substance outside of an organism nor a mysterious form within an organism. Peirce's semiotics provides important grounds for biosemiotics. As Ransdell points out in a classic essay on Peirce (1997 [1977]:

168), referring specifically to the Object in Peirce's sign triad, humans have limited access to the real:

> Can we somehow get outside of our own minds, our own semiosis, to compare the real object to our idea of it to see to what extent the latter is a faithful and adequate representation of the former? Of course not. Consequently, either the real object is forever unknowable - a Kantian *Ding an sich* - or else it is that which is present to us in the immediate object when the latter is satisfactory.

The argument Ransdell makes here about 'the real' being what is present in the immediate object (a technical aspect of Peirce's semiotics) is, effectively, the same one that is at the core of Jakob von Uexküll's concept of *Umwelt*. As mentioned above, an *Umwelt* is the means by which organisms capture 'external reality' in response to semioses. It is the 'world' of species according to their specific modelling devices, sensorium, or semiotic capacity to apprehend things (von Uexküll 2001a, 2001b). Signs grow – from the organism itself and from elsewhere, other organisms, or in feedback from itself (as in echolocation). The *Umwelt* of a species, then, is composed by the circulation and receiving, insofar as it is physically allowed by an organism's sensorium, of signs (von Uexküll 1992, 2001a, b, 2010; Deely 2009; the essays in Kull 2001; Brentari 2015). Thus, species effectively inhabit 'different worlds' because the character of the 'world' they apprehend is determined by the semiotic resources that are available to them through their sensoria. A dog can apprehend sweetness in a bowl of sugar, but it cannot measure the amount of sugar, gain a knowledge of the history of sugar production or use the sugar in different recipes; a human can do all of these and also listen to stories about sugar, but it cannot hear very high-pitched sounds like the dog can. The human inhabits an *Umwelt* characterised by nonverbal and verbal communication according to the senses it possesses. Those senses, of course, as the example of the dog's 'superior' hearing demonstrates, are not unlimited but, rather, specifically geared for the exigencies of survival.

As with Peirce's semiotics, in the concept of *Umwelt* there is the realization that beyond species' capacities of semiosis there is a world – the 'real world', in one sense – which cannot be reached. In any *Umwelt*, misinterpretation of signs, overlooking of signs and signs not being 100% adequate representations of reality, maintain any species, to some extent, in a state of illusion. Interestingly, this is the point that Tomaselli (2016) makes in an attempt to reconcile the encoding/decoding model with Peircean semiotics. Considering a court case in which the South African Supreme Court brought an action against the Minister of Defence by the End Conscription Campaign (ECC) to prevent the minister producing further anti-EEC disinformation, Tomaselli argues that via the influence of Eco, a version of the interpretant was already implicit in Hall's model. During the case it was argued that Peirce's phaneron or supersign, 'encodes' all and everything that is present to the mind, including the imaginary, the fictional and the supernatural. A holistic concept,

> The phaneron involves the interpretations of both producers (conceived texts, encoding) and viewers (perceived texts, interpretants) into a total framework of meaning (social and public texts [apartheid, anti-apartheid]) which may have little to do with the 'reality' that the Minister's expert witness encountered, experienced or was responding to (Tomaselli 2016: 68).

Tomaselli's implementation of the broader framework met with success in the trial and it is important as an indicator in the argument regarding the 'reality' of meaning. He points out that the expert witness on behalf of the Minister had used a transmission model of communication which, in an authoritarian fashion, excluded the broad kind of semiotic analysis of meaning that the ECC's team ultimately employed successfully in terms of the case's outcome.

The point to be made, here, is not that 'anything goes' in interpretation or that meaning is in the eye of the beholder. Among semioticians, Eco in particular had repeatedly made it his mission to discourage readers from getting drunk on interpretative strategies (see Eco 1990). The questions are: can semiosis or 'the sign' be considered determinate, a coded or fixed set of co-ordinates? Or is semiosis indeterminate, fully interpretable and susceptible of the will of the reader? Implicit in the work stemming from the encoding/decoding model is a leaning towards the latter. The non-semiotic transmission model used by the Minister of Defence's team in the case clearly inclined towards the former. Furthermore, Tomaselli freely admits that the semiotic approach used in the case was employed in the service of resistance to the apartheid-era authoritarian mobilization of signification. There seems to be a definite flavour of such resistance, invariably in situations with much lower stakes than those in apartheid-era South Africa, in the ethnographic studies of reading that stemmed from Hall's work.

Yet, if the Peircean sign comprises an interpretant, making the bearing of semiosis thoroughly contextual, does it not follow that semiosis, in the Peircean view, is one more example of indeterminacy, full interpretability and the thoroughgoing autonomy of the reader? The answer lies not just in the interpretant's facilitating of the flow of sign to sign (semiosis) but on the sign's constitution as a *relation* rather than just a configuration of parts. What has been forgotten, for the most part, in the history of sign study, is that semiosis inheres in *the sign relation itself* rather than in its components' reaching of a terminus. The American philosopher, John Deely, drawing on the late Latins and Peirce, has been central to the recovery of this memory, both for human semiosis and for that of other species. The sign user is not a fourth term to be added to the Peircean triad in order to make it work in an expected fashion (Deely 2006). Nor is meaning a matter of the intersubjectivity that groups of readers with sociological characteristics in common might bring to signs. Such intersubjectivity constitutes the sign user/maker or reader as merely "being-in-between" (Deely 2002) sign and terminus. Yet, this is not Deely's principal objection to the insufficiency of intersubjectivity as a theoretical concept. For him, echoing Aristotle, "over and aboveness" or suprasubjectivity is the defining feature of relation. A typical Deely example (2017: 15) distinguishes between intersubjective and suprasubjective relations:

> We are supposed to meet for dinner; you show up and I don't (or vice-versa), and you are annoyed until you find out that I died on the way to the dinner. At my moment of death, at the moment I ceased to have a material subjectivity encounterable in space and time, the relation between us went from being intersubjective as well as suprasubjective to being only suprasubjective; yet under both sets of circumstances I (or you) as the objective terminus of the dinner engagement remained suprasubjective (if not intersubjective!) as a constant influencing the behavior of the one still living in whom the relation retained a subjective foundation as a cognitive state provenating the relation as suprasubjectively terminating at an 'other'.

The sign – or semiosis – as this example shows, consists not in a determinate entity, the terminus, but in a *relation* that is indeterminate in respect of its terminus except insofar as it is understood by agents within the relation. The sign is *suprasubjective* in that its force – like that of fictions and the law – endures even when one or more of the subjects is removed.

The sign – or semiosis - is still determined by the agency of its reader, as in the settling of the relation of the meeting for a dinner date; but the suprasubjectivity of that sign relation is such that the sign is not nullified when one of the projected diners' putative autonomy is shown to be illusory by the affliction of sudden death. The sign is not suprasubjective in the way that a coded entity may be taken to be. Nor is its reliance on context the same as saying that its meaning depends on what readers think of it at a particular time. Instead, its suprasubjectivity and contextuality derive from two orders of being recognized by the Latin thinkers. In one set of circumstances, the relation in a sign could be of the order of *ens reale* (independent of mind for its existence), in another set the relation could be of the order of *ens rationis* (dependent on mind for its existence – see Deely 2001: 729). As with the significations of the Minister of Defence in the case recounted by Tomaselli, semiosis can go either way – but not without the force of relation.

Conclusion: meaning is real

Repeatedly in communication study, semiotics has been criticized for being text-centred and wilful in its disregard for readership. Hopefully, the latter will have been dispelled by the foregoing discussion which has shown that, certainly in its Peircean version, but time and again in other variants, semiotics has operated with an in-built consideration of readership. Yet, the question of semiotics' text-centredness – its apparent insistence that there is something called meaning – remains. Moreover, the response to that question must be an affirmative one. Yes, semiotics does pursue a meaning that cannot be collapsed into the various readings that are available to the totality of sign users. However, it does not pursue this for the reasons usually assumed. Semiotics is neither irrevocably text-centred nor an authoritarian master narrative. It is, instead, an anti-psychologism.

As Stjernfelt (2014: 4) makes clear, Peirce's work in particular is an ambitious anti-psychologism.. Anti-psychologism, he writes (2014: 13), is basic for semiotics; it refuses to take signs as reducible to psychological phenomena. That is because psychologism tends towards relativism. Stjernfelt offers a simple, but compelling, fictional example:

> If mathematical entities were really of a purely psychological nature, then truths about them should be attained by means of psychological investigations. The upshot of psychologism might thus be that a proper way of deciding the truth of the claim that 2+2 = 4 would be to make an empirical investigation of a large number of individual, psychological assessments of that claim. So, if we amass data of, say, 100.000 individual records of calculating 2+2, we might find that a small but significant amount of persons take the result to be 3 - which would give us an average measure of around 3.999 as the result. This might now be celebrated as the most exact and scientific investigation yet of the troubling issue of 2+2 - far more precise than the traditional, metaphysical claims of the result being 4, which must now be left behind as merely the coarse and approximate result of centuries of dogmatic mathematicians

> indulging in armchair philosophy and folk theories, not caring to investigate psychological reality empirically.

In the same way, semiotics seeks not to reduce signs to individual mental representations. Both the sign vehicle, its content and act of signification are considered by semiotics in their bearing as types whose tokens can be discerned in processes of cognition and communication. "If signs were only particular, fleeting and ever-shifting epiphenomena of brains and minds", Stjernfelt writes (2014: 47),

> this would not only give up signs as such as stable objects of scientific study - but it would, in turn, destroy even psychology itself along with all other sciences, because sciences, as already Aristotle realized, always intend general structures, even when they describe particular objects.

As part of the generality that Stjernfelt notes, the future of communication study surely must lie in the embrace of a non-anthropocentric perspective on semiosis. This is not to say that the study of human communication needs to be scaled down or that local studies in the field of communication need to be replaced by more general ones. Obviously, local studies are crucial. Yet their worth, particularly in projecting for the future, will be vitiated if they proceed without cognizance of human communication's cognacy with that of the other species that inhabit the planet and who may be affected by humans' behaviour. It will be vitiated, too, by disregard for the role that will be played by machines in the global ecology of communication.

Sign users, as has been argued, are *in media res*, always within semiosis and not outside, manipulating it. In related fashion, signs and meanings are continuous and not isolable in the way that often occurs in communication study and elsewhere. Work on networking has considered the manner in which the self is at once plugged into a potentially global system of communications yet, in the instrumentality of much communication, is rendered isolated or restricted in developing global collectivity (see, for example, Castells 2005, 2009; van Dijk 2012). However, such work did not predict the specific patterns of semiosis that have been witnessed in the social media age. If it is going to be possible to predict when the social media age will end or how it can develop in a fashion that will contribute to the commonweal, then this is one example where extending the understanding of the continuity of semiosis must surely be a crucial task.

An impediment to such work, as has been seen, is the positing of selves in semiosis as either cognitively pre-constituted or so pre-constituted in addition to sociologically determined in their relation to meaning. Peircean semiotics and cognitive semiotics are considerably sized and established constituencies in global semiotics and both are premised on sign action occurring not just in the social processes of communication, but in the cognitive processes inherent in members of species (see Bundgaard and Stjernfelt 2010). That is to say, the nature of an *Umwelt* is a good predictor of the actions of the inhabitants of that *Umwelt*. In the case of the human *Umwelt*, there is an additional imperative in that the human has the capacity, particularly in the sphere of communication, to enhance that *Umwelt* for the future. By the same token, of course, the human also has the capacity for such enhancement which may negatively impinge on the *Umwelten* of other species.

Central to all of these observations is the phenomenon of meaning. What any feature of the world means to its inhabitants is shaped by personal factors, group factors,

sociological factors, historical factors and so forth. Yet it is also shaped by species factors and by the nature of relation. Relation, in its very being, imputes stability to meaning. For humans, though, it is of particular importance because we can shift so rapidly from mind-dependence (where fictions can rule the lives of humans) to mind-independence (conceiving reality beyond the fictions rendered by an *Umwelt*). The action that might be taken in these simultaneously broad and stark dimensions would amount to a profound reimagining of communication.

References

Alasuutari, Pertti (1995) *Researching Culture: Qualitative Method and Cultural Studies*. London: Sage.

Ang, Ien (1984) *Watching* Dallas*: Soap Opera and the Melodramatic Imagination.* London: Routledge.

Ang, Ien (1991) *Desperately Seeking the Audience.* London: Routledge.

Ang, Ien (1996) *Living Room Wars: Rethinking Media Audiences for a Postmodern World.* London: Routledge.

Baker, Steve (2000) *The Postmodern Animal*. London: Reaktion.

Barbieri, M. (ed) (2007) *Introduction to Biosemiotics: The New Biological Synthesis*. Dordrecht: Springer.

Barthes, Roland (1967, [1964]) *Elements of Semiology*. trans. Annette. Lavers and Colin Smith, London: Cape.

Barthes, Roland (1973, [1957]) *Mythologies*. trans. Annette Lavers, London: Paladin.

Barthes, Roland (1977a [1971]) 'From "work" to "text"' in *Image – Music – Text.* (ed. and trans.) Stephen Heath, London: Fontana.

Barthes, Roland (1977b) 'Change the object itself' *Image – Music – Text*. (ed. and trans.) Stephen Heath, London: Fontana.

Barthes, Roland (1981) 'Theory of the text' in Robert Young (ed.) *Untying the Text: A Poststructuralist Reader*. London: Routledge.

Beattie, Geoffrey (2003) *Visible Thought: The New Psychology of Body Language.* London: Routledge.

Bouissac, Paul (2010) *Saussure: A Guide for the Perplexed*. London: Continuum.

Bréal, M. (1900) *Semantics: Studies in the Science of Meaning.* (Trans. Mrs. H. Cust). London: William Heinemann.

Brentari, Carlo (2015) *Jakob von Uexküll: The Discovery of the Umwelt between Biosemiotics and Theoretical Biology.* Dordrecht: Springer.

Bundgaard, Peer and Stjernfelt, Frederik (eds.) (2010) *Semiotics*. 4 vols. London: Routledge.

Castells, Manuel (2009) *The Rise of the Network Society.* 2nd edn. New York: WileyBlackwell.

Castells, Manuel (ed.) (2005) *The Network Society: A Cross-cultural Perspective*. London: Edward Elgar.

Cherry, Colin (1978) *On Human Communication: A Review, A Survey, and A Criticism,* 3rd ed. Cambridge and London: The MIT Press.

Cobley, Paul (2015) 'The deaths of semiology and mythoclasm: Barthes and media studies', *Signs and Media* (10): 1-25.

Cobley, Paul (2006) 'Saussure: Ferdinand Mongin de: theory of the sign' in K. Brown (ed.) *Encyclopaedia of Language and Linguistics* 2nd edn. Oxford: Elsevier.

Cobley, Paul (2015) 'The deaths of semiology and mythoclasm: Barthes and media studies', *Signs and Media* (10): 1-25.
Cobley, Paul (2019) 'Peirce in contemporary semiotics' in Tony Jappy (ed.) *The Bloomsbury Companion to Peircean Semiotics*. London: Bloomsbury.
Corner, John (1980) 'Codes and cultural analysis' *Media, Culture and Society*. 2: 73-86
Coward, Ros and Ellis, John (1978) *Language and Materialism: Developments in Semiology and the Theory of the Subject*. London: Routledge and Kegan Paul.
Culler, Jonathan (1975) *Structuralist Poetics: Structuralism, Linguistics and the Study of Literature*. London: Routledge and Kegan Paul.
Deely, John (2001) *Four Ages of Understanding: The First Postmodern Survey of Philosophy from Ancient Times to the Turn of the Twentieth Century*. Toronto: University of Toronto Press.
Deely, John (2006) '"To find our way in these dark woods" versus coming up Short', *Recherches sémiotiques/Semiotic Inquiry.* 26 (2/3): 57-126. (The Deely essay was commissioned 11 April 2007, submitted in final form October 2007, actual publication was in January 2009. The discrepancy between publication date and actual journal date is a result of the fact that *RSSI* had fallen behind in its issues and is in a 'catch-up' mode with the issue in question)
Deely, John (2009) 'Semiosis and Jakob von Uexküll's concept of umwelt' in Paul Cobley (ed.) *Realism for the 21st Century: A John Deely Reader*. Scranton: Scranton University Press, pp. 239–58.
Deely, John (2017) 'Ethics and the semiosis-semiotics distinction', Special issue of *Zeitschrift für Semiotik* ed. Morten Tønnessen, Jonathan Beevor and Yogi Hendlin, 37 (3-4): 13-30.
Dupuy, Jean-Pierre (2000) *The Mechanization of the Mind: On the Origins of Cognitive Science*. Trans. M. B. DeBevoise. Princeton, N.J./Oxford: Princeton University Press.
Dyer, Gillian (1982) *Advertising as Communication*. London: Methuen.
Dyer, Gillian (1982) *Advertising as Communication*. London: Routledge.
Eco, Umberto (1962) *Opera aperta*. Milan: Bompiani.
Eco, Umberto (1972) 'Towards a semiotic inquiry into the television message', Working Papers in Cultural Studies, no. 6, Birmingham: Centre for Contemporary Cultural Studies.
Eco, Umberto (1973) 'Does the public harm television?', cyclostyled paper for the Italia Prize Seminar, Venice, reprinted as 'Do the public have bad effects on television?' in *Apocalypse Postponed,* Bloomington: Indiana University Press, 1994, pp. 87-102
Eco, Umberto (1975) *Trattato di semiotica generale.* Milan: Bompiani.
Eco, Umberto (1976) *A Theory of Semiotics.* Bloomington and London: Indiana University Press.
Eco, Umberto (1989) *The Open Work*. Trans. A. Cancogni, Cambridge, MA. Harvard University Press.
Eco, Umberto (1990) 'Unlimited semiosis and drift: pragmaticism vs. "pragmatism"' in *The Limits of Interpretation*. Bloomington and London: Indiana University Press.
Eco, Umberto (1990) *The Limits of Interpretation*. Bloomington: Indiana University Press.
Eco, Umberto (1994) *Apocalypse Postponed,* Bloomington: Indiana University Press.
Fisch, Max (1986 [1978]) 'Peirce's general theory of signs' in *Peirce*, *Semeiotic and Pragmatism: Essays by Max H. Fisch* (ed.) Kenneth Laine Ketner and Christian J. W. Kloesel, Bloomington: Indiana University Press.

Fiske, John (1982) *An Introduction to Communication Studies*. London: Methuen.
Fiske, John and Hartley, John (1978) *Reading Television*. London: Methuen.
Fudge, Erica (2004) *Renaissance Beasts: Of Animals, Humans, and Other Wonderful Creatures*. Urbana: University of Illinois Press.
Geertz, Clifford (1993) 'Thick description: toward an interpretive theory of culture' in *The Interpretation of Cultures: Selected Essays*. London: HarperCollins.
Gillespie, Marie (1995) *Television, Ethnicity and Cultural Change.* London: Routledge.
Gordon, W. Terrence (1997) 'C. K. Ogen and I. A. Richards' *The Meaning of Meaning* from early reception to projected revisions' in Parth Bhatt (ed.) *Significations: Essays in Honour of Henry Schogt.* Toronto: Canadian Scholars Press.
Gray, Ann (1992) *Video Playtime: The Gendering of a Leisure Technology.* London: Routledge.
Hall, Judith A. (1990) *Nonverbal Sex Differences: Communication Accuracy and Expressive Style*. Baltimore and London: Johns Hopkins University Press.
Hall, Stuart (1973) 'Encoding and decoding in the television discourse'. Occasional Paper No. 7, Birmingham: Centre for Contemporary Cultural Studies, pp. 1-12.
Hall, Stuart et al (eds.) (1981) *Culture, Media, Language*. London: Hutchinson.
Harris, Roy (2006) 'Was Saussure an integrationist?' in Louis de Saussure (ed.) *Nouveaux regards sur Saussure: mélange offerts á René Amacker*. Geneva, Librairie Droz.
Hartley, John (1982) *Understanding News*. London: Methuen.
Hawkes, Terence (1977) *Structuralism and Semiotics*. London: Methuen.
Hermes, Joke (1996) *Reading Womens Magazines: An Analysis of Everyday Media Use.* Oxford: Polity.
Hobson, Dorothy (1982) Crossroads: *The Drama of a Soap Opera*. London: Methuen.
Hoffmeyer, Jesper (2008) *Biosemiotics. An Examination into the Signs of Life and the Life of Signs*. Scranton: Scranton University Press.
Hoffmeyer, Jesper (2010) 'Semiotics of nature' in Paul Cobley (ed.) *The Routledge Companion to Semiotics*, London: Routledge, 29-42.
Jakobson, Roman (1965) 'Quest for the essence of language', Address to the American Academy of Arts and Sciences, February 10,; published in *Diogenes* 51 (1966): 21-37.
Jin, Huimin (2011) 'British cultural studies, active audiences and the status of cultural theory: an interview with David Morley', *Theory, Culture and Society*. 28(4): 124-144
Kendon, Adam (1981) *Nonverbal Communication: Interaction and Gesture.* Berlin: Mouton.
Knapp, Mark L. (1978) *Nonverbal Communication in Human Interaction*. London: Thomson.
Kull Kalevi (2007).' A brief history of biosemiotics' in Marcello Barbieri (ed.) *Biosemiotics: Information, Codes and Signs in Living Systems*. New York: Nova.
Kull, Kalevi (2007) 'A brief history of biosemiotics' in Marcello Barbieri (ed.) *Biosemiotics: Information, Codes and Signs in Living Systems*. New York: Nova.
Kull, Kalevi (ed.) (2001) *Jakob von Uexküll: A Paradigm for Biology and Semiotics* special issue. *Semiotica*. 134 (1/4).
Kull, Kalevi (ed.) (2001) *Semiotica* 134 (1/4) [Jakob von Uexküll special issue].
Kull, Kalevi and Velmezova, Ekaterina (2016) 'Umberto Eco on biosemiotics', paper presented at the 16th Gatherings in Biosemiotics, Charles University, Prague, 7 July.
Lanigan, Richard (2013) 'Information theories' in P. Cobley and P. Schulz (eds.) *Theories and Models of Communication*. Berlin: de Gruyter.

Lieb, H. H. (1971) 'On subdividing semiotics' in Y. Bar-Hillel (ed.) *Pragmatics of Natural Languages*, ed.. Dordrecht: Reidel.
Liebes, Tamar and Katz, Elihu (1993) *The Export of Meaning: Cross-cultural Readings of* Dallas. 2nd edn. Oxford: Polity.
Livingstone, Sonia (2004) 'The challenge of changing audiences. Or, what is the audience researcher to do in the age of the internet?' *European Journal of Communication*. 19 (1): 75-86.
Lotman, Juri (1974) 'The sign mechanism of culture'. *Semiotica.* 12 (4): 301-5.
Lotman, Juri (1982 [1977]) 'The text and the structure of its audience'. *New Literary History*. 14 (1): 81-7.
Lull, James (1990) *Inside Family Viewing: Ethnographic Research on Television's Audience*. London: Routledge.
Maran, T. et al. (2011) 'Introduction' in Maran et al. (eds.) *Readings in Zoosemiotics*. Berlin: de Gruyter Mouton.
Morley, Dave (1974) 'Reconceptualising the media audience: towards an ethnography of audiences', Birmingham: Centre for Contemporary Cultural Studies, pp. 1-13.
Morley, David (1986) *Family Television.* London: Commedia
Morley, David (1992) *Television, Audiences and Cultural Studies.* London: Routledge.
Morley, David (1980) *The* Nationwide *Audience.* London: B. F. I.
Morris, Charles W. (1938) *Foundations of the Theory of Signs.* Chicago: University of Chicago Press.
Nightingale, Virginia (1996) *Studying Audiences: The Shock of the Real.* London: Routledge.
of `Bedeutungslehre' (1940), with a preface, introductory paper, and glossary by the guest editor of the issue Thure von Uexküll,Trans. by Barry Stone and Herbert Weiner.]
Ogden, Charles K. and Richard, Ivor. A. (1923) *The Meaning of Meaning: A Study of the Influence of Language upon Thought and of the Science of Symbolism* with supplementary essays by B. Malinowski and F. G. Crookshank. London: Kegan Paul, Trench, Trubner and Co.
Peirce, Charles Sanders (1931–58) *The Collected Papers of Charles Sanders Peirce*. Vols. I-VI [Charles Hartshorne and Paul Weiss (eds.)], Vols. VII–VIII [Arthur W. Burks (ed.)] Cambridge, MA.: Harvard University Press.
Petrilli, S. (2009) *Signifying and Understanding: Reading the Works of Victoria Welby and the Signific Movement*. Berlin: de Gruyter Mouton.
Petrilli, Susan (2015) 'Sign, meaning, and understanding in Victoria Welby and Charles S. Peirce', *Signs and Society*. 3 (1): 71-102.
Petrilli, Susan and Ponzio, Augusto (2001) *Thomas A. Sebeok and the Signs of Life.* Cambridge: Icon.
Poyatos, Fernando (1983) *New Perspectives in Nonverbal |Communication*. Oxford: Pergamon.
Radway, Janice A. (1984) *Reading the Romance: Women, Patriarchy and Popular Culture.* Chapel Hill and London: University of North Carolina Press.
Ransdell, Joseph (1997 [1977]) 'Some leading ideas of Peirce's semiotic' http://www.iupui.edu/~arisbe/menu/library/aboutcsp/ransdell/LEADING.HTM (last accessed 8 November 2018. This is a lightly revised version of the paper originally published in *Semiotica* 19 (1977): 157-178).
Ruesch, Jurgen and Kees, Weldon (1956) *Nonverbal Communication: Notes on the Verbal Perception of Human Relations*. Berkeley: University of California Press.

Sanders, Carol (ed.) (2004) *The Cambridge Companion to Saussure*. Cambridge: Cambridge University Press.
Saussure, F. de (1959, [1916]) *Course in General Linguistics*. trans. Wade Baskin, New York: McGraw-Hill.
Saussure, F. de (1983, [1916]) *Course in General Linguistics*. trans. Roy Harris, London: Duckworth.
Sebeok, Thomas A. (1972) *Perspectives in Zoosemiotics*. The Hague: Mouton.
Sebeok, Thomas A. (1979) 'Neglected figures in the history of semiotic inquiry: Jakob von Uexküll' in *The Sign and Its Masters*. Austin: University of Texas Press.
Sebeok, Thomas A. (1991) 'Communication' in *A Sign is Just a Sign* Bloomington: Indiana University Press, pp. 22-35.
Sebeok, Thomas A. (1997) 'The evolution of semiosis' in Roland Posner et al (eds.), *Semiotics: A Handbook on the Sign-Theoretic Foundations of Nature and Culture*. Berlin: de Gruyter, pp. 436-446.
Sebeok, Thomas A. (2001) *Global Semiotics*. Bloomington: Indiana University Press.
Sebeok, Thomas A. and Umiker-Sebeok, Jean (eds.) (1992) *Biosemiotics: The Semiotic Web 1991*. Berlin: Mouton de Gruyter.
Seiter, Ellen et al. (1989) *Remote Control: Television, Audiences and Cultural Power.* London: Routledge.
Self, Charles (2013) 'Who?' in P. Cobley and P. Schulz (eds.) *Theories and Models of Communication*. Berlin: de Gruyter.
Shannon, C.E. (1948). A mathematical theory of communication. *The Bell System Technical Journal*, Vol. 27 (July/October), 379-425 and 623-656.
Sperber, Dan and Wilson, Deirdre (1986) *Relevance: Communication and Cognition*. Oxford: Blackwell.
Stjernfelt, Frederik (2014) *Natural Propositions: The Actuality of Peirce's Doctrine of Dicisigns*. Boston, MA.: Docent Press.
Tomaselli, Keyan (2016) 'Encoding/decoding, the transmission model and a Court of Law', *International Journal of Cultural Studies* 19 (1): 59-70.
Uexküll, Jakob von (1940) 'Bedeutungslehre', Leipzig. Verlag von J. A. Barth.
Uexküll, Jakob von (1982) 'The theory of meaning', *Semiotica* 42 (1): 25-82. [Translation
Uexküll, Jakob von (1992) 'A stroll through the worlds of animals and men: a picture book of invisible worlds', *Semiotica*. 89 (4): 319–91.
Uexküll, Jakob von (2001a) 'An introduction to umwelt', *Semiotica*. 134 (1/4): 107–10.
Uexküll, Jakob von (2001b) 'The new concept of umwelt: a link between science and the humanities', *Semiotica*. 134 (1/4): 111–23.
Uexküll, Jakob von (2010) *Forays into the Worlds of Animals and Humans with a Theory of Meaning*. Trans. Joseph D. O'Neill, Introduction by Dorion Sagan, Afterword by Geoffrey Winthrop-Young. Minneapolis: University of Minnesota Press.
van Dijk, Jan A.G.M. (2012) *The Network Society. The Social Aspects of New Media.* 3rd edn. London and Thousand Oaks: Sage.
Weitz, Shirley (ed.) (1974) *Nonverbal Communication: Readings with Commentary*. Oxford: Oxford University Press.
Wharton, T. (2009) *Pragmatics and Non-Verbal Communication*. Cambridge: Cambridge University Press.
Williamson, Judith (1978) *Decoding Advertisements*. London: Marion Boyars.
Wolfe, Cary (2010) *What is Posthumanism?* Minneapolis: University of Minnesota Press.

Wolfe, Cary (ed.) (2003) *Zoontologies: The Question of the Animal*. Minneapolis: University of Minnesota Press.
Wollen, Peter (1969) *Signs and Meaning in the Cinema*. London: BFI.