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**schema/schemata** \* A schema (sometimes called scheme), plural schemata (or schemes), may best be viewed as a **model** (Baddeley 1976) or as a mini-system (Phillips 1981) by which we internalize, structure and make sense of an event. \* The term is used to explain how established ways of understanding, or ways of structuring *experience*, are used to make sense of new situations. The new is made to fit the pattern of the familiar.

This would explain the distortion of novel information so that it fits in with existing expectations: a useful account of information loss or distortion within communication processes. With reference to **cognitive** development, Piaget has referred to schemata as **symbolic** representations that are assimilated within an intellectual framework. For example, a child might assimilate the **sign** 'pram' and this then provides a future understanding or reference point for other restricting yet mobile objects.

Ultimately, complementary schemata may be organized into some coherent structure or mental map. As such, they may be modified or replaced as more and more events and relationships are assimilated and acted upon, or as cognitive structuring becomes more advanced.

See **cognition, memory**

*Further reading* Phillips (1981); Neisser (1976)

**semantics** \* The study of meaning from a linguistic perspective. \* Semantics aims to analyse and explain how meanings are expressed in language. Current enquiry seems to be organized around three important distinctions.

(1) *Sense versus reference* The meaning of a linguistic expression – a word, for instance – can be treated in terms of its connection with extra-linguistic reality. Thus, the meaning of the word 'chair' lies in its capacity to refer outwards from the language to objects like the one on which you may be sitting as you read this entry. From a different perspective, however, the meaning of a word can be considered in terms of its relationship to other words in the language. Thus, the meaning of the word 'chair' lies in its relationship with other words such as 'furniture', 'table', 'seat', 'bench', etc. A famous example of the distinction between sense and **reference** is the way in which objectively the same planet – Venus – can be referred to equally appropriately as 'the morning star' and 'the evening star', since it has the capacity to shine brightly in both the morning sky and the evening sky. Consequently, the two expressions 'the morning star' and 'the evening star' have an identical **referent**, although the sense of each expression is of course quite different. More attention in semantics has been given to the area of sense relations than to that of reference, in line with Wittgenstein's dictum: 'the meaning of a word is its use in the language'.

But ignoring either side of the contrast between sense and reference tends to lead to unbalanced theories of meaning and this can have consequences that go beyond the domains of linguistic theory. It is worth noting, for instance, that rival **aesthetic** theories can be divided into two camps depending upon whether they tend to favour one or other side of the distinction between reference and sense: **realist** theories favour art that appears to mirror or **reflect** reality in as direct a way as possible; other more Formalist theories, however, stress the **conventionality** of artistic **representation** and see art, and more particularly literature, as a continual experiment with meaning (or 'sense'). Contemporary literary theory tends to be very strong on the conventional bases of meaning, so much so that at times it seems to deny the possibility of any reality at all outside language. At the very least,

it insists that reality is not **mediated** to us directly, but is constructed through acts of meaning, so that we have no direct access to it outside of language. One pitfall of this position is that it can lead to a species of idealism in which reality is spoken into existence through language, and arguments about interpretation become avowedly **subjective**, to the exclusion of **culture** and history as material process.

In modern semantics sense relations have been treated in terms of the following major relationships that words can have with each other.

- (1) *Synonymy*: expressions which can be used in identical ways are considered synonymous; by which criterion an expression such as *to ponder* is held to be synonymous with *to meditate*, or *loutish* is held to be synonymous with *uncouth*.
- (2) *Antonymy*: expressions which reverse the meaning of each other in some way are considered to be antonymous. Thus, the pairs *woman/man*, *fast/slow*, *up/down*, *good/bad* and so on all express relations of antonymy.
- (3) *Hyponymy*: expressions may also operate in hierarchical relations of meaning where the meaning of one expression includes that of another. Thus, the expression *dog* is a hyponym of the expression *animal*, the latter being a superordinate term for a range of co-hyponyms with *dog*, such as *cat*, *monkey*, *giraffe*, *rabbit*, and so on. *Dog* itself, of course, is a superordinate term for another range of hyponyms such as *terrier*, *hound*, *retriever*, etc.

*Synonymy*, *antonymy* and *hyponymy* consist, therefore, of differing kinds of sense relations possible within the vocabulary of a language. They provide a way of conceptualizing the construction of meaning as it goes on within the linguistic system. In this respect it is worth emphasizing that they display linguistic and not 'real-world' classification. There is no reason in the real world why terms for animals should be organized in the particular types of sense relation adopted in English, as becomes immediately apparent when comparisons in particular areas of meaning are

made between languages. According to Whorf (1956), the Hopi tribe of North America, for example, used one word *masaytaka* to designate all flying objects except birds. Thus, they actually designated an insect, an aeroplane and an aviator by the same word, whereas English provides quite separate lexical items.

(2) *Word meaning versus sentence meaning* Other approaches to the meaning of words involve notions such as semantic features and **collocation**. Whatever approach is adopted, however, it does not seem possible to account for the meaning of a sentence merely by building upwards from the individual words that make it up. Otherwise 'Man bites dog' would mean the same thing as 'Dog bites man'. None the less, it seems possible that there may be parallels between the kind of sense relation we have described between words and those that exist between sentences. A sense relation such as synonymy, for instance, may be considered to hold not only between individual words but between whole sentences. Thus 'Sidney sold the book to Sheila' may be considered to be synonymous with 'Sheila bought the book from Sidney' and the same kind of relation can be claimed between 'The police arrested the miners' and 'The miners were arrested by the police'. Other kinds of relationship that can hold between sentences are those of **entailment** and *presupposition*. *Entailment* is a relation whereby, given two sentences A and B, A semantically entails B if under all conditions in which A is true, B is also true. Thus, a sentence such as 'Achilles killed Hector' entails 'Hector is dead'. In these cases B follows from A as a logical consequence. If it is true that Achilles killed Hector, then Hector must as a logical consequence be dead. *Presuppositional* relations are somewhat different. Basically, whereas negation will alter a sentence's entailments, it will leave presuppositions in place. Consider the sentence (i) 'Sidney managed to stop in time'. From this we may infer both that (ii) 'Sidney stopped in time' and also that (iii) 'Sidney tried to stop in time'. These inferred sentences, however, do not behave in quite the same way. Sentence (ii) 'Sidney stopped in time' is a logical consequence of sentence (i) – an entailment – and it does not survive under the negation of (i) – 'Sidney did not manage to stop in time'. Sentence (iii), however, is a presupposition; and whilst the original entailment now no

longer holds, the presupposition that 'Sidney tried to stop in time' still survives intact.

These kinds of distinctions are important for the analysis of meaning in all kinds of discourse. **Ideological** claims, for instance, are often promoted implicitly rather than explicitly, covertly rather than overtly; and they often need to be recovered from the presuppositions or entailments of a discourse rather than from its surface assertions. Thus, when a Ministry of Defence pamphlet urged that 'Britain must do everything in its power . . . to deter Russia from further acts of aggression', various unargued propositions were merely presupposed; notably, for example: (i) 'Britain has power' and (ii) 'Russia is committing acts of aggression'.

(3) *Text versus context* The third major area of inquiry and debate is addressed to issues such as how much of meaning is created and carried by the linguistic system and how much and in what way it is determined by crucial characteristics of the context in which any utterance is grounded. Indeed, some aspects of meaning previously considered to be semantic – i.e. part of the linguistic system itself – are now being treated as part of **pragmatics**.

The history of linguistics during the last sixty years can be read in terms of a continual deferral of the study of meaning. Indeed, the progression during this time has been very much from the smaller units of linguistic organization, such as the **phoneme** to the larger, such as the *sentence* or **text**; it has also been a progression from substance (**phonology**) to significance (semantics). **Meaning**, however, has at last come centre stage, and the last ten years has seen an immense burgeoning of work in both semantics and pragmatics. Meaning, of course, cannot be other than the ultimate goal of linguistic enquiry; and findings in this area undoubtedly have important consequences for associated areas of scholarship such as media studies, literary criticism, interpretive sociology, or **cognitive** science, in all of which issues of meaning are often at the centre of debate.

MM

See **collocation, discourse, multi-accentuality, pragmatics, semiotics, speech act**  
Further reading Lyons (1981)

**semiotics/semiology** \* The study of the social production of meaning from sign systems. \* Semiotics isn't so much an academic discipline as a theoretical approach and its associated methods of analysis. It has not become widely institutionalized as a 'subject'.

An indication of semiotics' provisional and marginal status is that it is still usually defined in the terms first proposed by its so-called 'father', the Swiss linguist Ferdinand de Saussure. He suggested a 'science that studies the life of signs within society', in a book published in 1916. The suggestion was taken up principally by the French **structuralist** Roland Barthes, who was chiefly responsible for popularizing and extending semiotics in the 1960s.

Semiotics as an intellectual enterprise endeavours to reveal and analyse the extent to which **meanings** are produced out of the structural relations that exist within any **sign** system, and not from the external reality they seem so naturally to depict. Since it is committed to the notion of systematic relations operating in abstract structures (that is, structures that cannot be observed directly, like **language**), semiotics has a tendency towards abstraction, formalism and lack of historical grounding. However, since it is equally committed to the *social* production of meaning (language cannot be invented by individuals) semiotics has always sought to relate the production of meanings to other kinds of social production and to social relations.

Semiotics as a method takes its terminology from linguistics and uses spoken language as the prime example of a sign system. However, its growth and success is not so much in the analysis of speech as of other sign systems, especially literature, cinema, publicity, photography and television. In fact semiotics has become associated largely with the increasingly serious study of various forms of **popular culture**. It has been especially useful in this context, since popular culture was previously a very

neglected field in academic study, and such attention as it did receive was often either highly derogatory or else a limited side branch of American **empirical** sociology. Semiotics does not, in principle at least, approach popular culture with prior notions of artistic or moral merit by which to judge a given **text** (an approach common in certain kinds of literary criticism) and unlike empirical sociology it is able to deal with the single text rather than with large-scale patterns.

Thus semiotics is in the first place text-centred, since it is devoted to analysing how **meaning systems** produce meanings via texts. But as it has developed, greater attention has been paid to the role of the **reader** in realizing or producing meanings out of textual resources in an interactive way. Thus semiotics began by showing how texts were structured reworkings of the signs, **codes**, and so on of their particular sign systems, and how these structures generated **myths**, **connotations**, and so on. It went on to demonstrate how such textual structures and devices as point-of-view, **mode of address** or **preferred reading** proposed or even fixed a position from which sense could be made by a reader – the positioning of the **subject**. At this point it became clear that ‘actual’ readers might not necessarily occupy the position proposed for them by **ideological** texts and **discourses**, and further that hitherto too much attention had been paid to the **cognitive** or rational activities involved in reading, and not sufficient to the **pleasure** and desire involved. Thus semiotics was forced to take account of the social processes in which texts are encountered, and of the role of pleasure in these social processes.

Clearly such issues as these are not the exclusive preserve of semiotics, and there has in fact been a fruitful cross-fertilization between it and other intellectual enterprises, notably **psychoanalytical theory**, Marxism, feminism and various sociological approaches.

The distinctive feature of semiotics remains, however, its attempt to specify in general and in detail how meaning is socially produced (not individually created), and subject to **power** relations and struggles just like other kinds of social production. When it turns its attention to the individual reader, this should not be understood as a return to the free-floating abstract **individual**

but rather the individual/subject whose individuality is largely a product of the ideological discourses and signifying practices which s/he inhabits or encounters in social relations.

JH

See **cultural studies, structuralism**

Further reading Culler (1976, 1983); Hawkes (1977); Fiske (1982)

**sender/receiver** \* Broadly, the key points at the beginning and end of the linear process model of communication, though in some models they may be preceded by terms like *source*, and followed by ones like *reaction*. \* The terms *sender* and *receiver* are the most general ones, easily understood by the layperson, but within their area of meaning we will come across a number of more specific terms. The most common of these are:

*Encoder/decoder* Using these terms can imply that we think of the **message** as having an abstract existence to which encoding gives a concrete **form** that can be transmitted. Decoding can then restore it to its original abstract content or meaning. This is the implication of their use within the process school. But these terms (or more commonly their verbal forms *encoding* and *decoding*) are also used in the **semiotic**, linguistic school. Here they imply that a **text** is composed of a number of codes which are derived from other texts and cultural products: encoders and decoders who share broadly similar **codes** (as a result of broadly similar **cultural experience**) will generate broadly similar meanings in the text, but those with different cultural experience, and thus different codes, may find their meanings differ significantly.

*Addresser/addressee* These terms are used by Jakobson, a linguist, and they imply a relationship between the two parties, within which certain **modes of address** are appropriate. An addresser has an **orientation** towards the addressee that affects the form and function of the message.

*Transmitter/receiver* These are pieces of technology used to extend human powers of transmission and thus the range of **communication**, but are sometimes used in the process school to refer to human beings.

*Author/reader* Those involved in the semiotic act of encoding

and decoding (see above). The reader is as creative as the author, as both bring to the **text** their cultural experience via the codes that they use. The author may, through textual means, try to impose his or her 'authority' on the reader (that is, may guide him/her to a **preferred reading**), but can never do so absolutely. The reader is where the **signifying** system of the text intersects with the **value** system of the culture, and reading is the generation of meaning that results.

JF

**sense/sense relations** \* The communicative value assumed by a word or expression by virtue of its place within a linguistic system. \* The precise **value** of a word or expression may be explored in terms of its sense relations with other words in the system. Particular kinds of sense relation include those of *antonymy*, *synonymy*, and *hyponymy* (see **semantics**), which are relations of opposite meaning, identical meaning and included meaning, respectively. All words and expressions, of course, are capable of sustaining multiple senses, though context usually works to highlight one sense and exclude others.

MM

See **meaning, multi-actuality, polysemic, pragmatics, semantics**

*Further reading* Lyons (1981)

**sign** \* A sign has three essential characteristics: it must have a physical form, it must refer to something other than itself, and it must be used and recognized by people as a sign. \* Barthes gives the example of a rose: a rose is normally just a flower, but if a young man presents it to his girl friend it becomes a sign, for it refers to his romantic passion, and she recognizes that it does.

Signs, and the ways they are organized into **codes** or languages, are the basis of any study of communication. They can have a variety of **forms**, such as words, gestures, photographs or architectural features. **Semiotics**, which is the study of signs,

codes and culture, is concerned to establish the essential features of signs, and the ways they work in social life.

Saussure divides a sign into its two constituent elements – the **signifier** (its physical form as perceived by our senses), and the **signified** (the mental concept of what it refers to). Peirce thinks that there are three types of signs – **icons, indexes and symbols**. Both these early authorities have had a considerable influence over later work in this area.

Saussure stresses that a sign can properly be understood only in relation to other signs in the same code or system: its meaning is determined partly by other signs which it is not. The significance of a bowler hat is clear only when we say it is not a topper, and not a trilby. The sign **BOY** is understood as **not-MAN** or **not-GIRL**, and **MAN** as **not-ANIMAL**, or **not-GOD**. As a linguist, Saussure is primarily interested in the relation of signs to each other within a code, and in the relationship of signifier to signified within a sign. He is less interested in the relationship of a sign to its **referential** reality (which he calls **signification**).

Peirce, on the other hand, gives this relationship at least as much emphasis as others. He, like his followers Ogden and Richards, takes the viewpoint of a philosopher, and believes that a sign can be studied only in relationship to two other elements which we can simplify into the terms *mind* and *referential reality*. His terms for them are, respectively, the **interpretant** and the **object**; Ogden and Richards's terms are the **reference** and the **referent**.

JF

See **signification, signifier, symbol**

**signal** \* In communication theory, the physical form that the message is given in order to be transmitted: the term does not refer to the content or meaning, but only to the physical existence or form of the message.\*

JF

**signification** \* For Saussure, the relationship of a **sign** or sign system to its referential reality. \* Barthes makes much more of the concept, and uses it to refer to the way that signs work in a **culture**: he adds the dimension of cultural **values** to Saussure's use of the term.

Barthes identifies two *orders of signification*: the first is that of *denotation* (which is what Saussure calls 'signification'), the second is that of *connotation* and *myth* and occurs when the first order meanings of the sign meet the values and established **discourses** of the culture.

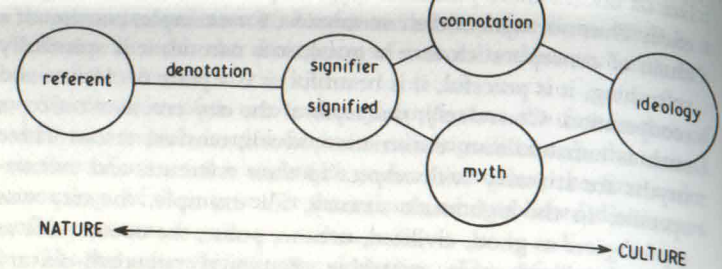
*The first order of signification: denotation* This refers to the simple or literal relationship of a sign to its **referent**. It assumes that this relationship is **objective** and value-free – for all their differences, the words 'horse', 'steed' and 'nag' all denote the same animal. The mechanical/chemical action of a camera in producing an image of what it is pointed at is denotation. The concept is generally of use only for analytical purposes; in practice there is no such thing as an objective, value-free order of signification except in such highly specialized languages as that of mathematics:  $4 + 8 = 12$  is a purely denotative statement.

*The second order of signification: connotation* This occurs when the denotative meaning of the sign is made to stand for the value-system of the culture or the person using it. It then produces associative, expressive, **attitudinal** or evaluative shades of meaning. In photography the mechanical/chemical process produces denotative meanings, but the human intervention in the choice of features such as focus, framing and lighting produces the connotative. Connotation, then, is determined by the form of the signifier: changing the signifier while keeping the same signified on the first order is the way to control the connotative meanings. Examples are: two photographs of the same girl, one in sharp focus, the other in soft; the same word spoken in different tones of voice, or printed in different typefaces; or the choice between 'horse', 'nag' and 'steed'. Connotation works through style and tone, and is concerned with the *how* rather than the *what* of communication.

*The second order of signification: myth* Barthes's rather specialized use of the term **myth** refers to a chain of concepts widely

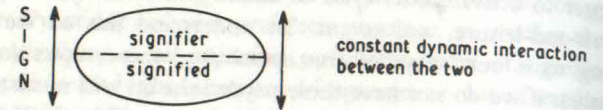
accepted throughout a culture, by which its members conceptualize or understand a particular topic or part of their social experience. Thus our *myth* of the countryside, for example, consists of a chain of concepts such as it is good, it is natural, it is spiritually refreshing, it is peaceful, it is beautiful, it is a place for leisure and recuperation. Conversely, our *myth* of the city contains concepts such as unnaturalness, constriction, work, tension, stress. These myths are arbitrary with respect to their referents, and culture-specific. In the eighteenth century, for example, the city was *mythologized* as good, civilized, urbane, polite; the countryside as bad, uncivilized, rude, primitive. A typical twentieth-century advertisement shows a happy family picnicking in a meadow beside a stream, with their car parked in the background. The mother is preparing the meal, the father and son are kicking a football, and the daughter is picking flowers. The ad acts as a trigger to activate our *myths* of countryside, family, sex **roles**, work-and-leisure, and so on. To understand this ad we must bring to it our 'ways of conceptualizing' these topics (or our *myths*): if we do not have these myths, the ad will mean something different to us, or may not mean very much at all. The term *myth*, then, is not to be used in the layperson's sense of a 'false belief', but in the anthropological sense of 'a culture's way of conceptualizing an abstract topic'. Myths are conceptual and operate on the plane of the signified; connotations are evaluative, emotive and operate on the plane of the signifier.

*Signification and ideology: the third order* Fiske and Hartley (1978) suggest that the connotations and myths of a culture are the manifest signs of its **ideology**. The way that the varied connotations and myths fit together to form a coherent pattern or sense of wholeness, that is, the way they 'make sense', is evidence of an underlying invisible, organizing principle – ideology. Barthes identifies a similar relationship when he calls connotators (the signifiers of connotation) 'the **rhetoric** of ideology'; Fiske and Hartley suggest that it may be helpful to think of ideology as the third order of signification.



See **code, ideology, intersubjectivity, signifier/signified**

**signifier/signified** \* The pair of concepts which together constitute a **sign** according to Saussure. He models them thus:



The signifier is the physical form of the sign as we perceive it through our senses – the sound of a word or the appearance of a photograph. The signified is the user's mental concept of what the sign refers to. \* The relationship between the two can be either **arbitrary** or **iconic**. In the arbitrary sign there is no necessary relationship between the signifier and the signified: the signifier takes the form it does by **convention** or agreement among its users. In the iconic sign, the nature of the signified influences the form of the signifier: the signifier looks or sounds like its signified (see **motivation (of the sign)**).

It is important to realize that these two terms are used for analytical convenience only: a sign cannot actually be split into signifier and signified any more than a coin can be split into heads and tails. Saussure believed that the arbitrary nature of verbal **language** is the main reason for its complexity, subtlety and ability to perform a wide range of functions.

JF

See **motivation (of the sign), sign, signification**