Discourse Domain

A 'discourse domain' (DD) is a cognitive space for the storage of information about a possible or thinkable state of affairs S in so far as S is specified by serially organized linguistic material. A DD is thus a cognitive representation of a possible state of affairs. The notion of discourse domain is part of the relatively recent development of discourse semantics (see Discourse Semantics).

The central ideas of discourse semantics are the following. First, the meaning of the propositional part of an utterance U (i.e., the whole uttered sentence minus whatever elements are responsible for its 'speech act' quality; see Speech Act Theory—an Overview) is specifiable in terms of a representation of what is minimally the case when (the propositional part of) U is true. Second, actual, real life linguistic comprehension involves a system of cognitive representations of the states of affairs described in (the propositional part of) utterances. Third, utterances (uttered sentences) are, in principle, not interpreted in isolation, but in terms of the information provided in preceding relevant discourse. Discourse semantics is thus truth-conditional, cognitive, and discourse-dependent. It distinguishes itself from standard model-theoretic formal semantics, which is only truth-conditional.

Proponents of discourse semantics hold that any explanatory semantic theory of natural language must take these three aspects into account. The truth-conditional aspect has been a recognized part of semantic theory since the 1920s. The cognitive and discourse-dependent aspects are finding recognition only now. This recognition is largely due to the inability of standard formal semantics to account for two classes of natural language facts, i.e., presupposition (see Presupposition) and anaphora (in particular donkey anaphora; see Anaphora; Donkey Sentences). Whereas standard formal semantics develops calculi that deliver truth-values for sentences paired with (sets of) states of affairs ('worlds'), the calculi developed in discourse semantics deliver an 'increment' (see Incrementation) for each uttered sentence, i.e., an addition to the cognitive structure representing the preceding relevant discourse. These latter calculi are considered to have psychological reality in that they represent, at some level of abstraction, processes that actually occur during comprehension. The truth-conditional aspect is accounted for by a model-theoretic calculus that delivers truth-values given for pairs of increments and any given state of affairs onto which the increment is interpretable. This model-theoretic calculus is not taken to be psychologically real. It is taken, rather, as a mathematical (epiphenomenal) description of the conditions under which a (cognitive) representation can be regarded as sufficiently
adequate to a state of affairs $S$ to be called true in $S$. Discourse semantics thus postulates cognitive structures, representing relevant discourse information, as an intermediate station between uttered sentences and any 'world' in which they are to have a truth-value. It also posits that meaning is prior to truth-values: a sentence acquires its truth-value in a state of affairs in virtue of its meaning, i.e., via its incremental value in the given discourse domain.

A discourse domain $\mathcal{D}$ contains (a) representations for (sets of) individuals, the so-called 'addresses,' and (b) instructions constraining the further development of $\mathcal{D}$. Any new increment to $\mathcal{D}$ consists of either the setting up of a new address, or information to be added to existing addresses, or an instruction, or any combination of these. Generally, existential quantification in an utterance results in the setting up of a new address. Definite terms denote addresses established earlier in $\mathcal{D}$ (though the required address may be slipp'd in post hoc by accommodation (see Accommodation and Presupposition). Anaphoric pronouns denote addresses in virtue of a special anaphora machinery (see Weijters 1989). Note that 'reference' plays no role, as it is immaterial for the comprehension of an utterance whether it is actually true or not, and hence whether an address set up in $\mathcal{D}$ actually corresponds to a real entity in the way prescribed for the address in question. What underlies comprehension is the relation of 'denotation,' (see Denotation in Discourse Semantics), i.e., the selection by a definite term of the proper address in $\mathcal{D}$.

An uttered sentence is incremented into its proper discourse domain. A discourse representation is itself a discourse domain, representing what must be minimally the case if what a speaker has committed himself to is true. The discourse domain that represents the speaker's direct truth-commitment is called the truth-domain. But a discourse representation (i.e., truth-domain) can contain any number of 'subdomains' that represent what, according to the speaker, could be the case but is not ('counterfactual' domain; see Counterfactuals), or what may (or may not) be the case, or what anyone mentioned believes, hopes, wants, says, or what will be or is the case if something else is the case first, etc. In general, subdomains correspond with what is known as 'intensional contexts' (see Intension) in standard formal semantics, but there are subdomains also for the disjuncts of a disjunction and the propositions in an implication (conditional). A general condition of (sub)domains is their incrementability: any (sub)domain allows for new incrementations.

Negation is incremented as an instruction banning the negated proposition from being incremented in $\mathcal{D}$. Negated propositions do not allow for further increments, as is seen from the impossibility of anaphora to an element whose existence has been negated ('There is no lock in this door. *This lock...'). Since a negated proposition does not allow for further incrementation under negation there is no room for the notion 'subdomain of negation' as proposed in Fauconnier (1985).

See also: Intensionality.

Bibliography
Fauconnier G 1985 Mental Spaces. MIT Press, Cambridge, MA