A decade of relevance theory

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Abstract

In this paper I provide an insight into Sperber and Wilson's relevance theory, an analysis of its situation after ten years, and comments on the theory and its wide implications for the study of communication. The analysis of the theory that is supplied, together with the account of its main applications, is basically intended to provide bibliographical sources for those analysts who, one way or another, are interested in Sperber and Wilson's proposal for communication or in any of its aspects, and would like to access further material related to the theory.

1. Introduction

Relevance theory (RT henceforth) has been with us for over a decade now, specifically the 1986–1995 decade between the two editions of Relevance (Sperber and Wilson, 1986a, 1995) although, obviously, RT extends before and after this decade. Along with the two editions of the theory, many comments and a great deal of criticism have poured in from different areas of research on human language and communication. These comments are worth mentioning and their incorporation into this account will help readers to obtain a better picture of the theory. In this sense, the analysis of RT that can be found in this paper reaches beyond the mere review of the book by Sperber and Wilson (S&W henceforth), and aims at a certain bibliographical insight into the theory. For those analysts interested in general comments on RT there are many reviews available (Amel, 1994; Austin, 1987; Baclawski, 1996; Bertuccelli-Papi, 1996a: 247–252; Blakemore, 1992: 24–38; Downes, forthcoming; Escandell Vidal, 1996: 108–133; Garnham, 1987; Gutt, 1986, 1991: 23–44; Hirst, 1989; Leslie, 1989; Mey, 1994: 80–82; Pateman, 1986; Portolés, 1994; Romero, 1995; Sanders, 1988; Sinclair and Winckler, 1991; Smith and Wilson, 1992; Toolan, 1992; W&S, 1987, 1994; Walker, 1989; Yus Ramos, 1997a: ch. 3; among others). For ‘last-minute’ comments on RT, see the articles included in Carston et al. (forthcoming), Groefsema (1997a) and Yus Ramos and Mateo Martínez (forthcoming).

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2. Preliminary studies on relevance

In the seventies there was little interest in the notion of relevance because researchers thought that no attempt to apply this notion to a formal semantic theory had been successful enough to be used in pragmatics (Gazdar, 1979: 45), with the exception, perhaps, of Dascal's (1977) analysis of this notion in a two-fold semantic/pragmatic relevance (see also Brockway, 1981; Tracy, 1984; Holdcroft, 1987; Berg, 1991).

In the eighties a growing interest in relevance can be noticed, supported by early versions of S&W's proposal for relevance in pragmatics (S&W, 1981a, b; W&S, 1981), basically in terms of a grouping of Grice's (1975) maxims into a single maxim (principle) of relevance. An example of this growing interest can be found in Werth's (1981, 1984) idea that conversation is a cooperative venture in which interlocutors aim at the incrementation of mutually accepted ideas by means of the incorporation of new relevant propositions.

3. Starting point

S&W begin their book with comments on several commonplace concepts in contemporary linguistic research: human communication (3.1); the importance of context in comprehension (3.2); the notion of mutual knowledge (3.3); and Grice's Cooperative Principle (3.4). These will be outlined below.

3.1. Human communication

S&W compare the traditional code model of communication, according to which messages are simply produced, received and decoded, and the more recent inferential model which underlines the importance of the addressee's inferential appreciation of the addressee's communicative intention. To choose only the code model would imply a modular view of pragmatics (Fodor, 1983; Kash, 1984; Davies, 1987: 716; Barton, 1989; Sinclair, 1995), that is, pragmatics simply as an extension of grammatical rules (W&S, 1986a; Sadock, 1986). S&W reject this idea and stress the importance of contextualisation in communication. Although S&W assume Fodor's (1983) modular view of language (central mental processor and specialised modules for data input, see Sperber, 1994a), the authors locate the human deductive system in a prominent position in human processing ability. This view is opposed to the old idea of the brain simply as a decoding device. For example the advances in non-verbal communication demonstrate that a code is not always necessary for successful communication (W&S, 1986a: 585):

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1 However, in the second edition of Relevance, S&W (1995: 293) do not draw this distinction so sharply, since now it appears that central systems should also be analysed in modular terms.
(1) *Peter:* How are you feeling today?

*Mary:* [Takes a bottle of aspirin out of her bag and shows it to Peter]

Nevertheless, both models of communication are not strictly incompatible for the study of communication (W&S, 1993a: 2). Despite being independent, code and inferential models should be combined in the study of language, at the same time as the naive attempt to build up a general theory of language should be abandoned: “the coded communication process, then, serves as a source of hypotheses and evidence for the second communication process, the inferential one. If comprehension is defined as a process of identifying the speaker’s informative intention, linguistic decoding is better seen not as part of comprehension proper, but rather as providing the main input to the comprehension process” (S&W, 1987: 705; see also Giora, 1988). Contrary to the code model, this inference-centred view of comprehension implies that there is no absolute certainty that the intended interpretation will finally be the one picked up by the addressee (an idea developed in the taxonomy of misunderstandings proposed by Yus Ramos, 1997b). This characterisation obviously introduces an element of risk in a theory of communication, but this is how communication takes place:

“[P]recisely because utterance interpretation is not a simple matter of decoding, but a fallible process of hypothesis formation and evaluation, there is no guarantee that the interpretation that satisfies the hearer’s expectation of relevance will be the correct, i.e. the intended one. Because of mismatches in memory and perceptual systems, the hearer may overlook a hypothesis that the speaker thought would be highly salient, or notice a hypothesis that the speaker had overlooked. Misunderstandings occur. The aim of a theory of communication is to identify the principles underlying the hearer’s (fallible) choices” (Wilson, 1994: 47).

3.2. Importance of context

S&W (1982a) reject the picture of context as a monolithic entity that is accessible to interlocutors beforehand during interaction. Instead, they propose a much more dynamic view of context as a construct that has to be established and developed in the course of interaction in order to select the correct interpretation: “a context is a psychological construct, a subset of the hearer’s assumptions about the world. Each new utterance, through drawing on the same grammar and the same inferential abilities as previous utterances, requires a rather different context” (S&W, 1987: 698; see also W&S, 1985). There would be, then, a bidirectional contextual influence: speakers determine the context during interaction, but at the same time the context constrains the signification that utterances eventually acquire (Parret, 1985: 168; Wilson, 1992).

For all speakers there is an initial context, basically consisting of previous utterances. But this context can (and often has to) be extended in the search for a relevant interpretation in the processing of the proposition from the interlocutor’s utterance.²

² S&W (1987: 702) define propositions as a succession of structured concepts. A concept is a label for different kinds of information: (1) logical information; (2) lexical information; and (3) encyclopaedic information (see Macnamara, 1987). Analyses such as Blakemore’s (1987b: 55ff.), Groefsema’s (1997)
This extension of context during comprehension can produce both good and bad results for eventual relevance and the correct attribution of reference (Wilson, 1992). As contextual variations can increase or reduce the relevance of the proposition being processed, the goal of reaching an optimal level of relevance can condition the choice of context (W&S, 1986c: 593). In this sense, Borthen et al. (1997: 82) propose two complementary cognitive principles which are intended to guide addressees in the search for an adequate context for interpretation:

(i) The 'No Tampering with the Context' Principle
The more semantically impoverished and the less linguistically elaborate a given linguistic expression \( i \), the greater the chance that the contextual assumptions that must be retrieved to achieve a relevant interpretation of \( i \) are highly accessible already before \( i \) is being uttered.

(ii) The Context Supplement Principle
The more is said, the greater the chance that part of the relevant context of a linguistic expression \( i \) must be retrieved through the processing of \( i \) itself.

For Morgan and Green (1987: 726), though, extensions of context and in general the search for relevance have to do with information and newness: “it is information that has or lacks relevance, not utterances; and relevance has to do with (grossly simplified) the newness of the information, not with any non-linguistic usefulness the information may have for the speaker or the hearer”.

This idea of extended context has led to a certain controversy, as it seems as if hearers have to start off their processing of an utterance in its logical form, enrich it to yield a proposition, and locate it inferentially depending on the attributes of context (see C. Smith, 1987; Politzer, 1990; for a graphical representation, see Groefsema, 1989). This would seem to imply that non-literal utterances (indirect speech acts, figurative language, polite utterances, irony ...) are more difficult to process than the more literal-oriented ones (Jucker, 1988; Gibbs, 1984, 1987a: 570ff., 1994; MacMahon, 1996; Groefsema, 1992; Airenti et al., 1993: 312; Recanati, 1987: 730; Itani, 1996).³ Besides, often this propositional enrichment of the logical form is not an easy task due to, for example, the communicator’s bad pronunciation (Carston, 1987: 714).

³ It has been criticised that S&W (apparently) treat relevance as a simple relationship between propositions and context. Several analysts (Mey and Talbot, 1988; Ziv, 1988; O’Neill, 1988) argue that S&W’s model stresses too much the identification of propositions and therefore it is unable to account for contextual aspects such as politeness or power relations. Ziv (ibid.), for instance, suggests that Kasher’s (1976) principle of rationality should be combined with RT in the explanation of these contextual features (see also Sinclair, 1995 for further comparisons between Kasher and S&W).
According to the picture of context proposed in RT, hearers usually extend the context in an attempt to extract contextual implications from the speaker's stimulus.\(^4\) Extension of the initial context can be achieved in three main directions: (a) previous utterances; (b) encyclopaedic knowledge; and (c) adding information to conversational context. Each addition favours the formation of further implications which might (or might not) increase the addressee's processing effort and contribute, eventually, to increasing (or decreasing) relevance. If the processing effort is not too high (in exchange for the benefit obtained), the extensions of context will be worthwhile and the information supplied by the communicator will be relevant.

In this sense, the loosely defined notion of processing effort has been criticised on several occasions. S&W treat processing effort as if it was a measurable notion (for instance in S&W, 1982c: 106), but it is not obvious how this can be done (Bach and Harnish, 1987). S&W point out that processing effort is determined by the linguistic complexity of stimuli, size of context, and accessibility to context. According to Charolles (quoted in Portolés, 1994: 58), three alternative measuring ways would be: (a) to determine the time spent during processing; (b) to measure the number of inferential steps required to access the implication; and (c) to analyse variations in the neural-chemical states of the human mind.

There has also been a great deal of discussion on this issue in the relevance theory e-mail list: Sperber (1996a) insisted that all psychological theories involve a notion of effort in two assumptions: (1) mental performances involve some processing effort; and (2) the greater the effort required, the lesser the probability that it will be performed successfully. Unfortunately, he added, there is no task-independent way to measure this effort, although a comparative measure seems to be sufficient. Watson (1996) assumed the unavailability of a task-independent measure of processing effort, but this fact should not lead us to the abandonment of the term, which is useful for cognition. Unger (1996) commented that "there are certain steps that logically depend on each other in such a way that they cannot be processed in parallel. Thus one does not necessarily need to assume a 'crudely serial approach' in order to make a carefully hedged assumption that processing time relates to processing effort", although "a simple equation of processing time = processing effort cannot be maintained". Lastly, Franks (1996a) pointed out that the key -- and the problem -- is how to differentiate cognitive tasks so that eventually differences of effort can be established. Later, Franks (1996b) commented on seriality in cognition and its implications for the notion of cognitive effort.

3.3. Mutual knowledge

S&W propose an alternative picture of mutual knowledge, (i.e. information supposedly shared by interlocutors) to the traditional notion. For S&W (1982a) the traditional mutual knowledge produces an endless recursion of assumptions (A knows

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\(^4\) S&W distinguish between logical implication and contextual implication. The former is context-independent, whereas the latter cannot be obtained from premises or context independently, but from the union of both elements (S&W, 1986a: 107–108).
p; B knows that A knows p; A knows that B knows that A knows p; ad infinitum). The problem lies in an incorrect characterisation of context, which has to be constructed, and is not given in advance (see Myllyniemi, 1986).

In a still unresolved pragmatic issue, this rejection of the possibility to determine which information is assumed to be shared by interlocutors while (or even before) interaction takes place, has been criticised and commented upon by several analysts (Clark, 1982; Davies, 1987; Gibbs, 1987a: 573–574, 1987b; McCawley, 1987; Russell, 1987; Mey and Talbot, 1988; Gerrig, 1987; Murray, 1983: 3; Garnham and Perner, 1990; Kreckel, 1981, 1982; Moore, 1982: 112; Kerkhoven, 1995). In short, the issue can be summarised in the following (rhetorical) question: how do speakers distinguish the information they merely know from that they really share? S&W argue that as the traditional concept of mutual knowledge is unable to clarify this point, the concept is equally unable to explain precisely what underlies its definition of mutuality (see Wilks, 1986).

For some critics of S&W, examples such as (2) given by Carston (1988a: 62) below, seem to imply that some information has to be shared beforehand in order to reach maximal relevance:

(2) A: Let’s go to a movie this evening.
   B: I’ve got a lecture.

Let us imagine that B implies, in a Gricean implicative sense, that B does want to go to the cinema. For A to reach this interpretation in a relevant way, it is necessary that A know beforehand that, for example, B seizes any opportunity to miss his lectures. In the same direction, Garnham and Perner (1990) suggest that it is irrefutable that S&W share the knowledge of having co-written the book Relevance. And Gibbs (1987b: 718) points out that although speakers’ and listeners’ knowledge “is difficult to specify as a set of mutually held propositions, this does not imply that speakers and listeners are unable to mutually recognise the existence of the shared knowledge”.

S&W’s alternative notion for mutual knowledge is mutually manifest assumptions. People make different representations of their surrounding reality. These representations are called cognitive environments in RT terminology. They are created through the addition of facts (and also assumptions, though more weakly) which are manifest to the individual: “a fact is manifest to an individual at a given time if, and only if, the individual is capable at that time of representing it mentally and accepting its representation as true or probably true” (S&W, 1986a: 40, 1987: 699). In the course of interaction, speakers are open to a great amount of contextual information and assumptions which are mutually manifest to both, and therefore a mutually manifest cognitive environment is created. This fact gives us a picture of conversation as

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5 Therefore, for ostensive communication it is not enough to attract the hearers’ attention to our intention to inform them. It is necessary that this intention be manifested openly. This is why informative intention has to be mutually manifest, and not just manifest (Recanati, 1993: 280). In the same line, Davies (1987) proposes a reformulation of mutual knowledge as mutual absence of doubt.
a truly *intersubjective* enterprise (see Taylor and Cameron, 1987: 161). Speakers have to guess the characteristics of their interlocutors' cognitive environments, which increase as interaction develops. A good example of guess can be found in the following exchange (S&W, 1982a: 79):

(3) A: Will you have a glass of brandy?
    B: You know I am a good Moslem.

In this example, B takes for granted that A will be able to infer that since Muslims do not drink alcohol and brandy is an alcoholic drink (*contextual assumptions*), B will not drink the offered brandy (*contextual implication*).

This view of interaction, though, somehow resembles the traditional approach of mutual knowledge and has therefore been criticised mainly on these grounds. For example, it is suggested that S&W's notion produces the same degree of recursiveness as the traditional notion of *mutual knowledge* (Gibbs, 1987a: 568; Hinkelman, 1987: 720), or that there are similar problems in recognizing which cognitive environments are mutually manifest, as there are in recognising shared information (Gibbs, 1987b: 718), or that this endless recursion of assumptions of mutual knowledge is short-circuited by *co-presence* between interlocutors (physical co-presence, linguistic co-presence, and community membership, using Clark and Marshall's 1981 terminology).

Also, as Mey and Talbot (1988: 250) point out, it is not so easy to establish a clear-cut line between *mutual knowledge* and *mutual manifestness*:

> "What they [S&W] do is send mutual knowledge out at the front door, only to let it in at the back ... Assumptions are mutually manifest because of similarities in different individuals' cognitive environments, enabling interactants to make 'educated guesses' about one another: What you are assuming has to be the same as what I am assuming, because we share the same cognitive environment. Cognitive environment is in principle not distinguishable from mutual knowledge, as long as it is supposed to have some such intersubjective 'reality'." (Mey and Talbot, 1988: 250)

See S&W (1987: 737ff.) and S&W (1990a: 183ff.) for the authors' replies to the criticism on their approach to mutual knowledge.

### 3.4. Grice's Cooperative Principle (CP)

In W&S (1981), three aspects of Grice's (1975) theory are questioned:

1. Grice's differentiation between *saying* and *implicating* is not clear. Hearers not only try to grasp the implicated meaning of an utterance, but also its literal meaning.

2. Grice suggested that his *maxim of quality* ('tell the truth') could account for non-literal uses of language like metaphor and irony, which in reality are false from the point of view of the CP, and therefore could only be understood as implicatures. S&W disagree with this reductive picture of non-literal language, and deal with indirect utterances considering the notion of *weak implicature* (and *poetic effect*). The difference is that strong implicatures are backed up by the speaker, whereas weak implicatures are derived on the hearer's sole responsibility. The consequence of a no
clear-cut division between them is that there are degrees of strength in implicatures (S&W, 1986a: 199). In general, the wider the range of possible conclusions, the weaker the implicatures, and the more the hearer must share the responsibility for deriving them (ibid.: 235). For example, in sentences such as ‘this room is a pigsty’, it is not too difficult to access the intended interpretation, because the implicature is strong and the speaker is fully responsible for providing this access. However, sentences such as ‘Robert is a bulldozer’ are more problematic, since there is a whole array of weak implicatures involved that the hearer must supply by himself.

This view solves controversial issues in pragmatic research such as the role of literal meaning in the comprehension of indirect utterances (Vicente, 1996b). Under S&W’s view, literal meaning does not have to be a necessary or preliminary stage in the processing of these utterances, nor does their interpretation have to be more costly on the effort side (S&W, 1986a: 237).


For relevance-theoretic research on politeness and ‘face work’, see Watts (1989a), Escandell Vidal (1995b) and Kuiper (1997).


3. S&W suggest that all the maxims in the CP can be reduced to only one of them: the maxim (turned principle) of relevance which, curiously enough, was not very explicitly developed in Grice’s analysis or in studies during the seventies, as mentioned above (see Morgan and Green, 1987: 727). Therefore, for S&W, (a) the premise that a speaker is telling the truth (maxim of quality) is a prerequisite for the hearer’s appreciation of relevance (W&S, 1988a: 139). (b) If speakers do not provide the necessary amount of information (maxim of quantity), they are not being as relevant as they could be. In this sense, any utterance which is longer than it could be, is supposed to lack relevance (see Donaldson, 1984; Jucker, 1994). (c) Relevance involves the creation of contextual implications, and this mental processing is difficult if the stimulus is obscure, ambiguous, and too long (maxim of manner). (d)
A speaker has to be not only as relevant as possible (maxim of relation, logically reducible to a principle of relevance), but as relevant as possible given the circumstances (W&S, 1986c: 590; see also Recanati, 1987: 730).

4. Intention

Traditionally the importance of intention in interpersonal communication has been stressed, especially in philosophical approaches to everyday language. From an intentional approach, language “could be interpreted as an instrument of representation of reality and interpersonal communication which refers to a different reality from its own, and whose description is supported by the psychological attribution or mental predicates about ideas, beliefs, desires or expectations of the individuals who produce or understand linguistic messages” (Belinchón et al., 1992: 83, my translation). Outstanding studies of intention in communication can be found in Lorenz (1985), Stamp and Knapp (1990), Anscombe (1991), Dennett’s (1981, 1991) intentional stance, Searle’s (1992) – capitalised – Intentionality, and Cruz (1995), among many others.

In RT, and from a more cognitive point of view, S&W (1986a, 1995) point out, in a similar fashion to Grice’s (1975) and Strawson’s (1964) models, that for communication it is essential that addressees recognise addressers’ intention to inform them (informative intention) by means of the parallel recognition of the communicative intention underlying the stimulus (Kuroda, 1989). Therefore, intention has an important role to play in communication (see also Bach and Harnish, 1979; Croddy, 1988). The definition of these two types of communication follows (S&W, 1987: 700):

(a) **Informative intention.** The intention to make manifest or more manifest to the audience a certain set of assumptions.

(b) **Communicative intention.** The intention to make mutually manifest to audience and communicator the communicator’s informative intention.

Strawson (ibid.) distinguishes three sub-intentions that explain this diadic approach to intention in communication. Addressee A has to have the intention that:

(4) a. his utterance $e$ should produce a certain response $r$ in an addressee B.
   b. B should recognise his intention (a).
   c. B should recognise his intention (a) at least as part of B’s reasons to produce the response $r$.

Sub-intention (4b) is the most important for RT. Once (4b) has taken place, communication has taken place, regardless of the fulfilment of the other sub-intentions. See Mey and Talbot (1988: 283) and Pettit (1987: 728) for comments on this two-fold proposal of intentions.

The explicit intention to call somebody’s attention to the intention to communicate some information is called ostensive communication. This type of communica-
tion has to satisfy three requirements (S&W, 1986a: 153–154): (a) attract the addressee’s attention; (b) direct this attention towards the addresser’s intentions; and (c) reveal the addresser’s intentions. In other words, often only by discovering the addresser’s intentions can one access the information that is meant to be communicated (S&W, 1987: 700).

Of course, not all assumptions are expressed in an ostensive way (W&S, 1993a: 4). There can be cases in which neither informative intention nor communicative intention exist (cases of accidental transmission of information); or informative intention without communicative intention (explicit non-ostensive communication). But only communication which combines both types of intention is successful and effective (see Millikan, 1987; also Bird, 1994 for comparisons between RT and speech act theory).

For sub-intention (4b) above, S&W (1986a: 22) distinguish between direct evidence and indirect evidence. The former refers to explicit manifestness of intention, whereas the latter has to do with implicit conveyance of intention (Blakemore, 1989a). For S&W (1987: 698), direct evidence is not an authentic form of communication, because “any state of affairs provides direct evidence for a variety of assumptions without necessarily communicating those assumptions in any interesting way”. The second type has to do with inference, which will be outlined below.

5. Inference

“In order to be a competent user of a natural language, it is not enough to master a group of rules for grammatical construction, semantic and phonological assignment, etc., but also to use a wide amount of common-sense knowledge and inferences and principles about people’s inner and intentional worlds” (Bélinchón et al., 1992: 184, my translation).

The addressee’s inference fills the gap between the semantic representation of an utterance and what this utterance actually communicates (S&W, 1987: 697; Carston, 1987: 714; Sun, 1993). Communication has to do with the addressee’s inference of the communicator’s (communicative/informative) intentions, that is, when hypotheses are made about the communicative purpose that an utterance holds. With this cognitive approach, S&W reject traditional views of communication as a straightforward decoding of information (as was pointed out above). This idea also has consequences for the semantics/pragmatics continuum and (non)-truth-conditional meaning (Blakemore, 1987a, 1992: 10–15; Aronson, 1994).

S&W (1986a: 68) define inference as “the process by which an assumption is accepted as true or probably true on the strength of the truth or probable truth of other assumptions”. Their analysis is directed towards non-demonstrative inference,

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since there is no model that can explain cognitive mental operations that yield correct inferences, nor are there ways to measure the success of inferences: “in demonstrative inference ... the truth of the premises guarantees the truth of the conclusions. In nondemonstrative inference, the truth of the premises merely makes the truth of the conclusions probable” (S&W, 1987: 701). The kind of inference in which S&W are interested, is the spontaneous and assumption-based inference that is not subject to rigid logical models, but to a more down-to-earth model of hypothesis formation and confirmation.

This ‘anti-logic’ picture of inference does not imply that human beings do not possess deductive rules that are spontaneously accessed (see O’Neill, 1988 for arguments against this ‘deductionist’ account of pragmatic inference and for a more probabilistic approach). Inferential processes are based on the individual’s previous mental representations and factual assumptions about the world. Each new inferred assumption is combined with pre-existing assumptions in order to modify and improve the general representation of the world that we all possess (see Wilks, 1987). Obviously, not all assumptions reach the same level of prominence in our minds, but are organised according to likelihood. We are unable to pay attention to all the barrage of information that accesses our minds from the world around us (Recanati, 1993: 285). Much information is only processed at preliminary level, while other information, likely to become relevant, reaches a second, deeper level of processing.

Therefore, the more attention we pay to assumptions, the more likely they are to become relevant. In other words, the accuracy of our representation of the world depends not only on which assumptions we believe, but also on our degree of trust in them. S&W take for granted that there is a close relationship between the strength of our assumptions and the probability of their becoming true.

The assumptions we store in our minds (factual assumptions in S&W’s terminology) come from different sources: (a) perceptual mechanisms; (b) linguistic decoding; (c) mental frames (schemas, scripts, themes ... depending of varied terminological proposals) stored in our minds; and (d) deduction.

Source (c) is particularly important in the processing of information and also for the identification of implicatures, which are taken here in a different fashion from Grice’s proposal (see Levinson, 1987a; Blakemore, 1987b: 63–71, 1992: 125–178; Bertuccelli-Papi, 1993; Leonetti, 1993). In W&S (1986b: 383) implicatures are defined as “those contextual assumptions and implications which the hearer has to recover in order to satisfy himself that the speaker has observed the principle of relevance” (see also S&W, 1995: 256ff.).

The implicature that the sender wants to communicate is, according to S&W, the one providing the highest number of contextual effects in exchange for the processing effort required (S&W, 1982a, 1982b; Pateman, 1986). This idea implies that (1) for S&W implicatures are not tied to linguistic meaning (unlike Grice’s); and (2) that implicatures can be stronger or weaker depending on the predictability of contextual effects (as mentioned above). For example:

(5) a. Peter: Would you drive a Mercedes?
   b. Mary: I wouldn’t drive ANY expensive car.
S&W (1986a: 194) suggest that the propositional form of (5b) (its explicature in their terminology)\(^8\) does not answer Peter’s question, but provides immediate access to his encyclopaedic information about expensive cars, an information containing, most probably, the entry (6):

(6) A Mercedes is an expensive car.

If (5b) is uttered in a context containing assumption (6), then the contextual implication (7) will probably be produced:

(7) Mary wouldn’t drive a Mercedes.

As it is supposed that (5b) is an intentional answer, we conclude that (7) is not only an implicature of (5b), but the implicature that Mary intended to communicate.

Of course, sometimes it is not so easy to determine what speakers mean (imply) when they pronounce an utterance. For example, this utterance by Thatcher, “I always treat other people’s money as if it were my own” (Wilson, 1994: 39), could be interpreted as implying ‘very carefully’ or ‘carelessly’ depending on the way she treats her own money. What Thatcher actually means with this utterance is not clear at all.

In S&W’s model, deduction is also important (Blakemore, 1987b: 39–54). This cognitive device is understood as the operation of adding new information \(P\) to old information \(C\). This operation is called contextualisation (S&W, 1986a: 108) in a rather more restrictive sense than, for example, Gumperz’s (1977) sense of the word. Although obviously non-demonstrative inference, which S&W support, cannot consist of deduction, “the spontaneous and essentially unconscious formation of assumptions by deduction is a key process in non-demonstrative inference.... The ability to perform deductions provides the mind with a uniquely adapted means of extracting more information from information it already possesses” (S&W, 1987: 702).

Contextualisation can yield contextual effects, also called cognitive effects in S&W’s post-1986 publications (if these effects have to do with the relevance to an

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\(^8\) In S&W’s model, explicatures refer to propositional enrichments of a logical – literal – expression of an utterance. The fact that explicatures also have to be enriched (against the Gricean view of explicit content vs. ‘enriched’ implicatures) has been developed by many RT analysts in the last few years, especially by Carston.

Besides, there are higher-level explicatures, which are further characterisations of explicatures by adding, for example, the speaker’s attitude when saying an utterance (see Blakemore, 1992: 60–61). For example if as a response to Peter’s question Can you help me to find work? Mary answers, with sadness, that she cannot help him, we could establish an explicature of Mary’s answer (a) and several higher-level explicatures (b–d) expressed by the same answer: (a) Mary cannot help Peter to find work; (b) Mary says that she cannot help Peter to find work; (c) Mary believes that she cannot help Peter to find work; (d) Mary regrets not being able to help Peter to find work. See Blakemore (1992), Carston (1988a,b, 1996), Levinson (1987b), Bach (1994), Neale (1992), Bertuccelli-Papi (1993), Recanati (1989), Kandolf (1993), among others, for the characterisation of explicatures and the enrichment of logical forms as propositional forms.
individual, rather to a general relevance in context). A contextual effect is produced when the context is somehow modified by new information, and this modification results in the strengthening or weakening of previous assumptions. In short, the computation of these effects has a cognitive basis and is subject to contextual attributes of interpretation (Hinkelman, 1987; Akman and Surav, 1995).

6. Relevance theory

The general objective of RT is “to identify underlying mechanisms, rooted in human psychology, which explain how humans communicate with one another” (S&W, 1986a: 32). This objective is based on four preliminary assumptions which will be developed below (Wilson, 1994: 44): (a) every utterance has a variety of possible interpretations, all compatible with the information that is linguistically encoded; (b) not all these interpretations occur to the hearer simultaneously; some of them take more effort to think up; (c) hearers are equipped with a single, general criterion for evaluating interpretations; and (d) this criterion is powerful enough to exclude all but at most a single interpretation, so that having found an interpretation that fits the criterion, the hearer looks no further.

The task of addressees in a communicative intent is to build up an interpretive hypothesis about the communicators’ intentions when they produce a stimulus. Communicators will try to measure up the implications of their stimuli so that the interpretation intended is finally selected by the addressees. This provides a picture of senders as communicating stimuli with degrees of more or less plausible interpretations, and the task of the audience lies in managing to select the correct interpretation (that is, the correct balance of effects/effort) in the continuum of possible interpretations in a context C (discussion in Gorayska and Lindsay, 1993; reply in Nicolle, 1995; and counter-reply in Gorayska and Lindsay, 1995).

S&W mention that the task of communication involves two ends: “as speakers we intend our hearers to recognise our intention to inform them of some state of affairs. As hearers, we try to recognise what it is that the speaker intends to inform us of” (S&W, 1987: 699). Nevertheless, for some analysts, S&W give the impression that they lay a greater emphasis on the addressers’ efforts to communicate, rather than on the addressees’ inferential efforts to select the intended interpretation (Blakemore, 1987a: 63; 1990: 366; Groefsema, 1989), a task which is often difficult because often “hearers are presented with signals which are for the most part semantically, syntactically, lexically, and phonologically unpredictable; moreover, the signals often arrive in a noisy channel and are frequently subject to considerable distortion and attenuation” (Cutler, 1987: 715). The most relevant relevance, using Berg’s (1991) phrase, is the one produced by the addressee’s stimulus that best guides addressees to the intended interpretation or, again in Berg’s words, the “usefulness with regard to the conversational goals or objectives of the conversants” (ibid.: 412). However, instead of the sender’s achievement, in several studies it is argued that communication should be regarded rather as an enterprise of shared efforts to reach successful conversational outcomes (Yus Ramos, 1997a; Cutler, 1987). This
idea can also be detected in other terminological proposals such as Murray’s (1983: 2) active community of interest, Mason’s (1982) maxim about speakers’ contribution to common interest, and Searle’s (1992) shared intentionality.

Let us come back to RT, and as mentioned above, S&W’s suggestion that there are cognitive environments composed of assumptions which are manifest to interlocutors in the course of interaction. Facing the problem of determining which assumptions are more likely to be chosen for being constructed and processed, S&W state that it is precisely the quality of their higher or lower degree of relevance that leads hearers to choose precisely one of them:

“[H]uman cognition as a whole ... is aimed at improving the quantity, quality, and organization of the individual’s knowledge. To achieve this goal as efficiently as possible, the individual must at each moment try to allocate his processing resources to the most relevant information. ... Human cognition is relevance-oriented. As a result, and to the extent that one knows the cognitive environment of an individual ... one can infer which assumptions he is actually likely to entertain and how a change in that environment might affect his train of thoughts” (S&W, 1987: 700, emphasis in the original).

Effective processing is the one which does not demand an excessive effort. Everybody aims at the economy of their mental efforts. At the same time, the human being is constantly aiming at a better knowledge of the world, depending on the resources available. When new information is combined with old, already stored information, there is an outcome of contextual effects that result in the production of new, more updated information. This generative process is relevant: the more effects created, the more relevance.

Nevertheless, all processing of the information produced by ostensive communication is subject to risk and effort: the risk of not knowing for sure which assumption, among all the possible ones, is the one which the sender intends to communicate (Blakemore, 1992: 21), and the effort of selecting one assumption and processing it by means of comparisons with previously stored information. This is why all ostensive communication carries a guarantee of its relevance: senders are aware of the cognitive effort that they are going to demand from their interlocutors, and suppose that despite this demand, their ostensive action will be worth the processing effort. Using S&W’s (1986a: 50) words, “humans automatically turn their attention to what seems most relevant to them. ... An act of ostension carries a guarantee of relevance, and this fact – which we will call the principle of relevance – makes manifest the intention behind ostension” (more on the principle of relevance below). Later, S&W (1986a: 156) state that “hopes of relevance sometimes turn out to be unjustified, and when they are justified, they are justified to a greater or lesser extent. ... With an ostensive stimulus, however, the addressee can have not only hopes, but also fairly precise expectations of relevance. It is manifest that an act of ostensive communication cannot succeed unless the audience pays attention to the ostensive stimulus. It is manifest that people will pay attention to a phenomenon only if it seems relevant to them”.

From this perspective, the sender’s informative intention seems to be oriented towards modifying the addressee’s cognitive environment, rather than his thoughts.
This involves a reformulation of the informative intention as “to make manifest or more manifest to the audience a set of assumptions \{I\}” (S&W, 1986a: 58). The hypothesis underlying this definition is that sometimes the sender’s intention is not so much to communicate a set of assumptions as to get a *mutual manifestness* of these assumptions. This leads to a parallel reformulation of communicative intention which incorporates the attribute of mutuality: “to make it mutually manifest to audience and communicator that the communicator has this informative intention” (S&W, 1986a: 61). The mutuality of assumptions between sender and audience is called *ostensive-inferential communication*: “the communicator produces a stimulus which makes it mutually manifest to communicator and audience that the communicator intends, by means of this stimulus, to make manifest or more manifest to the audience a set of assumptions \{I\}” (S&W, 1986a: 63).

Assumptions are compared to old information stored in the audience’s mind and the result of this cognitive operation can be the production of contextual effects. The number of contextual effects has a direct relationship to the degree of relevance.\(^9\) Contextual effects can be related to context in three main ways: (a) reinforcing a previous assumption; (b) contradicting a previous assumption; and (c) combining to a previous assumption to yield further contextual effects (in this last case *contextual implications* are generated). An example of the same utterance with variations of contexts is provided in Wilson (1994: 45):

(a) It will rain in Paris tomorrow.

*Previous context:* The hearer is going to Paris tomorrow and he is almost sure that it will rain.

*Contextual effect:* The utterance strengthens a previous assumption.

(b) It will rain in Paris tomorrow.

*Previous context:* The hearer is going to Paris tomorrow, but he had not expected that it might rain.

*Contextual effect:* The utterance contradicts (and suppresses) a previous assumption.

(c) It will rain in Paris tomorrow.

*Previous context:* The hearer is going to Paris tomorrow and has thought about packing an overcoat just in case.

*Contextual effect:* The utterance is combined with previous assumptions to yield the contextual implication that it is necessary to pack that overcoat.

There are also situations in which assumptions have no effect whatsoever in a given context: (a) the assumption supplies new information, but this information is

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\(^9\) Analysts such as Gazdar and Good (1982) wonder how addressees can measure the number of contextual effects in order to, eventually, decide which proposition is the most relevant. S&W (1982c), in their reply to Gazdar and Good, admit that sometimes it is difficult to compare the higher or lower relevance of two propositions, but on most occasions it is possible. For comments on this issue, see Berg (1991: 418), Moore (1982: 111), Bach and Harnish (1987: 711), Levinson (1989: 459) and Holdcroft (1987: 491), among others.
not related to the information already present in the context; (b) the assumption is already present in the context and its strength is not altered in any way by the new information; and (c) the assumption is too weak to alter the context and is therefore eliminated (S&W, 1986a: 120–121).

In other words, assumptions that produce no contextual effect are irrelevant, that is, producing contextual effects is a necessary (and also sufficient) condition for relevance to exist: "an assumption is relevant in a context if and only if it has some contextual effect in that context" (S&W, 1986a: 122).

This preliminary definition of relevance is, according to S&W, limited. There should be a way to account for different degrees of relevance. The key to a gradual relevance lies in the effort required to process information: the higher the effort, the lower the relevance. In conclusion, the definition of relevance has to be reformulated in two preliminary conditions (S&W, 1986a: 125):

Condition (a): an assumption is relevant in a context if the number of contextual effects is high.
Condition (b): an assumption is relevant in a context if the effort required to process it in that context is low.

An example of these conditions is proposed below (W&S, 1986b: 383):

(9) a. Does Susan drink whisky?
   b. She doesn't drink alcohol.
   c. She doesn't drink whisky.

Reply (9b) does not provide a direct answer to (9a) and is therefore closer to a Gricean implicature. This produces a higher processing effort for (9b) than for a more straightforward answer like (9c). The explanation for the choice of a more costly answer such as (9b) lies in the fact that the speaker of (9b) thought that his answer would provide additional contextual implications that could not be derived from (9c), and that these new implications would make up for the increased effort (besides, the information that whisky is an alcoholic drink becomes manifest for both speakers). Often, this indirect and subtler way of communication is preferred by speakers (Bertuccelli-Papi, 1996b).

The characterisation of relevance in terms of contextual effects and processing effort involves a reformulation of the very notion of context. As suggested above, S&W reject the idea of a context given to interlocutors beforehand, and opt for a more dynamic view of context as constructed during interaction. This is so despite the fact that often the contextual attributes which precede interaction are very important as has been commented on, for example, in the given-new contract (Clark and Haviland, 1977) and other studies (Prince, 1981, for example). The previous contextual features form the initial context which is the supporting element for the processing of new information and the creation of further contextual attributes. Therefore, speakers select the most adequate context as conversation develops:
"[A] crucial step in the processing of new information, and in particular of verbally communicated information, is to combine it with an adequately selected set of background assumptions – which then constitutes the context – in the memory of the deductive device [i.e. speakers’ brain]. For each item of new information, many different sets of assumptions from diverse sources (long-term memory, short-term memory, perception) might be selected as context. However this is not to say that any arbitrary subset of the total set of assumptions available ... might become a context. The organisation of the individual’s encyclopaedic memory, and the mental activity in which he is engaged, limit the class of potential contexts from which an actual context can be chosen at any given time" (S&W, 1986a: 137–138).

All these comments on the nature of context end up in one final rhetorical question: if context is not given beforehand but constructed during interaction, what determines the choice of a specific context from a wide range of possible contexts available? For S&W the answer is, quite predictably, the search for relevance.

In the adscription of relevance, the individual has a series of contexts available, which are psychologically arranged in order of accessibility. In the same way that processing information demands effort, accessing a context also requires effort. Consequently, for an individual, relevance not only has to do with effects and processing effort, but also with accessibility to context: “an assumption is relevant to an individual at a given time if and only if it is relevant in one or more of the contexts accessible to that individual at that time” (S&W, 1986a: 144). Accessing an adequate context is part of the individual’s general cognitive search for relevance. In this sense, accessibility to context, contextual effects, and processing effort can now be combined in a new characterisation of relevance (comparative):

Condition (a): An assumption is relevant to an individual to the extent that the contextual effects achieved when it is optimally processed are large.
Condition (b): An assumption is relevant to an individual to the extent that the effort required to process it optimally is small.

In the second edition of Relevance (1995: 265–266) these conditions are slightly reformulated to incorporate the notion of positive cognitive effects:

Condition (a): An assumption is relevant to an individual to the extent that the positive cognitive effects achieved when it is optimally processed are large.
Condition (b): An assumption is relevant to an individual to the extent that the effort required to achieve these positive cognitive effects is small.

The newly introduced notion of positive cognitive effect has to do with the controversial issue of the truth/falsity of assumptions and how this fact can be integrated in RT, as mentioned above (see note 6). Although cognitive systems do not have explicit ways of assessing the truth or falsity of assumptions, S&W argue for an integration of truth into the definition of relevance. Since false assumptions prevent cognitive efficiency, the definition of relevance has to account for this and, consequently, relevance now deals with positive cognitive effects instead of the old contextual effects. See Jucker (1997) and Origgi and Palma (1997) for comments on this issue.
When there is an optimal selection of context, a maximal amount of contextual effects, and little processing effort, relevance is optimal (see S&W, 1986a: 144; Groefsema, 1989).

Of all the external stimuli that access our processing device continuously, S&W analyse those which are intended to generate contextual effects, especially ostensive stimuli that make it possible that the informative intention be manifest for both interlocutors, that is, become mutual. In order to achieve this, stimuli have to attract the audience’s attention and direct it toward the communicator’s intentions. Many assumptions that many ostensive stimuli manifest are regarded as irrelevant unless they are treated by the audience as ostensive (S&W, 1986a: 154). Ostensive stimuli are characterised by their ability to capture the audience’s attention. In other words, they carry the presumption of their relevance. The presumption of relevance is explained in two premises:

(a) The assumptions \{I\} that the sender intends to make manifest to the addressee are sufficiently relevant to be worth the audience’s processing of the ostensive stimulus.

(b) The ostensive stimulus is the most relevant that the sender can use to communicate \{I\}.

And, finally, S&W define their principle of relevance as follows: “each act of ostensive communication carries the presumption of its own optimal relevance”. For the principle to be satisfied, premises (a) and (b) have to be satisfied.

In the Postface to the second edition of Relevance, S&W (1995: 260ff.) acknowledge that people tend to use the notion of Principle of Relevance both in a broad cognitive sense (‘human cognition tends to be geared to the maximisation of relevance’), and in a more restrictive communicative sense (‘every act of ostensive communication communicates a presumption of its own optimal relevance’). This misreading of S&W’s theory is understandable, since the notion of Principle (which S&W opposed to Grice’s own Cooperative Principle), when applied in a wide cognitive context, seems “rather arbitrary, cause[s] unnecessary effort, and hence ... lead[s] to misinterpretation” (ibid.: 261).

S&W propose a remedy for this situation by talking, in future, of two Principles of Relevance: a ‘First cognitive Principle’ and a ‘Second communicative Principle.’ The latter is the one the book by S&W (1986a/1995) is mainly about.

However, the First Principle is also important, since it acknowledges the fact that human cognition is oriented towards the best cognitive processing available, that is, towards the highest possible relevance when processing inputs. After all, cognition is a biological function of human beings, and obtaining the best possible reward in exchange of the cognitive expenditure is a ‘natural’ tendency towards greater efficiency. This is why, despite the fact that some of the conclusions derived might turn out to be false, the human cognitive system tends to assess relevance in terms of contextual effects achieved (see Origgi and Palma, 1997). In other words, communicators treat an input as relevant “only if the output of [their] cognitive processing meets some specific condition ... for an input to be relevant, its processing must lead to cognitive gains” (S&W, 1995: 265).
The principle of relevance defined above refers to what S&W call Second Principle of Relevance in the last edition of their book. The two premises (a) and (b) of the presumption of relevance undergo a reformulation (1995: 267 and 270) and become simpler and more general:

(a) The ostensive stimulus is relevant enough for it to be worth the addressee’s effort to process it.
(b) The ostensive stimulus is the most relevant one compatible with the communicator’s abilities and preferences.

This reformulation has practical consequences for the analysis of communication, since it fits situations which the unrevised version of the premises would be unable to explain, for example situations in which an utterance turns out to be more relevant than it would be expected. Consider this example by S&W (1995: 273–274):

(10) a. Peter: Where does Gérard live?
   b. Mary: Somewhere in the South of France.
   c. Mary does not know where in the South of France Gérard lives.
   d. Mary is reluctant to say exactly where Gérard lives.

In the unrevised version, assuming that (10b) is the most relevant utterance that Mary can use to communicate the information, the addressee would be led to infer (10c). But if it is mutually manifest for both interlocutors that Mary does know where Gérard lives, her utterance would rather implicate (10d), which is problematic both for a traditional analysis of implicatures since we could not say that Mary is ‘cooperating’ (despite infringing a Maxim) in a Gricean sense, and it is also for the old version of RT, since the hearer would not be expected to reach (10d) once (10c) is found satisfactory in the balance of effects and effort. With the revised premise (b) of the presumption of relevance, both standard Gricean implicatures and non-Gricean implicatures such as (10d) can be accounted for, because premise (b) no longer states that the utterance is the most relevant that the speaker could have used, but the one compatible with the speaker’s abilities and preferences, which opens up a way to analyse cases in which the speaker is simply unwilling to be more specific. See also S&W (1995: 276ff.) for an analysis of scalar implicatures under the light of this revised version of the presumption of relevance.

Any communicator who intends to make manifest the presumption of relevance of a stimulus has to expect the stimulus to satisfy premise (a) of the presumption, and premise (b) not to be false. The choice of the right assumption would take a long time if the interlocutor attempted to test all the assumptions and then select the intended one (i.e. the one satisfying the principle of relevance). As an answer to this drawback, S&W (1986a: 167) suggest that it is the first assumption consistent with the principle of relevance that addressees select, and as soon as they find this first (relevant) hypothesis, they will stop their search for the intended interpretation (see Jaszczolt, 1996). This proposal has been criticised since several situations where ambiguous utterances arise can lead hearers to a dilemma of choices in which it would be almost impossible to determine the first interpretation consistent with the
principle of relevance (Kempson, 1986; Bertuccelli-Papi, 1996c). For example, Morgan and Green (1987: 727) mention Shaffer's play *Amadeus*. When Salieri asks Mozart what he thinks about his music, Mozart's answer, 'I never thought music like that was possible', does not seem to imply either that Mozart is praising or criticising Salieri, and therefore the choice of a first relevant interpretation will be very difficult. Sometimes, the key to the successful outcome of the processing of ambiguous utterances lies in the degree of accessibility of interpretations: the receiver consults encyclopaedic information during processing, and if stereotypical frames are accessed in order to select an interpretation, these will be activated and a likely interpretation selected. This happens to sentences like the child left the straw in the glass (S&W, 1986a: 186), which immediately convey a more stereotypical and cognitively accessible interpretation of 'straw' as 'instrument for drinking', rather than 'straw' as 'the stems or stalks of certain cereals'. (C. Smith, 1987: 733; see also Ying, forthcoming, on the processing of ambiguous sentences from a RT perspective).

Unlike Grice's (1975) cooperative principle, which speakers voluntarily follow or disobey, the principle of relevance is spontaneous and biologically rooted in human cognition:

"Grice's principle and maxims are norms which communicators and audience must know in order to communicate adequately. Communicators generally keep to the norms, but may also violate them to achieve particular effects; and the audience uses its knowledge of the norms in interpreting communicative behaviour. The principle of relevance, by contrast, is a generalisation about ostensive-inferential communication. ... Communicators do not 'follow' the principle of relevance; and they could not violate it even if they wanted to. The principle of relevance applies without exception: every act of ostensive communication communicates a presumption of relevance" (S&W, 1986a: 162; see Recanati, 1987 for comments).

The following example is illustrative (S&W, 1986a: 13).

(11) a. Jones has bought the *Times*.
    b. Jones has bought a copy of the *Times*.
    c. Jones has bought the press enterprise which publishes the *Times*.

If an interlocutor assumes that the speaker of (11a) intends to be relevant, he will test the first interpretive hypothesis (11b) and as this first hypothesis is consistent with the principle of relevance, he will stop his processing activity at this point, therefore leaving other, more unlikely possibilities (like 11c) unprocessed. In this case, cognitive frames play an important part assigning, to each interpretive possibility, a place in a scale of likeness: utterance (11a) usually leads to interpretation (11b). This fact is exploited by the authors of humorous texts, predicting which interpretation is most likely to be chosen as consistent with the principle of relevance and finally forcing addressees to reformulate their processing activity and opt for a more unlikely (though still possible) interpretation which finally turns out to be the correct one (Yus Ramos, 1997c; more on this below). This is what happens in the following joke quoted by Yamaguchi (1988: 332):

\[\text{\ldots}\]
A pair of suburban couples who had known each other for quite some time talked it over and decided to do a little conjugal swapping. The trade was made the following evening, and the newly arranged couples retired to their respective houses. After about an hour of bedroom bliss, one of the wives propped herself up, looked at her new partner and said: “Well, I wonder how the boys are getting along”.

Here, the reader is forced to abandon the first hypothesis that is consistent with the principle of relevance (heterosexual relationship) and take a more unlikely (but eventually correct) interpretation of the conjugal swapping as a homosexual relationship.

To go back to example (11) above, let us suppose now that for the speaker of (11a) the interpretation (11c) is the interpretation that he actually wants to convey. The utterance (11a) would not satisfy his informative intention, because it would not fulfill premise (b) of the presumption of optimal relevance (“the stimulus has to be the most relevant that the sender could have used to communicate {I}”, in the old version, or “the most relevant one compatible with the communicator’s abilities and preferences”, in the revised version). Consequently, in order to communicate (11c), the speaker would have to choose a much more explicit stimulus such as, say, ‘Jones has bought the *Times*, but not the paper, no; the actual press company!”, which would save a great deal of the audience’s processing effort. A consequence of this argument is that the interpretation with the highest number of contextual implications need not be the one consistent with the principle of relevance: “even a highly relevant interpretation will be discarded if a speaker who intended it could have made his utterance significantly more relevant by doing something to reduce the hearer’s processing load” (S&W, 1982c: 105, emphasis in the original).

Several commentarists have dealt with this issue. For example, Bach and Harnish (1987:711) wonder, in the specific case of indirect speech acts, how a speaker can communicate this indirect interpretation of an utterance if hearers stop their interpretive activity at the first interpretation that seems correct. The same could be said about ambiguous utterances (Morgan and Green, 1987:727). S&W (1987: 746–747) reply that hearers, when facing the interpretation of ambiguous sentences, tend to extend the context because this extension, despite the supplementary effort, yields a relevant number of contextual effects. In other words, hearers do not stop their interpretive activity at the first interpretation which they come across, but at the first which is consistent with the principle of relevance. If the extended context and the increased effort end up in nothing relevant, the reward for the hearer will be nonexistent (see Blass, 1990: 50–52, for a good example of how processing effort increases as the answers of the hearer become more and more indirect), but often the increased effort obtains higher relevance as a reward.

7. Some comments on relevance theory

As *Relevance* reaches over ten years of existence since its first edition, a number of comments and a certain amount of criticism can be detected in the bibliography
available. This is an indication that RT can generate a great number of both positive and negative comments, but it never leaves linguists indifferent. A brief account of several comments on RT follows.

Levinson (1989) is one of the most critical reviewers of RT. His comments are directed to some of RT's detected weaknesses. For this analyst, "the book relies on improbable presuppositions about human cognition; it underlines the role of usage in pragmatic theory; it ignores many current developments in semantics, pragmatics and the study of inference; it is too ambitious and globally reductive; and anyway the theory is obscure and it is not clear how it could be made to have clear empirical application" (Levinson, 1989: 456). Later Levinson adds that S&W "write with the fervour of those who have discovered the philosopher's stone, a single principle that will render tractable all the mysteries of attention, trains of thought and, as a mere by-product as it were, language comprehension. Many observers simply cannot understand why they think there should be such a thing, let alone why they think RT, with its uncertainties of construction and application, could be it" (ibid.: 464).

As a positive counterpoint, Levinson (ibid.) stresses the valuable restructuring of Grice's ideas that can be found in RT, with its emphasis on the role of inference.

Sánchez de Zavala (1990, 1994) also criticises several points of RT, specifically the problems involved in the selection of the intended interpretation from a set of equally plausible hypotheses. In other words, RT does not determine the range of natural interpretations in two different given contexts, even if one of the interpretations seems to be consistent with the principle of relevance (see also Blakemore, 1987b: 67). Cognitive environments cannot play such an important role in the determination of the right interpretation.

In the same line, Wilks and Cunningham (Wilks, 1986; Wilks and Cunningham, 1986) point out that contextual information can produce important variations in the weighing of contextual effects and processing effort, and a reformulation of the two premises of the principle of relevance is needed in the following terms (Wilks and Cunningham, ibid.: 403–404):

(i) MAXIMISE the number of contextual implications drawn for some total given processing effort ... for interpretation of input, location of context, and drawing of implications.

(ii) MINIMISE the amount of processing for context finding so as to leave more available for drawing contextual implications under (i).

Chametzky (1992a) starts his criticism from the dichotomy explanation/prediction to conclude that language is an open system that can only be explained in an ex post facto way, and it would be an error to search for a theory of language as RT based only in prediction (see also Dascal, 1977). S&W are then accused of excessive idealism (see Wilson, 1992a for a reply, and Chametzky, 1992b for a counter-reply).

Gorayska and Lindsay (1993) propose a new model of RT including new terminology such as plans, goals and elements. In a very etymological analysis, these analysts conclude that S&W's terminology does not differ very much from the traditional notion of relevance, that is, an purely relational attribute (of the form 'X is
relevant in relation to Y'), created from the desire of someone in his attempt to achieve a goal (see O'Neill, 1988; Morgan and Green, 1987; and Clark, 1987b for further comments of the meaning and use of the term relevance).

Roberts (1991) stresses the importance of mutual gaze (what he calls mutual monitoring of attention) for ostensive communication if the communicative intention aims at an optimal interpretation. In one of S&W’s examples, a man and a woman are sitting on a bench and the man sees Williams, a boring friend of the woman’s, who is approaching them. Then he (ostensibly) leans forward so that Mary can see Williams and consequently be warned against (informed about) his arrival. For Roberts, if the man is not looking at the woman in order to make it clear that this is not just an unintentional movement of his body, communication will surely fail.

Besides, Roberts (ibid.) proposes a series of steps to account for ostensive-inferential communication:

Step 1 An action is performed to get the audience’s attention and to focus it on the action and associated intentions.

Step 2 There is a presumption of the optimal relevance of the action for communicating something to the audience; this presumption makes one begin figuring out that the sender is trying to communicate.

Step 3 A communicational device is used to obtain the basic particular content of the message.

Step 4 The informational output from step (3) is used to select assumption schemas from background knowledge.

Step 5 The assumption schemas from step (4) are not developed enough to be a hypothesis about the intended interpretation.

Step 6 Whatever appears in all interpretations must be correct.

Step 7 The receiver is to figure out what the sender can intend on the basis of the sender’s knowledge of the receiver’s knowledge.

Step 8 The sender’s intentions are to be used as a basis for devising hypotheses about the intended interpretation.

Step 9 The hypothesis about the intended interpretation which produces the greatest contextual effect with the least processing effort is the correct one.

8. Applications

RT has been applied successfully to different types of discourse, and these applications are a proof of RT’s importance for contemporary research on language and communication. Among all the discourses to which RT has been successfully applied, some areas of interest are outlined below.

8.1. Grammar vs. discourse

RT has wide implications for syntax if the syntactic patterns of the sentence are to be interpreted as playing an important role in the quality of the outcome of the audi-
ence’s processing, especially since the logical form of utterances has to be enriched to yield propositional forms (Kempson, 1987). Applications of RT have also been made under late generative approaches like Government and Binding and Minimalism (Kempson, 1988a,b; see also Vandepitte, 1990; Sinclair, 1995: 511–514; Espinal, 1996).

Besides, RT can easily explain apparently ungrammatical uses of language, if the speaker relies on the interlocutor’s ability to make up (cognitively) for apparently ill-formed sentences (see Haegeman, 1987).

Among the analyses dealing with grammatical aspects (often overlapping with semantic and pragmatic aspects of language), the study by Blakemore (1987b) on the constraints on relevance produced by connectives should be underlined. These connectives, which can be regarded as half-way between grammatical and textual-pragmatic aspects of discourse, can be treated as non-truth-conditional meaning conveyors, and therefore as hypothetical carriers of illocutionary force. S&W argue that these connectives and other indicators should be analysed in procedural terms rather than in conceptual terms (that is, concerning the information about how to manipulate representations, rather than the information about representations), and regarded as contributing to explicatures, rather than to implicatures (S&W, 1995: 258).

In a nutshell, W&S (1993a) suggest that there are two types of meaning which cross-cut many linguistic dichotomies available in pragmatic research (describing vs. implicating; stating vs. showing; saying vs. conventionally implicating; truth-conditional vs. non-truth-conditional; representational vs. computational ... ) and which have been developed mainly in two areas: (a) linguistic (utterances have propositions which themselves have truth-conditions, but these do no exhaust what the proposition can encode; also non-truth-conditional information is encoded); and (b) cognitive (linguistic decoding provides input to the inferential phase of comprehension, the latter involving the manipulation of conceptual representations). This second area confirms the existence of conceptual and procedural information as used by Blakemore and her followers. In W&S’s words:

“Inferential comprehension involves the construction and manipulation of conceptual representations; linguistic decoding feeds inferential comprehension; linguistic constructions might therefore be expected to encode two basic types of information: concepts or conceptual representations on the one hand, and procedures for manipulating them on the other” (W&S, 1993a: 10).

Blakemore applies this hypothesis to connectives, which should not be seen as encoding concepts, but which constrain the inferential phase by indicating the kind of inferential process that the hearer should go through (hence reducing the eventual overall effort).

W&S (1993a) extend the notion of constraint (which Blakemore applied to implicatures) also to explicatures, since truth-conditional connectives such as mood indicators and discourse particles “can constrain any aspect of the inferential phase of comprehension, whether explicit or implicit” (S&W, ibid.). In any case, the cognitive dichotomy conceptual-procedural now appears to be a more plausible explanation of linguistic semantics than the classical truth-conditional vs. non-truth-conditional meaning.

Other areas of RT-related grammatical interest are:


(ii) *Mood:* See Clark (1993a,b), Lunn (1989), Rouchota (1994a,b,c), W&S (1988a,b, 1993a), and others.


RT has also been useful to analyse certain stylistic features of sentences and texts, such as the role of given/new information. See, apart from S&W (1986a: 202–217), the studies by Gundel and Mulkern (1997) and Gundel (forthcoming) on referring expressions, and Borthen et al. (1997) for a RT-based analysis of ellipsis. Other style-related analyses include B. Clark (1996), Blakemore (1993, 1994a,b), Culpeper (1994), and Escandell Vidal (1995).

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10 In Blakemore (1992: 149–151) this dichotomy is treated in *procedural vs. representational* terms. In this analysis, certain performative expressions, despite not contributing to the proposition expressed by the utterance, they do contribute to a propositional representation. On the other hand, since representations are intended to act as premises for deductions, it is also possible that linguistic meaning plays some role in determining how representations should be manipulated, which implies that some linguistic meaning is *procedural* rather than *representational*. This is particularly noticeable in Blakemore's (1988a, 1990) procedural analyses of *so, therefore and after all* (see also Nicolle, 1997 for an account of types of *procedural encoding*).
8.2. Media discourse

Many studies analyse media discourses in relevance-theoretical terms. In Yus Ramos (1997d; 1998) there is a proposal of a new RT-related model of interpretation of and in verbal-visual media discourses (the so-called VV-Model). In this model, sixteen categories are proposed according to four preliminary qualities of the outcome of addressees’ interpretation: (a) whether communication takes place between characters, or between the author of the discourse and the spectator without the intermediate mediation of a conversation between characters; (b) whether communication is intentional or exuded, that is, whether the sender does intend to communicate some information, or there is an accidental transmission of information (W&S, 1993a); (c) whether communication uses verbal or non-verbal channels of communication; and (d) the maximal (or minimal) efficiency in the outcome of the addressee’s (spectator or character) interpretation. The mathematical combination of these four parameters yields the sixteen four-fold categories numbered in Table 1.

Table 1
The VV-model and its sixteen categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Exchange</th>
<th>Message</th>
<th>Intentionality</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spectator-oriented</td>
<td>Verbal</td>
<td>Intentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>2</td>
<td>Spectator-oriented</td>
<td>Verbal</td>
<td>Intentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>3</td>
<td>Spectator-oriented</td>
<td>Verbal</td>
<td>Unintentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>4</td>
<td>Spectator-oriented</td>
<td>Verbal</td>
<td>Unintentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>5</td>
<td>Spectator-oriented</td>
<td>Nonverbal</td>
<td>Intentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>6</td>
<td>Spectator-oriented</td>
<td>Nonverbal</td>
<td>Intentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>7</td>
<td>Spectator-oriented</td>
<td>Nonverbal</td>
<td>Unintentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>8</td>
<td>Spectator-oriented</td>
<td>Nonverbal</td>
<td>Unintentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>9</td>
<td>Character-oriented</td>
<td>Verbal</td>
<td>Intentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>10</td>
<td>Character-oriented</td>
<td>Verbal</td>
<td>Intentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>11</td>
<td>Character-oriented</td>
<td>Verbal</td>
<td>Unintentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>12</td>
<td>Character-oriented</td>
<td>Verbal</td>
<td>Unintentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>13</td>
<td>Character-oriented</td>
<td>Nonverbal</td>
<td>Intentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>14</td>
<td>Character-oriented</td>
<td>Nonverbal</td>
<td>Intentional</td>
<td>Minimal</td>
</tr>
<tr>
<td>15</td>
<td>Character-oriented</td>
<td>Nonverbal</td>
<td>Unintentional</td>
<td>Maximal</td>
</tr>
<tr>
<td>16</td>
<td>Character-oriented</td>
<td>Nonverbal</td>
<td>Unintentional</td>
<td>Minimal</td>
</tr>
</tbody>
</table>

The main hypothesis underlying this model is that all types of interpretation in/of media communication fit, in some way or other, one or several of these categories. The VV-Model has been applied successfully to the verbal-visual discourse of British comics (Yus Ramos, 1997d), a medium which has proved to be particularly interesting for pragmatic analysis (Yus Ramos, 1995a,b; see Watts, 1989b for another application of RT to comics). In theory (and after taking into account the formal differences among discourses), the VV-Model can also be applied to any other verbal-visual media discourse (film, press, TV ...).

Another media discourse to which RT has been successfully applied is the discourse of advertising. The control over the amount of information provided, the pre-
dictability of consumers' responses, and the calculation of the effort required to process information, which are typical features of the strategies by the makers of adverts can easily be analysed using a relevance-theoretical approach. One of the first analysts to realise the fruitful contribution that RT could make to the analysis of ads was Pateman (1983), even though RT was still at its preliminary stages. These ideas have been developed and strengthened later by Tanaka (1992, 1994).

For film discourse there are also studies which introduce applications of RT. For example, see Buckland (1995), who deals especially with the audience's non-demonstrative inferences during film comprehension.

8.3. Literature

The fact that S&W use instances of face-to-face communication to develop RT seems to suggest that RT cannot be easily applied to fictional discourses like literature in which there is no feedback from addressees (readers) to communicators (authors) in the exchange (see Richards, 1985; Blakemore, 1994a; B. Clark, 1996; H. Clark, 1987a,b; Reboul, 1987, 1992; Gorayska, 1996; Green, 1993, 1996; Trotter, 1992; Pilkington, 1990, 1991a,b, 1992, 1994, 1996; Mackenzie, 1995, Varela Bravo, 1988; and Bex, 1996, among others).

Clark's (1987a,b) approach to literature and RT is particularly interesting: he proposes that there are a certain number of levels or layers in every communicative interaction (further developed in Clark, 1996; see also Hess-Lüttich, 1985 for an alternative terminology of layers). The number of these levels increases in the case of fictional discourse due to the multiplicity of communicating sources (characters, authors, readers, actors, audience ...). In Shakespeare's Hamlet, for instance, there would be at least three levels of communication: between actors, between characters, and author-audience. Clark (1987b: 715) states that RT is unable to provide a coherent explanation of the relationship of all these levels: "S&W ... presuppose that all communication is flat - that is only has one layer, one type of relevance. ... Shakespeare and Melville [Clark's examples] have intentions towards us, but these are not 'informative' or 'communicative intentions'. ... Even if relevance theory could explain ... how Ophelia understood Hamlet, it would not explain how we do". On the contrary, in Yus Ramos (1997d; 1998) communication in the different layers is treated as equally likely to be analysed under the perspective of RT.

8.4. Translation

The contributions by Gutt (1985, 1986a,b, 1987, 1988a,b, 1990, 1991, 1992, 1995, forthcoming-a,b) and his proposal of overt/covert (direct/indirect) translations are outstanding in the application of RT to this field. Gutt uses S&W's idea that the interpretive resemblance between two propositional forms does not imply that the two utterances have to be identical, and that in reality it is the intended set of shared assumptions that are prominent in communication. Therefore, the translator has to try to communicate the same set of assumptions that the original author intended to communicate, but in a particular context and to a different audience (Mackenzie, 1994).

8.5. Humour

As mentioned above, the predictability of which interpretation is consistent with the principle of relevance (the one providing the highest number of contextual effects in exchange of processing effort) can be useful for creators of humorous texts. In a nutshell, humorists can lead the audience to choose the most natural (relevant) interpretation of a text, while at the same time deceiving them. Later, this interpretation is short-circuited and a second, more unlikely, but perfectly possible interpretation, is presented to the audience, which now realises the deceit. The humorist’s prediction of which interpretation is most likely to be chosen as the first interpretation consistent with the principle of relevance, somehow strengthens the validity of S&W’s theory of effects/effort and how addressees select (first) relevant interpretation.

This idea has been studied in Yus Ramos (1997c,d; 1998) in the terminological coining of overt intention versus covert intention. The first one would account for this predictable and natural – relevant – interpretation that the addressee is naturally led to choose (see Mey, 1992), while the latter refers to this second underlying and more unlikely interpretation that is eventually presented as the correct one, thus leading to incongruity and humorous effect. This dichotomy of interpretations is illustrated by the following example from the alternative comic Viz (quoted in Yus Ramos, 1998):

(13) [panel 1: complete darkness, sound of alarm-clock represented as onomatopoeias]
[panel 2: a light is switched on, the alarm-clock strikes 3 o’clock, character A has woken up] A: Jesus – This facking [sic] alarm clock’s gone off too early again.
[panel 3: character A stretching in the dim light] A: Mind you – I may as well get up. I’ll never get back to sleep now.
[panel 4: character A draws back the curtains, there is sunshine outside, the radio is on] Radio: ... and now it’s time for Steve Wright in the afternoon ...
(‘Student Grant’, Viz 55: 19, 1992)

Here, and as a consequence of the cartoonist’s overt intention, the reader is led to a first interpretation consistent with the principle of relevance (the character has been woken up at three o’clock in the morning). Eventually, the reader finds out that the actual correct interpretation is different (three o’clock in the afternoon). This second interpretation, hidden behind the cartoonist’s covert intention, is perfectly possible, but it certainly produces a much worse balance of contextual effects and processing effort than the other – first – interpretation accessed. As addressees stop their processing activity at the first interpretation consistent with the principle of relevance,
this second interpretation is never taken into consideration, and this fact is easily pre-
dicted by the cartoonist in his search for a humorous effect.

See also Jodlowiec (1991) and Curcó (1995, 1996, 1997) for more RT-related
research on humorous discourse.

8.6. Other

Several other areas of interest have been studied using a relevance-theoretic per-
spective, for example, education and political language. Even the appreciation of
music has been studied using a RT framework (Downes, 1994). Other areas of
research include: (1) For an application of RT to rhetoric, see S&W (1990), Camp-
bell (1990, 1992) and Gorayska (1996). (2) Analyses of the semantic/pragmatic
interface in the study of descriptions can be found in Rouchota (1992, 1994d). (3)
Vandepitte (1989) and Scheuer (1995) analyse intonation under RT. (4) For an
anthropological analysis of culture from a RT perspective, see Bloch (1991), and
Harvey (1988). Related analyses of culture, this time from a modular point of view,
can be found in Sperber (1985, 1996b,c). (5) RT has also been applied to augmenta-
tive and alternative communication systems, widely used with individuals who are
unable to communicate in the usual way (see Clibbens, 1997). (6) Lastly, develop-
mental pragmatics is also analysable under a RT perspective, see Kiss (1997) and
Foster-Cohen (1997).

The application of RT to other fields has been questioned (or the absence of this
application criticised). This is the case of, for example, computational linguistics
(Hinkelman, 1987; Seuren, 1987; Akman and Surav, 1995).

9. Conclusion

In this article an account of RT has been provided, together with comments and
criticism that have poured from different areas of research in the years of existence
of RT. The bibliography and the wide applications of RT to other discourses give us
a picture of S&W’s theory of great vitality and continuous development. As the
reader will have noticed, and as pointed out before, RT can either provoke immedi-
ate rejection or immediate praise, but it never leaves the reader indifferent. This
attribute is good for any theory which aims at a complete and better understanding
of human communication. We will have to wait for further developments of the the-
ory (S&W, forthcoming) to see how the ideas outlined above are reinforced or left
outdated. In any case, these (more than) ten years of RT have brought new life to
cognitive pragmatics, and we should be grateful for such a daring and thought-pro-
voking theory.

Last, I would like to finish the article with an apology to all those analysts whose
important work on RT has not been mentioned in this account. The blame for this
absence has to be put on the author’s inability to access certain bibliographical
sources, and never on a decision that this work did not deserve to be mentioned. I do
hope that my bibliographical omissions will be forgiven by the authors concerned.
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