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**Agenda 2000****Agenda 2000—Communication: language as an implementational device for cognition**

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*Abstract*

*The aim of this paper is to identify the functions of social cognition in a communication context. It is argued that social cognition is for the regulation of adaptive action and makes use of external devices (e.g. language) to implement action. First, the complexity of communication as a social achievement is discussed to prepare the ground for examining the link between language, cognition and communication. The implementational devices (language) of social cognition are addressed next. On the basis of these considerations a message-modulation model is proposed to conceptualize the interplay between language, cognition, motivation and communication. The application of this model to research on the transmission and maintenance of stereotypes illustrates the types of open research issues and directions that may be possible routes for future work. Copyright © 2000 John Wiley & Sons, Ltd.*

A central theme of social psychology is *talk* and its social, psychological and cultural boundaries. We talk to, with and about family, friends, strangers, colleagues, and acquaintances. We also talk about politics, soccer, films, art, food, wine, work, love, sex, and the meaning of life—and not necessarily in that order. Talk takes different forms, as in real (conversations, disputes, negotiations, etc.), removed (voting, newspapers, films, theatre, books), magically removed (fantasies, dreams, daydreams) or virtually removed (Internet) contexts. We flirt, convince, dominate, influence, discriminate, identify, gossip, inquire, and help by means of talk. We also have those very same things done to us by talk. A large part of social psychology is about talk. And *communication* is about *talk and its boundaries*.

The broad challenge taken up by those seeking a communication perspective is how to reconcile an individual level of analysis with a *social* one, especially with the

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diverse implications of the word 'social'. One traditional avenue is to retain the individual level of analysis and enrich the meaning of cognition in progressive steps from non-social to social stimuli (e.g. trait information) to finally stimuli including social context information (e.g. communication context broadly). A good example is to be found in Wyer and his colleagues' research (Wyer & Gruenfeld, 1995). They observe that social cognition has neglected the social context of information processing. Namely '... an understanding of information processing in a social context requires a consideration of not only the literal meaning of the information conveyed but also subjects' perceptions of why the information is communicated' (Wyer & Gruenfeld, 1995, p.51). The notable advancement here is the enrichment of a social stimulus with additional contextual variables that arise from a communication context. The ostensible purpose of the communication, the style in which the communication is made, characteristics of the speaker, etc. are such examples. For instance, research by Wyer, Budesheim, & Lambert (1990) was designed to show the difference between standard person impression paradigms (trait information) and one that included social context (trait information about a target provided by a speaker) as an integral part of the experiment. The authors demonstrate that *speakers* were judged to be more likable when they described the target favorably and less likable when they described the target unfavorably. Moreover, evaluations of the target were influenced by how speakers were perceived. Targets were judged less likable when speakers were favorable about them and more likable when speakers were less favorable. This type of approach retains the individual level of analysis. The question remains one of unlocking cognition as a process in the head of the individual. In this traditional view of social cognition, the *individual in isolation* is regarded as *the proper unit of analysis*. Consequently, the purpose of cognition is seen to be for representation, processing and computation. This is accompanied by a methodological commitment to the processes or properties of individual agents (cf. Semin, 1995).

Consideration of the processes that are central to communication, such as common ground (e.g. H. Clark & Shober, 1992; H. Clark, Schreuder, & Buttrick, 1983), shared reality (Hardin & Higgins, 1996), interchangeability of perspectives (Schütz, 1962), the socially distributed nature of cognition (Hutchins, 1996), conversational conventions (Grice, 1975), illuminates the fact that the traditional unit of analysis in social psychology is fundamentally flawed. The conceptual issues that arise from a communication perspective suggest that this article of faith does not stand up to scrutiny. Moreover, this work also suggests that the social in social cognition is more than mere stimulus enrichment. Indeed, as Schwarz (2000) notes in his contribution on 'social judgment and attitudes' to this 'agenda series', '... researchers rediscovered that humans do much of their thinking in a social context and turned to the exploration of socially situated cognition and the interplay of cognition and communication in human reasoning' (p. 151). The research by Schwarz and his colleagues is an example, showing the application of the logic of conversation (Grice, 1975) to the research setting (see for reviews, Schwarz, 1994, 1996). This work has led to a radical reformulation in our understanding of judgmental biases, *inter alia*. Similarly, Higgins' (2000) contribution on 'social cognition' singles out the meaning of 'social' in social cognition by drawing attention to the fact that this type of cognition is: (a) 'interpersonal, intersubjective and reflexive' (p. 4), (b) has adaptive functions; and (c) is shared and is therefore critical in understanding the shared nature of cognition. It is self-evident that there is a converging theme centering on the varied implications of

the 'social'. The purpose of the present contribution is to identify the *functions of social cognition* from a communication perspective and to highlight some of the implications by examining the link between language, cognition and communication.

## COMMUNICATION AS A SOCIAL ACHIEVEMENT: INSIGHTS AND OPEN ISSUES

Human communication is a social accomplishment (e.g. Higgins, 1981, 1992). In fact, the successful exchange of intended meaning—the hallmark of communication (Grice, 1957, 1969)—constitutes a remarkable achievement when one considers the complexity of the communication process. Conversation as it takes place in face-to-face interaction occurs within *real time constraints*. When we talk, we do so by producing approximately 140 words per minute, each drawn from a lexicon with a volume of roughly 20 000–60 000 words. Moreover, talk does not simply involve producing words. It requires *choosing* words from a lexicon to create sentences that are also linguistically *structured*.

But that is not all, since such production does not take place in a vacuum. Production occurs with the purpose of communicating an intention to someone else. It is a production with a social end, which requires synchronization with another's comprehension.

The speaker–audience relationship regulates the properties of messages. Chiu, Krauss, and Lau (1998) refer to this process of adapting messages to specific listeners as '*audience design*'. Diverse research strands have examined the communication context in terms of the types of speaker–addressee relationships. This research has shown that while cooperative relationships lead to convergence, competitive or adversarial ones are likely to lead to divergence, whereby what precisely diverges or converges depends on the different objectives pursued in these studies (e.g. Turner, 1981; Johnson, Johnson, & Maruyama, 1984; Thibaut & Kelley, 1959). Deutsch (1949, 1953), for instance, related cooperative and competitive communication goals to a convergence of attitudes between transmitters and recipients in the former condition and divergence in the latter.

Similarly, 'speech accommodation theory' (Giles & Coupland, 1991) is another instance of how cooperative and competitive relationships influence convergence or divergence as indicated by changes in the interlocutor's accent or language (e.g. Giles & Smith, 1979; Giles, Bourhis, & Taylor, 1977; Giles, Taylor, & Bourhis, 1973). This research suggests that in multilingual contexts a cooperative or competitive relationship between interlocutors influences accent and language use—which are taken as indicators of attitudes. Similarly, speech divergence is found to be pronounced in intergroup contexts when the speaker expects competitive interactions with outgroup members (e.g. Taylor & Royer, 1980; Doise, Sinclair, & Bourhis, 1976) or when outgroup members are known to hold negative attitudes towards the transmitter's group (Bourhis, Giles, Leyens, & Tajfel, 1979). Bourhis and Giles (1977) provide a classic demonstration when an adversarial conversational context is shown to induce participants to introduce a variety of strategies, such as accentuating differences in speech, as well as non-verbal behavior to emphasize the difference between themselves and the adversarial 'other' signaling divergence from the 'other'. In con-

trast to divergence, a number of communicative acts and styles are used to reduce differences, such as speech rate, pausal phenomena, utterance length, but also smiling, gaze, etc. These are strategies by which individuals adapt to each other's communicative behaviors. Levin and Lin (1988) provide an interesting example of convergence. They showed that during the Watergate trials John Dean converged in terms of his median word frequency (an index of formality) to his different Senate interrogators. Similarly, Coupland (1984) conducted a phonological analysis of a travel agent and showed that she converged to her clients as a function of their socio-economic status and education.

The synchronization of conversation between speaker and addressee involves monitoring the *perspective of the addressee* (e.g. Fussell & Krauss, 1989a, b, 1991; Krauss & Fussell, 1988; Shober, 1998) which contributes to the shape of the message production process. Studies by Krauss and his colleagues (e.g. Fussell & Krauss, 1989a, b) using a referential communication paradigm examine message design as a function of addressee characteristics. These types of studies illustrate how perspective taking influences the linguistic features of messages and how these in turn influence their communicative accuracy. In most of these studies, the experimenter defines the communication goals. For instance, in one study (Fussell & Krauss, 1989a) students were presented with abstract line drawings and asked to describe them either for their friend, themselves or a stranger. At a later stage they were asked to identify which figure each message referred to. Participants were most accurate with their own messages. Moreover, they were more accurate with their friend's messages than with 'stranger's' messages. It is not only the perspective of the addressee that is critical to successful communication. Considerable groundwork has to be done to achieve intersubjectivity (Rommetweit, 1974; Schütz, 1962). One of the ways in which this is accomplished is by monitoring whether or not *common ground* is established with the addressee (e.g. H. Clark & Shober, 1992; H. Clark *et al.*, 1983). To this end a number of—typically linguistic—strategies are employed to coordinate joint reference to objects and events in a communicative setting (e.g. H. Clark, 1992, 1996; Krauss & Fussell, 1996).

The interpersonal nature of communication is also highlighted by 'communication game' approach advanced by Higgins and his colleagues (e.g. McCann & Higgins, 1992). Communication constitutes purposeful social interaction, takes place in a social context, and is regulated by social rules and conventions (e.g. regarding language use) that are deployed to establish a 'shared reality' and to attain individual goals (e.g. Austin, 1962; Grice, 1975; Higgins, 1981, 1992; Krauss & Fussell, 1996; Searle, 1969). Thus, features of the communication situation such as speaker and listener roles have been shown to impact the representation of information (e.g. Higgins, McCann, & Fondacaro, 1982; Zajonc, 1960). This theme is also reflected in the classic research line on 'saying is believing' initiated by Higgins and Rholes (1978). In these studies, speakers' relationships were experimentally shaped to promote positive self-presentation or intimacy to a listener. This research has shown how the interdependence between communicator and recipient influences not only the message people write but also how formulating such messages shapes their beliefs. Essentially, these and other studies (Higgins & McCann, 1984; Higgins *et al.*, 1982; McCann, Higgins, & Fondacaro, 1991) show that participants distort their messages in a way that is consistent with an audience's attitudes. Moreover, their impressions are shown to be evaluatively consistent with the content of their message as measured after a time-lapse.

The use of language is in the main a manifest activity by which such synchronization is achieved, whereas conversational conventions that regulate the interchangeability of perspectives (Schütz, 1962) are unarticulated. Let us briefly turn to the unarticulated complexities that the social accomplishment of communication entails. Synchronization between speaker and addressee requires conventions to regulate what is in fact a stage in a sequential process, namely conversation. Conversationalists concurrently assess a set of '*tacit*' conventions or maxims. These maxims are derived from the unspoken *principle of cooperation*, by means of which intended meaning is achieved in communication (Grice, 1975, 1978). The roles of speaker and addressee reverse in a turn-taking process regulated by conversational conventions signaling turns (Sacks, Schegloff, & Jefferson, 1974). These are but some of the conventions that contribute to establishing socially shared meanings or realities (see Hardin & Higgins, 1996; Thompson & Fine, 1999, *inter alia*). These conventions have evolved to regulate the speaker–addressee relationship. They are some of the resources for 'intersubjectivity'. Whereas meaning is initially unshared and subjective, word meanings, syntactic rules, and conversational conventions must be shared in order to create an 'objectivity' or intersubjectivity (Rommetweit, 1974; Schütz, 1962) without which communication could not be accomplished. As a whole conversation involves drawing on shared resources to convey a potentially novel and unique meaning.

What types of issues face the addressee who processes and comprehends messages synchronously within the time constants imposed by the unfolding of the message-production process? Obviously, the conventions and linguistic tools establish intersubjectivity. But what the addressee receives is typically not well formulated. Often the sentences that are produced are not complete. Sometimes things that are not said convey more meaning than those that are said. Thematic foci change rapidly, and return. The addressee often interjects with queries, requests, and remarks. Moreover, communication is goal-driven (e.g. Higgins, 1981, 1992) and typically results in a transformation of some reality.

By now, you should have an appreciation of the complexity of the process that we call human communication. An equally remarkable aspect of human communication is that it is such an *effortless, efficient and a reasonably accurate process*. It becomes apparent that such a complex process requires a shift of emphasis from cognition as an individual-centered, internal, and representation-driven process to cognition as an emergent property stemming from the interaction between an agent and the social world.

## SOCIAL COGNITION AND ITS IMPLEMENTATIONAL DEVICES

One way of looking at cognition is as a process that is steered by both *internal* and *external* processes and resources. It is undoubtedly the case that cognition has evolved for the regulation of adaptive action. Thus, cognition 'happens' in close interaction with the world. The notion that 'cognition is for action' is not new (James, 1890). However, it is only in recent years that this is being realized (see Fiske, 1992). The general argument here is that we learn about our social environment in an active way, by means of social interaction to further the attainment of our goals. Cognition is not only for representation, processing and computation, but also for the regulation of

action. For instance, Fiske, Haslam, and Fiske (1991) show that representations of other people are organized in terms of the nature of one's relationship to those people and therefore the types of activities one shares with them (see also Carlston, 1994).

For cognition to 'happen' it has to be 'coupled' with an external entity in a two-way interaction (Clark & Chalmers, 1997). In the case of human communication, one can refer to this process as 'social coupling'. Between human agents this process is carried out chiefly by language. 'Without language we might be much more akin to discrete Cartesian "inner minds", in which high-level cognition, at least, relies largely on internal resources. . . . Language thus construed, is not a mirror of our internal states but a complement to them. It serves as a tool whose role is to extend cognition in ways that on-board devices cannot' (Clark & Chalmers, 1997, p. 14). Coupling occurs in communication between speaker and addressee via the action (message). All these *three* components of this 'event' play an active causal role and jointly regulate behavior. Language in this context is the means by which action is brought about and is a tool to effect changes. 'The fundamental function of words is to bring about changes in the speaker's environment and linguistic understanding consists in a grasp of these causal relations' (Gauker, 1990, p. 44).

In order to be able to speak about 'socially coupled systems' we have to have a better understanding of the ultimate tool, language, by which such *social coupling* is achieved. This is an important point that has to be addressed in the current resurgence of interest on the socially situated nature of cognition. The question is one of examining the tools by which cognition is implemented. For instance, much of the recent interest in socially-shared cognition (e.g. Resnick, Levine, & Teasley, 1991) *shared realities*, how they are established and the purposes they serve (Higgins, 1992; Hardin & Higgins, 1996) does not mention the use of tools by means of which individual behaviors are coordinated and synchronized. The coordination and synchronization of social interaction is a crucial issue to understand not only how shared realities is achieved but also how social cognition is implemented and regulated. This is one of the issues that has received little attention in the recent views of what the social in social cognition entails (e.g. Higgins, 2000). How is manifest *social* action achieved and what features do such devices have to have in order to be able to function as tools that enable social coupling?

### Language as a Tool

Like any tool, language displays a two-way adaptation (A. Clark, 1997; Semin, 1995, 1998) that allows for coupling with an external entity in a two-way interaction. What a two-way adaptive function means is best illustrated by a physical tool. A pair of scissors is engineered to fit between a task or goal and human propensities (in particular handling and movement capacities). This tool gives us capabilities or powers to do things that we do not have by nature. Armed with a pair of scissors we are able to cut paper and fabrics neatly.<sup>1</sup> Language is the ultimate two-way adaptation device. Most importantly, it gives the power to communicate. Moreover, as A. Clark (1997, pp. 193–194) points out, 'it also enables us to reshape a variety of difficult but

<sup>1</sup> Obviously, literal tools have a real existence independent of their use, linguistic tools do not have an existence independent of communication. Linguistic tools are *reproduced in communication* (see Semin, 1998, 2000a, b).

important tasks into formats better suited to the basic computational capacities of the human brain. Just as scissors enable us to exploit our basic manipulative capacities to fulfill new ends, language enables us to exploit our basic cognitive capacities of pattern recognition and transformation in ways that reach out to new behavioral and intellectual horizons. Moreover, public language may even exhibit the kind of double adaptation described above, and may hence constitute a body of linguistic artifacts whose form is itself in part evolved so as to exploit the contingencies and biases of human learning and recall'.

### Language as an Implementational Device for Cognition

Language is a medium for practical activity (Chiu, Krauss, & Lau, 1998; Higgins, 1981; Krauss & Fussell, 1996) and thus a *tool to implement cognition* in communication and thereby transform reality by conveying meaning. This is achieved by using language as a resource to structure the representation of reality in a particular way in order to shape and influence the cognitive processes of the *recipient* of a message. Additionally, the way a speaker uses language also structures an addressee's response. Looked at this way *cognition becomes 'intended action' with language as the tool for implementing such action* (see Semin, 2000a). In order to give public shape to a personal goal (e.g. talk about an event she or he witnessed, such as a fight), a speaker constructs a linguistic representation. This is achieved by choosing one particular representation of an event from a variety of alternatives (e.g. John punched David, John hates David, John is aggressive). The choice of a linguistic utterance is intended to structure not only an addressee's representation of an event in a particular way, but also the flow of the verbal interaction. Language therefore constitutes 'a structuring resource'.

In order to answer how a message is shaped we need to examine the linguistic properties of a message as verbal utterances by means of which a speaker can structure a listener's representation. Any message has two correlated properties (Semin, 2000a). These are the (1) *propositional* properties, and (2) *structural* properties of a message. These correlated features are best illustrated by an example. Consider witnessing the following event: 'John's fist travels with high speed in space only to make violent contact with David's chin and thus knocks him out flat'. A large range of options is available to represent this event linguistically. Here are a few—'John punched David', 'John hit David', 'John hurt David', 'John damaged David', 'John dislikes David', 'John hates David', 'John is aggressive'. All the sentences above express a proposition that preserves a truth reference to the event that has taken place. No one who has witnessed the event would doubt the verity of these sentences. This captures the meaning of what is to be understood by propositional properties. They represent semantic information about events or persons. Moreover, the truth-value or reference of such propositions can be checked. Thus, the propositional features of a message will vary as a function of the events to be represented. A different event, such as Jack assisting an elderly gentleman across the street will necessitate semantically different representations. Thus, the propositional properties of messages vary as a function of the type of event that is represented in verbal utterances.

The above sentences have a feature that is orthogonal to the specific propositional properties. Some of the sentences preserve perceptual features of the event (e.g. John punched David). Other sentences refer to the actual event but do not preserve its

perceptual features (John hit David). Others are removed from the precise act (John hates David—John is aggressive). They are nevertheless valid representations of the event. An event can thus be represented with sentences that vary in their degree of abstraction. The *linguistic category model* (LCM; Semin & Fiedler, 1988, 1991) captures this meta-semantic or structural property of language. The LCM is designed to identify the general cognitive functions of various linguistic devices (predicates), namely interpersonal verbs and adjectives. It furnishes the means to investigate the properties of message structure and thereby interface psychological processes underlying message production, message structure and message comprehension (Semin, 2000a, b). The LCM makes a distinction between four different levels of abstraction. These categories are respectively: *Descriptive-action-verbs*, which are the most concrete terms. These are used to convey a non-interpretive description of a single, observable event and preserve perceptual features of the event (e.g. 'A punches B'). *Interpretive-action-verbs* also describe a specific event, but are more abstract in that they refer to a general class of behaviors and do not preserve the perceptual features of an action (e.g. 'A hurts B'). *State-verbs* constitute the next category in degree of abstraction and describe an emotional state and not a specific event (e.g. 'A hates B'). The most abstract predicates are *adjectives* (e.g. 'A is aggressive'). Adjectives generalize across specific events and objects and describe only the subject. They show a low contextual dependence and a high conceptual interdependence in their use. In other words, the use of adjectives is governed by abstract, semantic relations rather than by the contingencies of contextual factors, with the opposite being true for action verbs (e.g. Semin & Fiedler, 1988; Semin & Greenslade, 1985). The most concrete terms retain a reference to the contextual and situated features of an event.

This is the sense in which linguistic devices can be seen as resources that structure the speaker–addressee environment. The choice of a specific linguistic representation over another is a way of structuring the reality in a message and intending to structure the representation, comprehension and action of the addressee (Semin, 2000a). This is precisely what is meant by the notion of language having two-way features in terms of achieving social coupling.

### External Tools as Memory Devices—The Situation

Indeed, it is not only language as an implementational tool that requires more careful and systematic attention. The role that social artifacts such as red postboxes and cash dispensers play in structuring action and thus regulating socially shared cognition receive virtually no attention (e.g. Hardin & Higgins, 1996) whatsoever as Caporeal (1997) points out. Such artifacts constitute crucial landmarks that provide markers for the organization of complex goal directed action, and also serve as external memory tools. Thus, when I have to drive (action) to a particular destination (goal) I do not need a mental map or representation of the entire region, but simply use signposts as artifacts that help me regulate my driving in order to reach my destination. A substantial amount of cognitive resources are downloaded to such artifacts. The action itself can be seen as an *emergent process* that is regulated by the continually changing relationship between the driver and the environmentally provided situated knowledge. Both internal and external resources contribute to the regulation of action.



It is self-evident that closer attention has to be paid to such artifacts in order to understand the coordination of social interaction (Hodges & Baron, 1992).

### THE MESSAGE-MODULATION MODEL

How is the use of implementational devices and external resources shaped in communication contexts? As we know, one of the central social constraints on how a message is modulated is to be found in the relationship between a speaker and a listener. In the following I shall outline a model that attempts to capture the central elements of how messages and their properties are modulated. The gist of what the model attempts to capture is best illustrated by an example. Consider the following simple exchanges between two strangers in Amsterdam who want to find the way to the soccer stadium and a local informant. One is a tidily dressed woman and the other is the archetypal soccer hooligan from some unspoken country. In the first case, the local's response will probably be something like 'Take the first road to the left. When you see the McDonald's, turn right. Then you arrive at a T-junction and then . . . etc., etc.' The answer in the second case is much more likely to be 'Just go straight ahead and you will get there. Good luck.' In the first instance, we have a helpful, detailed and accurate instruction. In the second case, the instruction is as misleading as it can be. The messages (instructions) constitute situated knowledge structures by which *social coupling* is achieved. Their production is regulated by the cognitive and motivational implications of the speaker–audience relationship. The message is a product of motivational (like or dislike for the target), cognitive (preparation of instructions) and behavioral (speech acts conveying a cognitive map) processes. The message is designed to impact the audience cognitively, behaviorally and motivationally. The impact of the message can be seen as (1) providing a cognitive map, that guides the (2) 'stranger's' behaviors to reach a destination, and as having (3) clear motivational consequences (a very satisfied or highly angered inquirer). In this context, both speaker and audience present external memory tools for the event to occur. The speaker is identified as a local and thus approached, the addressee is identified as a tidily dressed woman or a soccer hooligan. *The knowledge structure as presented in the message is a situated one and is the emergent outcome of the relationship between speaker and audience, and its psychological function and status cannot be understood independently of this relationship.*

I refer to this way of talking about the emergent nature of social cognitive processes that are distributed across a communication context as the *message-modulation model*. This model can be expressed in terms of three general propositions.

- (1) Messages (speech acts) are *publicly accessible situated knowledge structures* that are mediated by the propositional and structural properties of language.

According to this proposition, a message (a speech act) constitutes a *manifest, publicly accessible behavior*. In the above example, the instructions to reach (or not) the stadium are provided by the manifest *propositional* properties of the instruction. Such knowledge structures can also be mediated by the structural properties of the message. These types of publicly accessible knowledge structures are emergent

structures. Moreover, such knowledge structures are not something internal to an individual but rather *external* and *shared*, namely publicly accessible.

- (2) The function of messages is the regulation (e.g. coordination and synchronization) of the cognitive, behavioral and motivational processes between speaker and audience.

This proposition addresses the regulatory function of messages. A message is meaningless without an audience. Essentially, the function of any message is to *coordinate* the interaction between a speaker and an audience. Thus, the message in our example was designed to enable an inquiring stranger to get to a destination or not, as the case might be. Such messages are manifest, tailored for the particular purpose at hand and—all other things being equal—truthful, informative, relevant, clear, brief and orderly (Grice, 1975). However, speaker–audience relationships are not always neat, clean and unmotivated, as we are reminded by the brief, informative but clearly misleading instructions supplied to the hooligan. Moreover, the particular shape that such public knowledge structures acquire are regulated by motivational features of the speaker–audience relationship, shaped by the cognitive processes that are motivationally regulated and expressed by the use of linguistic tools that interface with the audience (the inquirer).

Furthermore, the specific circumstances characterizing the speaker–audience relationship will be detectable from the linguistic properties of the message. These, as I shall argue in some detail below, depend on the degree to which we have a sophisticated conceptual and methodological handle one has on language as the ultimate social coupling tool. But in essence, messages contain information not only about the psychological processes (cognitive, motivational) underlying message production but also those processes (cognitive, motivational) that constitute the intended impact of a message on its audience.

- (3) The type of situated knowledge structure that a message constitutes is an emergent property resulting from the speaker–audience relationship.

The shape that a message takes reflects the emergent quality of speaker–audience relationship. Messages, their function, type, and shape cannot be understood independently of the relationship or interdependence between speaker and audience. The speaker–audience interdependence is an *emergent and regulatory property that characterizes the intersection between speaker and audience*, rather than residing in some internal qualities of the two parties to a communication. The speaker–audience relationship supplies the regulatory motivational and affective processes that contribute to the shape of the message. Conversely, the message conveys information about the type of relationship between speaker and audience and in fact reifies the relationship.

In short, the message-modulation model suggests that cognition is an emergent and situated process that is regulated by motivational processes inherent to the speaker–audience relationship and manifested in situated knowledge structures servicing the attainment of speakers' and recipients' goals. Language is the device by which the social coupling is achieved—namely message production and the respective characteristics of the agents constitute the external memory resources that drive the dynamics of the emergent outcome, the message. Now, let us look at some extant research in

social psychology that has been conducted with a view of incorporating the communication context into social cognition.

### THE TRANSMISSION AND MAINTENANCE OF STEREOTYPES—AN ILLUSTRATIVE CASE OF SOME OPEN QUESTIONS AND DIRECTIONS

What concrete implications does the message-modulation model have for social cognition? What types of new directions are indicated for research that examines social cognition as a situated and emergent process that makes use of tools and external devices? In the following the 'linguistic intergroup bias' (e.g. Maass, 1999) is used to highlight some answers to these questions and raise others that suggest potential avenues for both research and theory formulation. A brief overview of this phenomenon and its explanation is provided to set the stage for these issues.

#### The Linguistic Intergroup Bias (LIB)

Anne Maass and her colleagues (e.g. Maass, Ceccarelli, & Rudin, 1996; Maass, Milesi, Zabbini, & Stahlberg, 1995; Maass, Salvi, Arcuri, & Semin, 1989) were the first to investigate the relationship between stereotype-related message production and the cognitive and motivational processes underlying this production. This research has shown that how social events are linguistically reproduced varies systematically and that such variation is a function of the group membership of the speaker and the target in the social event. For instance, the same desirable behavioral event was shown to be represented in more abstract language if performed by an ingroup target than by an outgroup target. Moreover, the same undesirable behavioral event is represented more concretely when performed by an ingroup target than an outgroup target. The twist in this finding concerns the implicit meanings conveyed by abstract and concrete language-use in describing behavioral events. The means conveyed by abstract and concrete interpersonal language have been shown to differ (Semin & Fiedler, 1988, 1991). Abstract messages lead to target generalizations, and are seen to provide more information about enduring properties of the target and less information about the situational context. Also, abstraction implies that the event in question is more likely to recur (Maass *et al.*, 1989). Concrete messages lead to event particularization, such that the behavior in question is seen as specific to the context. Desirable ingroup behaviors and undesirable outgroup behavioral events are represented more abstractly and thereby *implicitly* transmit the inference that these behaviors are due to enduring characteristics of the targets (Franco & Maass, 1996). In contrast, concrete representation of ingroup undesirable and outgroup desirable behaviors is intended to convey the incidental or particularistic nature of the behavior.

Maass proposes that both motivational and cognitive mechanisms are responsible for this bias. The former derive from social identity theory (Tajfel & Turner, 1979, 1986). The argument is that this linguistic bias serves to maintain a positive ingroup image even in the light of disconfirming evidence (e.g. Maass *et al.*, 1996). The cognitive mechanism derives from research showing that expectancy-consistent

behaviors (namely stable, and typical behaviors) are generally described at a higher level of abstraction than expectancy-inconsistent behaviors (Maass *et al.*, 1995, 1996).

*Question 1: For Whom are Messages Constructed and for What Purpose?*

The message-modulation model suggests that the relationship between a speaker and addressee is critical in shaping the structure of a message and that such messages have cognitive, motivational and behavioral implications. Interestingly, the research on the LIB has not examined message production in a real or simulated communication context. In other words, messages showing the LIB were produced without any explicit reference to an addressee or communication goal. Of course, this paradigm rests on the assumption that 'internal' cognitive and motivational processes are responsible for the LIB. Consequently, the LIB is treated as an individual-focussed general bias.

Recent research (Semin, Montes, & Valencia, 2000, unpublished manuscript) suggests another way of looking at the LIB. Semin *et al.* look at how messages are formulated in a communication context by setting up an experimental situation where the relationship between a speaker and an addressee is either cooperative or competitive. The speaker is then given the opportunity to send a message to the addressee who is either a partner in solving a task or an opponent. The message is about a positive or negative behavior that the partner (or opponent) has displayed on a previous occasion. This message is to be read by the partner or opponent prior to starting a cooperative or competitive task. In the competitive context a message can facilitate the attainment of one's task driven objectives and hinder the addressee's objectives. In the cooperative situation, the message can have the function of facilitating joint performance and this objective is more likely to be attained by using the message to convey to the recipient one's positive or cooperative attitude. When participants knew that their message is to be read by their partner (opponent) they modulate the message structure. When cooperating they described their partner's positive behaviors abstractly (indicating enduring positive qualities) and negative behaviors concretely (i.e. bagatellizing the causes of the undesirable behaviors). When competing they described positive opponent behaviors concretely and negative ones abstractly. Thus, messages serve specific functions in the communication context to facilitate or hinder the goals of the participants. Thus, if the message has no function then no message modulation occurs.

One interesting implication is that the LIB is unlikely to occur if the message was denied to have a communicative function. To examine this Semin, de Montes, Gil & Valencia (Communication Context and Strategic Language Use: The Message Modulation Model, submitted) introduced a control condition where the message had no communicative function. Participants were told that the message would not be given to the addressee. In this condition, no effects were observed whatsoever. Thus, when the message has no communicative function, then the modulation of message structure does not occur. These findings indicate not only that the relationship between a speaker and addressee is important to understand how a message is modulated, but also whether the message has a communicative function.

The second interesting implication is a question—why does the research to date show a LIB in the absence of an explicit addressee? One can only surmise that such

an addressee was in fact implied in these experiments, probably by the context of the studies (e.g. Maass *et al.*, 1989). Moreover, the message-modulation model suggests that the implied addressee must have been an adversarial one, since the LIB effects are unlikely to be manifested with a non-adversarial addressee. Moreover, recent research by Ruscher and Duval (1998) suggests that message modulation is also strongly influenced by whether speaker and addressee are communicating shared versus unshared information. These are the types of questions that may lead to the development of systematic lines of research about message structure, function and characteristics in a communication context.

*Question 2: Is the Message Merely the Outcome of Internal Cognitive and Motivational Processes?*

The message-modulation model suggests that messages and their structures have an emergent quality that results from the speaker–audience relationship. The contrasting results obtained by Semin, de Montes, Gil & Valencia (Communication Context and Strategic Language Use: The Message Modulation Model, submitted) between the communication and the no-communication conditions suggests that messages such as those examined in the LIB are *situated and emergent*. This contrasts sharply with the view that expectancies or internal motivational processes drive message structure. If internal processes alone were responsible for the LIB then the same message structure should emerge even when the message has no communicative function. This is not the case (e.g. Semin, de Montes, Gil & Valencia (Communication Context and Strategic Language Use: The Message Modulation Model, submitted)). Similarly, Schaller and Convey's (1999) research showed that the types of goals and the content of interpersonal communication influences the situated expression of stereotypes. Also, recent work by Crocker (1999) suggests that the self-esteem of the stigmatized is situated and emerges as a function of the type of socially shared meaning and features of the situation by which the relevance of such shared meanings are accessed when evaluating the self. This type of research that examines the situated nature of social cognition provides one possible avenue of specifying the relationship between internal and external resources in the generation of action in a communication context and—one would hope—a more precise conceptualization of what socially situated action is.

Finally, the above arguments about socially situated cognition have one general implication for conceptualizing social cognition. It suggests that if we disregard the action (message) implications of cognitive processes and the context in which it is produced (e.g. speaker–addressee relationship) then we run the risk of assuming that cognitive and motivational processes are entirely driven by internal resources and are not adaptive to the respective situational contexts. A case in hand is the cognitive and motivational explanations of the LIB that are assumed to be internal and thus context-insensitive. However, if cognition is for the regulation of adaptive action then it must be socially situated. Moreover, as the message-modulation model suggests motivation should be regarded as a regulatory process for situated cognition and in the case of the above cited research (Semin, de Montes, Gil & Valencia (Communication Context and Strategic Language Use: The Message Modulation Model, submitted)) arises as a function of the type of interdependence between speaker and addressee.

*Question 3: What Mediates the Impact of a Message and What are the Implications of a Message?*

An important question is how systematic biases in these messages influence recipients (or addressees). We need to address this question if answers to the cognitive, motivational and behavioral implications are to be better understood. Some preliminary work in the stereotype transmission domain identifies the specific linguistic properties that are responsible for the types of inferences that receivers make. Concrete messages are shown to lead to particularizing inferences about the target whereas abstract ones lead to generalizing dispositional inferences (Werkman, Wigboldus, & Semin, 1999; Wigboldus, Semin, & Spears, 2000). However, the limitation of this research is that it uses 'neutral' receivers, that is, receivers did not stand in an interdependent relationship to the addressee and the message was in fact not designed for them in the first place. Moreover, these isolated examples of a social coupling process (e.g. Semin & de Poot, 1997; Werkman *et al.*, 1999; Wigboldus *et al.*, 2000) dissects the different stages of a social coupling process that generally take place within real time constraints into production of *written* messages and reception of written messages. Thus an important research agenda is the systematic examination of both the cognitive, motivational processes that give rise to messages (action) as well as the motivational, cognitive and behavioral implications for recipients of such messages.

*Question 4: Distinguishing Between Production and Reception Paradigms*

The current perspective invites a reconceptualization of a domain such as the linguistic intergroup bias in terms of a speaker, a message and an addressee and the relationship between these three analytically distinguished elements. Conventional conceptualizations of the stereotype domain in particular but social cognition research in general place the research participant in an *addressee* role and the stimuli constitute the experimentally controlled material (message). This type of approach can be referred to as using an '*implicit reception paradigm*'. It is implicit because this paradigm treats cognition as primary and is not designed within a communication framework. The psychological focus is on an individual's *comprehension* processes (thus reception) and consequently the individual constitutes the proper unit of analysis. Furthermore, this is not typical of comprehension processes in everyday life where comprehension is integrally tied to preparation for a reaction, a response to the action that has to be comprehended.

Formulating such problems from a 'social coupling' perspective does not mean that one has to dispense with such a focus, however. The advantage that a social coupling perspective offers is a bridging of intra- and interpersonal processes by establishing how cognitive and social processes interface, forcing one to take into account production processes (speaker and product, i.e. message) and reception processes (addressee). In doing so, one also has to seriously consider the resources that are deployed in such a communication context. The introduction of a production–message (action)–reception framework may have the added advantage of forging interfaces between different types of social psychological domains and theories into a mutually informative dialogue.

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