

*Beyond communicative intention**

MARIE-ODILE TAILLARD

Abstract

While intentions are at the center of communication theories such as Relevance Theory, and also of theories of action in general, the interaction between communicative and non-communicative intentions has not been much investigated within the relevance-theoretic framework. This paper discusses Bratman's (1987) Theory of Planning, which recognizes the critical role of intentions in governing our actions, driving our practical reasoning, and enabling us to coordinate with other individuals. I will argue that this theory can shed new light on how a communicator's non-communicative intentions can shape her utterances and affect her audience's intentions, how the audience's intentions may influence the comprehension process, and how audiences may cope with attempts at persuasion by considering the communicator's non-communicative intentions.

1 Introduction

The relationship between thoughts (e.g. desires, beliefs and intentions) and actions has been investigated by philosophers through the ages, and characterized in very different ways. Under one theory (Bratman, 1987), which answers many previously unresolved questions, and has received some empirical backing from cognitive psychology (Malle, Moses and Baldwin, 2001), plans and intentions are mental states that we develop rationally in order to enable the fulfillment of our desires, given our beliefs. A plan is a higher-level intention. Once we have committed to a plan, we form more specific lower-level intentions enabling us to carry it through, and perform the actions necessary to fulfilling each level of intentions. This planning process is critical to our functioning both as rational individuals and as social beings, because it projects our attitudes and beliefs into time and social space, allowing them to affect our actions beyond the present and enabling us to coordinate our actions with those of others (Bratman, 1987).

While intention has been shown to be central to human communication, the critical role in social interaction of intentions beyond communicative intention has not been much studied within Relevance Theory (RT). In developing RT, Sperber

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& Wilson (1986, 1995) argued that two levels of intentions are involved in ostensive communication: the informative intention and the communicative intention. The speaker's informative intention is to inform the audience of something (e.g. to induce a belief in the audience). For example, if I am a passenger in a car and find the outside scenery attractive, I may form the intention to inform my fellow passengers that I find the scenery attractive. I might choose to do so by looking out of the window with an enthusiastic facial expression. In addition, and as a means to fulfilling my informative intention, I might form a 'communicative' intention, i.e. an intention to let my fellow passengers know of my intention to inform them that I find the scenery attractive. It is this communicative intention that is the mark of ostensive communication. My facial expressions might have revealed my enthusiasm for the beauty of the countryside in a purely accidental way. By contrast, when I utter: 'What beautiful scenery!' I indicate 'ostensively' (Sperber & Wilson, 1986, 1995) that I intend to share my enthusiasm. Clearly, my intention to communicate is best fulfilled if I make it manifest to my audience in such a way that there is no question in their mind that it was indeed my intention. Just as importantly, in understanding my utterance, the audience must correctly recognize my informative intention: 'she intends for me to believe that she finds the scenery beautiful,' rather than any alternative intentions, such as 'she intends for me to believe that "What beautiful scenery!" is the translation of "Quel paysage magnifique!"'

From the production perspective, my intention to communicate results directly from my intention to fulfill my informative intention, i.e. to make the audience believe something. From the recovery point of view, unless the audience correctly recognizes the speaker's informative intention, communication has failed. This clearly illustrates the hierarchical structure of intentions. We can take the example one step further. My intention to share my enthusiasm for the scenery might, for instance, serve (from my perspective) to fulfill, and be best understood (by others) in the light of, my underlying intention to cause the hearer, having adopted the same attitude, to stay awake while driving. In this case, isolating the communicator's informative and communicative intentions (to share her appreciation for the scenery) does not reveal to the audience the communicator's higher-order intention (to keep the driver awake), which might nonetheless have some relevance for them. The higher-level intentions that the audience brings to this particular interaction will also help determine the extent to which the communicator's higher-level intentions are explored, and the cognitive resources mobilized to do so.

In this paper, I will examine the role of intentions beyond the informative and communicative intentions, both in the general context of social interaction, and more specifically, in communication. I will show how the specific characteristics, structure, and commitment inherent to intentions, as detailed by Bratman, give

them a pivotal role in enabling communicators to influence the intentions and actions of others. Beyond the informative and communicative intentions lies a highly organized structure of plans and intentions that constitutes much more than just the general context in which communication is produced and understood – it is the driving force behind our interactive and communicative actions. I will begin by reviewing Bratman's theory of planning, contrasting it with previous philosophical accounts which treat intentional action either as caused by the agent's desires and beliefs, or as resulting from an exercise of will. This discussion is important in that it is the failure of such accounts that justifies the claim that intentions are distinct cognitive states, with a critical role as motors of action, a role which we must recognize when constructing an intention-based theory of communication.

2 Bratman's Planning Theory

2.1 Beliefs, desires and intentions

Humans are planning agents, according to Bratman. Planning enables us to organize our actions over time and to coordinate them with those of other agents. Plans are hierarchical structures, the elements of which are intentions. As intentions are fulfilled, we proceed step by step towards the eventual fulfillment of our plans. So, if furthering my education or pursuing academic achievement are among my highest-order plans, completing a PhD is a plan of a slightly lower order, followed roughly, in descending order, by my intention to write a thesis, my intention to write this chapter, my immediate intention to finish this section by 3:00 this afternoon and so on. As I complete each step, I give myself, through practical reasoning, the means to reach the next step. Practical reasoning, or means-end reasoning, plays an important part in Bratman's theory, and involves the consideration of how best to successfully reach certain ends.

In order for this planning process to work, there are constraints on how intentions should fit into the planning hierarchy: each intentional step must be taken in such a way that it is 'means-end coherent.' In other words, any optional action must be considered as a coherent means to an end in the structure. For example, in order to write a thesis on persuasion, I intend to find a framework in which to better understand intention in communication; I intend to write this paper to discuss such a framework. Beliefs and desires function as an 'admissibility filter.' As I consider possible courses of action to reach my goal, the optional actions under consideration must be screened through the 'filter' of my beliefs and attitudes (Bratman, 1987, pg. 33). If my intention is to obtain a book from the library, and I believe that the library, which is on campus, is holding the book on reserve for me through the end of the day, I should form the intention to go to campus today

instead of tomorrow. Similarly, in order to fulfill my informative intention to share my enthusiasm for the scenery, I must form a communicative intention to have my informative intention recognized. It is only by fulfilling my communicative intention that I can fulfill my informative intention by inducing the audience to share my enthusiasm for the scenery. I will come back to this practical reasoning process, and to the role played by desires and beliefs in this process, in section 4.

2.2 Features of intentions

Because of their temporal and interpersonal coordination functions, intentions exhibit specific characteristics that set them apart as a category of mental states distinct from desires and beliefs, according to Bratman. One of these features is their stability. Once an intention has been formed, it has inherent ‘inertia’ which makes the possibility of reconsidering it subject to certain norms of practical rationality. As rational agents with limited cognitive resources, we develop certain sets of habits or dispositions that enable us to maximize the efficiency of our reasoning processes. Such dispositions, once formed, help us identify with minimal effort those situations in which reconsideration of an intention may be warranted, and assess the various costs and benefits associated with such reconsideration before it is even carried out. This inertia makes intentions a firm base on which to build further intentions and enable temporal or interpersonal coordination. Clearly, without such habits or dispositions, we might well waste both time and cognitive resources reconsidering every step of our planning structures, regardless of the rationality of such reevaluation.

Another feature of intentions, notes Bratman, is that they crucially act both as inputs to and as outputs of practical reasoning. Bratman proposes a detailed account of how an input intention (one that has been formed by the agent and has achieved stability) provides a rationale for the development of further (output) intentions within the framework of the agent’s desires and beliefs. Here again, we see the familiar pattern of an informative intention acting as the input to a process of practical reasoning, the output of which is a communicative intention. Because of the importance of the practical reasoning process to Bratman’s planning theory, and to my upcoming discussion of the role of intentions in communication and in social interactions, I will discuss practical reasoning in greater detail in section 4.2.

Finally, intentions, in Bratman’s planning theory, are characteristically ‘conduct-controlling.’ How intentions, desires and beliefs are linked to specific actions has long been a subject of concern for philosophers. At least two schools of thought can be distinguished. Proponents of a causal explanation defend the notion that our desires and beliefs are the reasons for our actions, and that more specifically they **cause** our actions. Volitionists, on the other hand, believe that actions are

brought on by an act of will performed 'in light of' the agent's desires and beliefs. I will briefly review both of these theories to highlight the originality of Bratman's contribution.

3 From desires and beliefs to action

3.1 Davidson: Reasons Cause Action

In his well-known essay on 'Actions, Reasons and Causes' (1963), Donald Davidson proposes that intentional actions are bodily motions caused by 'the onset' of a certain state of mind, namely a pro attitude, combined with a set of related beliefs, which together constitute the reasons for action. Davidson (1963/1980, pp. 3-4) characterizes pro attitudes as 'desires, wantings, urges, promptings... social conventions, and public and private goals and values in so far as these can be interpreted as attitudes of an agent directed toward actions of a certain kind.' There is, at least in Davidson's earlier work, no intervening, distinguishable mental state or act such as an intention between, on the one hand, the desire for an outcome, combined with the belief that such an outcome can be achieved by undertaking a specific action, and, on the other hand, the action itself. The reasons for undertaking an action (pro attitude plus belief) cause the bodily motion directly, in Davidson's view. The action itself can be seen under an intentional or an unintentional description. The standard illustration involves an agent reaching for the salt-shaker at the dinner table and knocking down a wine glass. This constitutes only one action, a bodily motion of the arm being extended, caused by desiring the food to be saltier and believing that adding salt will fulfill this desire. The reason for undertaking the intentional action of extending the arm is to fulfill the agent's desire for saltier food by adding salt. 'Under one description,' (Davidson, 1963/1980, pp. 4-5) this action is an intentional reaching for the salt, while under another description, the same bodily motion is an unintentional knocking down of the wine glass.

While pro attitudes clearly encompass some notion of desire or will, Davidson strongly rejects the idea of what he calls a 'mysterious act of the will' (Davidson, 1974/1980, p. 87) as a source, reason or cause of action. In some of his later work, Davidson characterizes the role of pro attitudes as premises roughly akin to, for instance, 'any act of mine would be desirable insofar as it is an act of making the food saltier', which, together with my belief that adding salt will make the food saltier, results in an 'all-out evaluative conclusion' (Bratman, 1999, p. 212), the acceptance of which is my reaching for the salt. If we are to apply this form of practical reasoning to the intentional production of utterances, intentions themselves must be able to function as inputs to such reasoning in order for our

informative intentions to give rise to the communicative intentions that lead to their fulfillment.

3.2 Volitionism

The volitionist account argues that an act (or possibly state) of ‘will’, which might be represented by the statement ‘I will that I perform this action,’ (e.g. Grice, 1971, p. 277), intervenes between desires and beliefs, on the one hand, and action, on the other. This act or state of will is a ‘primitive element of animal consciousness’ (O’Shaughnessy, 1980) that ‘has the power of producing the bodily movements it represents’ (G. Wilson, 2002). In other words, it is not one’s desires and beliefs that cause one to act, but rather, one’s ‘primitive’ will. Volitionists strongly reject what they see as a lack of choice inherent in Davidson’s account of action: if one is actually caused to act by one’s beliefs and desires, one has no free choice. In response to Davidson, volitionists propose that willing is a state of mind antecedent to action which enables us to choose ‘in the light of’ (rather than caused by) our desire and beliefs (Lowe, p. 252), between actions, or between action and non-action. Volitionists support their claim by comparing successful with unsuccessful actions. An act of will takes place regardless of whether the action is to be met with success or not, so that ‘willing that one perform an action’ is the ‘common element’ between successful and unsuccessful actions (Lowe, pg. 247). For example, I may ‘will that’ I communicate my appreciation of the scenery, but find myself unable to produce a sound upon opening my mouth, and therefore fail to perform the action. The link between one’s desires and beliefs and one’s actions is indeed one’s will to act, the common element that does not depend on the action being successful, argue the volitionists. It is the broader framework of how to account for the rationality of willing a certain action given one’s volitional states and beliefs that is left unresolved in the volitionist framework. Indeed, Davidson himself seems to accept this common element (although he insists that it is non-volitional in nature) as an input (‘any act of mine that yields the desirable effect is desirable’) to his own brand of practical reasoning.

Michael Bratman clarifies and redefines this debate between the volitionist account and the causality account of action in terms of his theory of planning, and specifically the notion of planning agency. The critical new element offered by Bratman is the existence of intentions as a state of mind in their own right, distinct from beliefs and desires, but derived from them through practical reasoning. Bratman claims to shed new light on the age-old ‘reasons as causes’ issue by shifting attention away from actions to intentions and their functionality as the centerpiece of the debate. Crucially, according to Bratman, intentions and the more complex plans they constitute commit one to action; and commitment, as we shall

see, reconciles the two conflicting accounts of action. Desires and beliefs do lead to action, albeit through practical reasoning, planning and commitment.

4 Bratman's notion of commitment

4.1 Commitment

We'll now see how Bratman's account of commitment manages to steer clear of the perils of both the 'mysterious act of will,' and the sort of inescapable causality 'exerting a ghostly mode of influence on later action' (Bratman, 1987, p. 108). Bratman's solution avoids these perils by acknowledging causal and volitional elements as two facets of commitments, each with its particular role to play in a notion of commitment steeped in bounded rationality (Simon, 1956, Gigerenzer & Selten, 2001). Bounded rationality, a term first used by Herbert Simon (1956), refers to the process of practical reasoning under limitations of time and cognitive resources. Under such limitations, humans take advantage of regularities in the environment in which they function and in the information which they process, to develop efficient habits, dispositions, or norms. Commitment, according to Bratman, qualifies as one such set of dispositions and internalized norms, operating more or less effortfully, automatically or consciously as the link between our intentions and our actions. The resource-saving advantage of commitment is clear. By committing now to going to the library tomorrow, I am efficient in two ways: I make it possible to coordinate my visit to the library with my other activities and those of others around me, and I save myself the time and effort of having to reason tomorrow that I must go to the library to pick up a book. Certainly, if we are to apply this account of commitment to informative and communicative intentions, as I will in greater detail in section 5, an appeal to automatic processes linking intentions to the production of an utterance is appealing. I will show that the advantages of Bratman's notion of commitment in intentions go well beyond this immediate benefit.

There are two dimensions to commitment, argues Bratman. The descriptive dimension has to do with the actual role of commitment in undertaking actions, while the normative dimension relates to the role that commitment ought to have in the conduct of our lives in order for us to attain satisfaction in the long-term. As noted above, the descriptive dimension of my commitment to going to the library is simply that it enables me to coordinate with others and within my own activities, without having to reconsider the plan at any point along the way. The normative dimension consists of the rational norms and standards that affect my reasoning and my action. Here, Bratman distinguishes between internal and external norms of rationality. As we engage in practical reasoning, we consider certain options for future action. Internal norms of rationality in practical reasoning have to do with

the ‘admissibility’ of these options as they come under consideration. These admissibility norms include means-end coherence, consistency and inertia (discussed above). If I am committed to going to the library tomorrow, I can use this commitment to rationally form the intention to meet a friend on campus and commit to doing so. At the same time, our practical reasoning is constrained by what Bratman terms ‘external’ norms of rationality. Such norms are external in that they are accessible to an outside observer: they are not constrained by the agent’s ‘admissibility filter’ (her desires and beliefs), but rather by norms governing when it is generally rational for an agent to deliberate or reconsider intentions and/or plans. Suppose that I bought theater tickets several weeks ago for tomorrow night, but failed to record this plan in my diary, and now accept an invitation to travel to Paris tomorrow for several days. Based on my belief that I have no previous commitment for tomorrow (i.e. my own admissibility filter), my intention to go to Paris is rational. However, anyone who knows of my two conflicting commitments and is therefore unconstrained by my admissibility filter could accuse me of irrationality.

While it exhibits two aspects or dimensions, commitment consists of two components: one volitional, the other ‘reasoning-centered.’ The volitional component is simply the immediate control exerted by a present intention over an action: my intention to engage now in an action is sufficient for me to ‘endeavor’ (or ‘at least try’) (Bratman 1987, p. 108) to engage in the action. My commitment to going to the library makes me ‘endeavor’ to go to the library when the time comes for the action to be performed. It is my commitment which will make me walk out the door and get on the underground to travel to the library. The ‘reasoning-centered’ component of commitment consists in the roles played by intentions over time -- from their formation to the performance of the intended action. It is because I need the book for my research that I placed it on reserve, and will pick it up tomorrow when it is available. Bratman’s characterization of commitment as part volitional (it requires that I walk out the door and take the underground to ‘endeavor’ to go to the library), and part reasoning-centered (my intention to read the book results in my intention to pick it up from the library and in my going to the library) is intuitively very appealing. There is nothing ‘mysterious’ or ‘ghostly’ about any of this: while my own practical reasoning makes this commitment rational (internally and externally), I am able at any point to reconsider my intentions, if such reconsideration is compatible with my internal norms, and take on another commitment. If my child becomes ill, my internal norms trigger reconsideration of my visit to the library, and my desires and beliefs (admissibility filter) justify my abandoning the intended trip to the library and staying home.

Bratman’s account of commitment offers an altogether credible, but, unsurprisingly, very complex set of attitudes and reasoning processes working

together to result in the important coordination function of intentions, both temporally, and interpersonally. In so doing, he manages to ‘demystify commitment without allowing it to collapse into mere desire and expectation.’ (Bratman 1987, p. 110).

4.2 Practical reasoning and deliberation

Having discussed most of the elements of Bratman’s particular brand of practical reasoning in the context of his planning theory, I will now consider the process of practical reasoning itself. In general terms, we’ve seen that practical reasoning is, in Bratman’s view, part of an individual’s attempt to reach long-term rational desire satisfaction. Along the way, rational desire satisfaction requires the fulfillment of one’s plans, which itself requires the formation of lower-order intentions and their fulfillment through the performance of intended actions. One of the important features which, according to Bratman, distinguishes intentions from desires and beliefs is their role as inputs and outputs of practical reasoning. As inputs, higher-order intentions ‘pose a problem’, since they require one to choose between several courses of action offering different methods of fulfilling them. These options are screened against the admissibility filter created by existing desires and beliefs, as well as existing intentions. The output of this deliberative process is the retention of one course of action and, as commitment to it develops, the formation of a new intention. This chain of cognitive states and actions is held together by commitment, which ensures that our intention to undertake certain actions, and their rationality, is accounted for every step of the way. It is the cognitive work behind this planning structure and its fulfillment which Bratman terms practical reasoning. Built into this cognitive work are many mechanisms that ensure efficient processing and take advantage of regularities by creating what Bratman calls habits, dispositions and norms (some of which others might call heuristics, cf. Gigerenzer & Selten, 2001). I discussed in section 2 how such mechanisms are appealing to proponents of an intention-based communicative theory (and an efficiency-based cognitive theory) such as RT.

Put in a dynamic and interactive context, this massive planning structure becomes more complex. Not only do intentions themselves ‘pose problems,’ but external events and pressures affect our intentions by posing and solving further problems. Here again, our practical reasoning is permeated with mechanisms geared to achieving cognitive efficiency. As noted above, prior intentions are inherently stable, and will not be reconsidered unless the options generated by external pressures exhibit certain characteristics that make both the reconsideration and its potential outcome beneficial to the individual’s immediate or longer term plans and intentions. While Bratman discusses at great length what makes reconsideration rational, and how the resulting deliberation would be constrained

both by the admissibility filter and by habits, dispositions and norms, he does not discuss the nature of such external pressures and how they might be exerted. This is obviously an issue of great interest in the study of communication as it is through communication that individuals gain information about each other's cognitive environment and attempt to modify it.

The first dimension worth focusing on in discussing these external pressures is whether they themselves are intentionally exerted or not. Once identified as intentional, such pressures might then be analyzed in terms of the wider network of intentions and plans of the other agent, and thus further screened for evidence of cooperation, manipulation etc. It is then possible to imagine a manipulative scenario in which one agent tricks the built-in efficiency mechanisms of another into 'letting through,' or not tagging for deliberation, an external option which might not be the most beneficial, the most 'desire satisfying' for that other agent in the long-term.

5 Intention and coordination in social interaction

5.1 Intentional cognitive effects of communication

In this section, I will analyze some of the consequences of adopting Bratman's theory of planning and intentions for an intention-based theory of communication. Following Paul Grice's work on meaning and intention, pragmatists have generally accepted that understanding an utterance requires the hearer to recognize the speaker's intentions. This critical role of intentions in communication is part and parcel, I believe, of their role in interpersonal coordination, as discussed by Bratman. Clearly, in order to coordinate one's actions with those of others, one needs to communicate one's intentions successfully. For this to happen, the addressee must at least recognize the communicator's intention: some minimal level of effective communication¹ is required for intentions to fulfill their coordinating role. Given that one of the roles of intentions is precisely to enable individuals to coordinate with others, it should hardly seem coincidental that communicating and making one's intentions known to others are intimately connected: conveying intentions is both the means and the goal of intentional communication. Individuals form the intention to make the audience believe something in order to coordinate with others around them. When this intention is recognized and, if all goes well, the appropriate beliefs are formed by the audience, the interpersonal coordination role of intentions is enabled.

¹ Deirdre Wilson pointed out that this need not be restricted to ostensive communication: having one's informative intention recognized can be sufficient for an agent to coordinate her intended action with another individual.

In developing RT, Sperber and Wilson (1986, 1995) distinguish, as we've seen, between two levels of speaker intention, both of which are critical to the coordination function just discussed. The speaker's informative intention is, as seen earlier, to make the audience believe certain things. The speaker's communicative intention is to have her informative intention recognized. When the addressee does indeed recognize the speaker's informative intention, she has understood the speaker's meaning. Her recovery of the intended meaning is guided by the presumption of optimal relevance: the presumption that the utterance is at least relevant enough to be worth processing, and moreover the most relevant one the speaker could have used given her own abilities and preferences.

This framework offers the intuitively satisfying possibility that the communicative intention might be fulfilled (i.e. the informative intention recognized), without the informative intention being fulfilled (i.e. the audience does not believe the offered information). The informative intention is only fulfilled when the hearer adopts the offered information as part of his own beliefs (or more generally, part of his cognitive environment). Understanding the speaker's meaning and accepting the proposed beliefs or attitudes are two different processes, and the two-level intention framework offered by RT clearly shows how the higher-level (communicative) intention can be fulfilled without the lower-level (informative) intention being achieved. These two levels of intentions provide for two types of effects on the audience: understanding and believing. In Bratman's framework, both of these intentions are subordinated to a higher-order intention to coordinate one's actions with others – it is the agent's commitment to that higher level intention which necessitates the fulfillment of the lower-level communicative and informative intentions. Depending on what the agent/speaker is intending to achieve by coordinating with the addressee, she may intend no more than to have the addressee understand her meaning and believe the information offered, or she may intend for the addressee to undertake a particular action by 'persuading him' to form the intention to do so. Whatever the nature of the intentions conveyed, they are only a small part of a planning structure to which the communicator is committed.

5.2 Intention-shaping in communication

While I have so far only discussed the intentions which the speaker brings to the interaction, clearly, the addressee brings his own set of intentions – such as, for instance, to listen, to learn, to argue, to be informed etc. These 'audience intentions' also belong to complex planning structures, are embedded in higher-order intentions, and involve a commitment to performing certain actions. So communication creates an 'interface' between the speaker's intention structure and the addressee's intention structure which enables the coordinating role of

intentions. It is this coordinating role and the commitment inherent to intentions that make it possible for the interface to reshape both of the participants' intentions, as I shall now discuss.

We have established that by communicating, we provide our audience with evidence of our beliefs, attitudes and intentions beyond our communicative and informative intentions. This evidence is itself processed by the audience, resulting in further cognitive effects: potential changes in the audience's beliefs, attitudes and intentions. There is also some experimental evidence that a communicator's own intentions can be shaped in certain ways as a direct result of communicating them. In several studies (Williams et al., 2002) in which consumers were asked about their purchasing intentions for a particular product or service, subjects who answered by expressing their intention to purchase were later found to be significantly more likely to purchase than members of a control group who had not been asked about their intentions. This suggests, at the very least, that communicating one's intention increases the likelihood that one will perform the intended action.

The intentions with which an audience approaches an utterance may also shape their inferential and practical reasoning processes, affecting comprehension and/or giving rise to further effects, including potential further effects on the audience's own higher-order intentions. Let us examine a series of examples:

- (1) If my intention is to ignore the background idle chat in a train compartment while I read, I will attempt to disable any inferential reasoning leading to comprehension of the other passengers' utterances. While I can hear the chatter, I am not attending to it in any way.
- (2) If I am attempting to help a foreign student improve his English accent, my intention is to focus on the phonetic level of his utterances, and to correct it accordingly. Upon hearing a large number of mistakes, for instance, I may adjust my intentions, and choose not to immediately point out finer details, while addressing gross errors immediately.
- (3) If my intention is to identify and expose any evidence of discriminatory attitude in a communicator's speech as politically incorrect, I will actively seek to read beyond her communicative and informative intentions and to focus on her higher-order intentions².

² This example was suggested by Deirdre Wilson.

- (4) If, as a shopper, a friendly salesperson compliments me on the fit of a garment I am trying on, I might try to determine whether her comments are sincere, or meant to disguise her intention to reach her weekly sales quota, and I will adjust my own intention to purchase the outfit or not.

It seems that my ‘audience intentions’ can prevent my processing the utterance beyond the most superficial level (i.e. ignoring the communicator’s informative intention), as in (1). In (2) my audience intentions (of identifying and correcting the student) only require that I focus on the phonetic level of the speaker’s utterances, and are shaped by that very superficial form rather than by the speaker’s communicative or informative intention. In (3), my intentions require that I explore a much higher order of the speaker’s intentions, maybe even her intention to hide her true attitudes. I am using all possible aspects of the interaction to attribute (arguably, ‘over-attribute’) meaning, beyond the speaker’s communicative and informative intentions, and allowing such interpretation to shape my own further intentions (of whether to expose the speaker for political incorrectness). Finally, in (4) my intention to purchase suitable clothes requires that I consider the salesperson’s intention beyond her communicative and informative intentions. I must determine whether her communicative intention is subordinated to an intention to flatter me into buying the clothes, or an intention to ensure that her customers only buy clothes that suit them well. My purchase intention will be shaped as a direct consequence of this determination

All these examples suggest that the interpersonal coordinating role of intentions, as posited by Bratman (1987), works both reciprocally and reflectively. Communication creates an interface that has the potential to affect both participants’ states of mind – their beliefs and attitudes as well as their intentions.

5.3 Intentional intention-shaping

I have so far examined the types of effects linked to a speaker’s informative and communicative intentions, namely understanding and believing, but have not considered the further effects on the audience’s attitudes, beliefs and intentions that the speaker may intend to achieve. Once one accepts the idea of an interface of intentions through communication, one must then distinguish between cases in which the potential intention-shaping is intended by the speaker, and those in which it is not, and in each of these cases, whether the hearer’s own intentions justify a more effortful attribution of higher-order intentions. If I buy the outfit from the salesperson in example 4, is it (a) because I neglected or failed to recover her higher-order intention to flatter me, (b) in spite of my having recovered it, (c) because she had no such higher-order intention, or (d) was my intention to buy the outfit independent of the salesperson?

Communicators who intend to influence their audience's intentions and future actions use the communicative interface adeptly. By producing an utterance that is not only relevant enough to justify the audience's efforts to understand it, but also to break through the audience's inert intention structure, either by providing a solution to a means-end coherence problem, or by triggering reconsideration of such a problem, a communicator can alter her audience's intentions and actions. This type of persuasive tactic is familiar enough to competent interlocutors to have evolved into recognizable persuasion patterns. Achieving relevance in such persuasive tactics is the persuasive communicator's challenge. From the audience or target's point of view, the admissibility filter, habits, norms and dispositions that constrain rational reconsideration and deliberation enable him to cope³ with such persuasive tactics on his own terms and to his own benefit. Controlling these constraining mechanisms and their level of sensitivity to persuasion attempts in order to efficiently balance the cost and benefit of being persuaded is the audience's challenge.

Let's look at an example:

- (5) Car salesman: If you buy before the end of the month, you'll get this year's model at last year's price.

The salesman reads the potential customer's intention to buy a car in the next few months, and her general preference for saving money. The salesman's own intention is to reach his monthly sales quota by selling a car before the end of the month, and to cause the customer to shift his purchasing intention forward in time. He represents a solution to the customer's means-end incoherence problem (the logistical details of buying a car) that is consistent with his beliefs and attitudes (wanting to save money), namely the proposition that the customer can save money by buying the car this month. He formulates his utterance accordingly.

Importantly, if the customer did not have a general preference for saving money (or had a stronger preference for delaying his purchase), the outcome of the persuasive attempt might simply be the customer's belief that he could have saved money by buying sooner, without this attitude altering his behavior. In that case, the communicative act would still be successful in that the salesperson's informative intention would be not only recognized but fulfilled. However, the persuasive intention would remain unfulfilled: the persuasive act itself would be unsuccessful because of the failure by the salesman to properly read the customer's intentions. In other words, a successful act of persuasion depends on the communicator's ability to read the target's intentions, to find a proper strategy to

³ The term 'cope' in the context of persuasion was first used, I believe, by Friestad & Wright (1994).

affect the target's intentions, and then to communicate accordingly by sharing the intended attitude with the target. However, if the customer walks into the car dealership determined to disbelieve anything the salesperson says, he has set the sensitivity level of his reconsideration effort high enough that no amount of potential benefit would be sufficient to persuade him to buy before he is ready to do so on his own terms. The salesperson's persuasion attempt fails. Failure to persuade may clearly result either from the communicator's inability to read the audience's intentions properly, or from the audience rejecting the persuasion attempt after deliberation, or 'disabling' reconsideration.

The RT comprehension procedure is also governed by bounded rationality: an addressee follows a path of least effort in computing cognitive effects and stops when her expectations of relevance are satisfied (Sperber and Wilson, 2002). The cognitive effects obtained by the addressee are the ones that enable him to comprehend the speaker's utterance and to share the speaker's attitude. So, in the car salesman example, the customer easily understands and has no reason to doubt that she can save money by buying the car sooner rather than later. The intended cognitive effects are achieved, and the speaker's informative intention is fulfilled. However, as suggested above, the salesman's persuasive intention is not fulfilled unless it successfully alters the customer's purchasing intention. If it fails to do so, it is because it failed to resolve the customer's means-end incoherence (it failed to provide the addressee with the type of cognitive effects that might have resolved her means-end incoherence). We might say that while the utterance satisfied the customer's expectations of relevance sufficiently to allow her to understand and believe the salesman, it was not intention-relevant, in the sense that it did not affect the addressee's existing intentions (it did not offer a solution to her means-end incoherence problem that was consistent with her beliefs). Because there is no presumption of intention-relevance, there is no reason for the addressee to believe that expending further mental effort might yield further cognitive effects.

5.4 Intention-relevance

Let's now examine what intention-relevance might consist in. The relevance of a cognitive input is a positive function of its benefits and a negative function of its costs, where costs are measured in terms of processing effort and benefits in terms of cognitive effects (e.g., roughly, knowledge gained, expectations confirmed or disconfirmed). Intention-relevance is just one particular type of relevance, as it applies specifically to the domain of intentions. In the case of intentions, processing effort can be construed as both the effort necessary to infer the applicability of the proposed solution to the means-end incoherence problem, and also the cost involved in reconsidering one's existing intention structure, and/or belief consistency. Cognitive benefits in the case of intentions might be measured

in terms of both added coherence between the means and the ends involved, and of consistency with existing beliefs. What is critical here, it seems, is that the communicator's persuasive intention will only be fulfilled if the target perceives that the intention-related benefits to him outweigh the perceived cost of reconsidering his intentions to 'suit the communicator.' We can try to imagine what a scale of intention-related processing costs might look like. Such costs can be seen as a positive function of factors affecting the reconsideration of intentions: for example, the difference in complexity between the two intentions, the level of commitment to the existing intention and consistency with beliefs. Low costs would result from a relatively small adjustment to either one's plans or one's beliefs. This property is exploited by communicators who persuade their targets in an incremental succession of small persuasive acts. At the other end of the scale, high costs would be incurred by a major 'overhaul' of existing plans or beliefs. An important factor in figuring the processing cost is the manifestness of the persuasive intention. The more manifest the persuasive intention to the target, the lower the cost of recognizing it.

The scale of cognitive benefits to one's intentions would be a positive function of variables such as commitment, consistency and means-end coherence. The notion of intention-relevance brings the cost and benefit scales together. A persuasive attempt involving perceived low cost to the target will be sufficiently relevant if it offers relatively low benefits. For example, persuading a consumer to undertake an insignificant unexpected purchase (e.g. a pack of chewing gum at a supermarket checkout stand) need not require more than the suggestion of instant fresh breath. On the other hand, a costly reconsideration would only be worth undertaking if it came with high benefits. A consumer who is highly committed to buying a given car model may only be persuaded to change his mind if the benefits of the alternative choice are high enough to warrant the effortful change in intention (e.g. for a safety-conscious driver, a price savings might not be a sufficient benefit while additional airbags might). Similarly, in the Williams et al. (2002) studies briefly discussed in section 5.2, consumers who are asked about their purchase intentions are in effect prodded to engage in practical reasoning. If the purchase they are asked to consider is indeed coherent and consistent with other intentions, desires and beliefs, they may form an intention to undertake the purchase and communicate this intention in response to the investigator's question. Not only have they reaped the benefit of added coherence, they have done so on their own terms, without the cost of conceding to a persuader, and they have formed (and communicated) a commitment to undertake the action. The intention-relevance of this questioning technique make it, if used intentionally as a persuasive strategy, extremely effective as it manages to 'slip below defenses' unless it is recognized as intentionally persuasive, as discussed by Williams and her colleagues.

6 Conclusion

In this paper, I have shown how an integrated approach to intention that pulls together previously disparate aspects of intentionality and places intentions at the center of a more general theory of action can shed new light on the critical role of intentions in social interaction, and particularly in communication. The meeting of two intentional structures (each of the two interlocutors') in communication creates an interface. Because it enables the beneficial coordination of actions, this interface is marked by a certain susceptibility of each of the two intentional structures to intention-shaping by the other. This susceptibility can, under certain circumstances, allow a speaker to shape the addressee's existing intentions, sometimes intentionally, as in the case of persuasion. In such cases, unless the addressee's own intentions drive him to expend additional processing effort to look beyond the speaker's communicative intention to her higher-level intentions, the possibility of manipulation is created.

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