Introduction

The analysis of values in textual structures is relevant in three overlapping areas. First, representations of social reality in discourse (and in sociological interpretations of discourse) are always value-related. Whether we talk about sex, gender, ethnicity, war, or public health, our conceptual systems are invested with values, albeit often tacitly and in an invisible way. This is one of the most important mechanisms of persuasion, not only in political texts but also in scientific discourse (Atkinson 1990).

Second, the definition of positive identities of the speaker — for example, as someone who knows and can be trusted — involves values that must be generated not only inter- or extratextually but also in the structures of the text itself. And third, the arousal of emotions or even passion is based on values that are present but often hidden in textual structures.

In traditional content analysis, values are usually conceived as an element of what Fairclough (1992a) calls the contextual dimension of discourse. Texts are seen to represent values embedded in ideology, attitudes, or power relationships outside the text. Fairclough’s appeal to combine contextual analysis of the content to intratextual form is particularly relevant in the analysis of values. Understanding how social reality is produced in discourse obviously requires a reflection of how existing power constellations and dominating value systems are articulated in its structures (Van Dijk 1993). This article suggests that the semiotic concept of modality is a useful tool for analyzing how this happens.

We shall first briefly look at the concept of modality in formal logic and linguistics. Second, we discuss the norm-theoretical notion of value to contrast it with a semiotic approach. Third, we address the problem of theoretical organization of modalities and their application to the theory of emotions. Finally, we use the theory of modalities in a rhetorical analysis of an influential article on public health that appeared in
Modalities in formal logic and linguistics

In antiquity and in the middle ages, modality was understood as the truth value of a proposition: it can be necessarily, actually, or possibly true. This is today called 'alethic modality' (Sebeok 1986). Since the 1950s, logicians have worked particularly on epistemic and deontic modalities. Epistemic modality is relative to the speakers' knowledge of the world. It can be formulated as a series of two kinds of propositions, one concerning the epistemic state of the speaker, the other the state of the world. The statement 'It can be raining in Budapest' can be expressed as: 'In view of what I know, it is not excluded that it is raining in Budapest' (Kiefer 1987: 69).

Epistemic modalities are logically related like alethic modalities, given what the speaker knows. The set of propositions that describe this knowledge constitutes what is called a 'possible world'. In formal logic, possible world semantics is the area of inquiry where the validity of propositions is investigated under various possible world conditions that are related to propositional attitudes. For example, the possibility and necessity of a proposition may depend on the speaker's desires, as in 'Bill may be our leader' or 'Bill should be our leader' (boulomai modality). Kiefer (1987) has proposed that the semantics of possible worlds can be used to formalize most phenomena that linguists usually include in the domain of modality, including sentence types and speakers' emotive, cognitive, or volitional qualifications of the state of affairs.

Cervoni (1987) has argued that modal logic offers a solid basis to define 'the hard core of modality', by which he refers to alethic, deontic, and epistemic modalities. However, for linguists, the logical treatment of modalities is too narrow, because it is centered on truth values of propositions. Linguistic analysis of modalities presents much more diversity in its problematics and its approaches.

Two basic orientations may be distinguished, the semantic and the morphological. The morphological approach views modality as an independent grammatical category, similar to aspect, tense, number, gender, etc. (Palmer 1986). The semantic approach defines modality in terms of content and investigates how lexical forms, modus, illocutionary functions, and different forms of negation can be used to express different modalities (Hakulinen and Karlsson 1979: 261).
Cervoni (1987) represents the semantic approach. For him, the 'hard core modalities' are expressed in different ways in different languages by propositional structures and modal verbs. Propositional modalities are of the form 'It is necessary/probable/desirable/ permissible etc. that P' or 'an infinitive'. Modal (auxiliary) verbs appear in more diverse contexts and are more ambiguous. The most unambiguous in French are 'can/may' (pouvoir) and 'must' (devoir), but even they cover vast semantic fields. 'Pouvoir' in French may refer to a physical, mental, moral, etc. capacity but also a permission (as in 'you may enter') or a possibility (as in 'he may come later') (Cervoni 1987: 81–89).

Outside the 'hard core of modalities' Cervoni discusses a series of impure modalities that are expressed in a number of principal verbs such as 'confirm', 'hope', 'pronounce', 'deny', etc. A large number of lexical categories such as modal and non-modal adjectives ('useful', 'serious', 'certain'), morphological structures (the subjunctive, several temporal forms of the indicative), and illocutionary acts may express modalities (1987: 89–98).

The problem of categorizing linguistic manifestations of modalities indicates a central issue in this area. We are dealing with a phenomenon that is situated in the Hjelmslevian 'form of content' level or, as Halliday would say, in 'the semantic system' (1978: 39). A theory of modalities that could be useful from the discourse analytic point of view cannot take the inductive road from manifestation (or realization) to content but must proceed in the reverse direction. We must first consider what we mean by modalities or modal structures, and then look for their linguistic and paralinguistic expressions or realizations (Halliday 1976: 198).

Norms, modalities, and values

Both in logic and in linguistics, modalities are understood as structures that in one way or another evaluate the state of affairs. This is why they are also relevant in discourse analysis.

Very often sociology operates with an interpretative scheme which imputes values to social phenomena from the outside: they orient action and regulate as norms of acceptability, but values rarely constitute the meaning of action itself. In norm-theoretical sociology '... value standards are involved in the evaluative mode of the motivational orientation as rules and recipes for guiding selections ... These standards guide selection (a) by narrowing the range of alternatives open and (b) by amplifying consequences of the various alternatives. These [are] standards of accept-
ability and they (i) narrow the range of cognitions, (ii) narrow the range of objects wanted, and (iii) narrow the number of alternatives' (Parsons and Shils 1951: 72).²

From the point of view of sociological discourse analysis there are three problems with the norm-theoretical framework.

First, values have more dimensions than just acceptance or rejection. An art critic, for example, mobilizes a wide range of values not only to approve or disapprove an object of art but to evaluate the artist's ability, talent, and devotion. The critic may impose on the readers a duty to know and enjoy the work. By comparing it with other pieces of art, the critic may extol his or her own competence. These are all articulations of values, and there are others, but only some of them have to do with norms of selection.

The second problem, closely related to the first, is that norm theory does not account for the meaning of the objects of action or forms of behavior. The same behavior — visiting art museums, for example — may have entirely different meanings for different people or at different times. Correspondingly, very different objects and forms of action can have similar symbolic functions.³

A third criticism of the norm-theoretical conception of value and meaning is associated with American phenomenology and ethnomethodology. This criticism has attempted to replace the externality of values to action by an emphasis on contextuality and interactionality of meanings (Heritage 1984: 7–36, 103–134; Garfinkel 1984 [1967]: 11). Social phenomena are negotiated constructs of reality, and we agree with ethnomethodologists that the function of social science is to identify such constructs and to analyze how they are created in discourse (Pollner 1987).

The actantial model and the semiotic concept of action

Norms of acceptability certainly are expressions of values, but they represent only one dimension of a rich and complex web of discursive phenomena. Values are relations not only between subjects and objects but also between several subjects. The actantial model that A. J. Greimas (1966) developed from the Proppian narrative scheme is a helpful heuristic device in understanding the pluridimensionality of values in simple stories. This model distinguishes several logical positions — subject, object, sender, receiver, anti-subject, opponent, and helper — that actors may occupy in a story. These positions are important in articulating why an action is valuable and from whose point of view. We could therefore call this the semiotic concept of action (see Fig. 1).
For example, in a Western film (such as *Shane*, *Dodge City*, or *Duel in the Sun*), the hero arrives on a scene where the villagers are troubled by bandits. The hero may be requested by the people to rescue the village, but he may also get at the bandits for a personal reason. It could, for example, be a revenge for murdered parents, as in *Nevada Smith* (Wright 1975: 64). In the former case the villagers occupy the sender’s position: they set the hero’s action in motion. The object of value is peace or justice. The villagers are also the receivers in the sense that they are the beneficiaries of the victorious heroism. In the latter case, the hero himself sets the action in motion and is sometimes also the receiver or beneficiary because his honor (the object of value) will be restored. The function of the anti-subject and its helper, the opponent, is to articulate the hero’s exceptional skills, and the function of the helper is to articulate the nature of these skills (for example, loyalty to a friend, as in *Rio Bravo*).

The model should not be understood too rigidly. The actantial positions are usually not each occupied by different actors; they are positions between which actors may move in the course of the narrative; and some may remain empty throughout the story.

The actantial model helps to show that norms are only one kind of value-relationship that defines action: that of obligation (or interdiction). To be meaningful, social action requires a valuable object, but its value can be defined in different ways, including difficulties in attaining it. Such values are articulated in discourse as modalities. However, this is not how modality is today most commonly understood in (critical) discourse analysis.

**Functional grammar, critical linguistics, and sociosemiotics**

The functional approach to language developed by M. A. K. Halliday has been influential in a diversity of discourse analytic approaches to
modality. The best known of these is the 'critical linguistics' group that has developed Halliday's theory of modalities in a sociologically relevant direction. (Fowler et al. 1979; Kress and Hodge 1979). Hodge and Kress (1988) have applied Halliday's theory to media studies in a methodology that they call social semiotics. Fairclough (1992b), also indebted to Halliday, has developed a 'critical discourse analysis' which focuses on relational and identity functions of discourse. Agnes Weiyun He (1993) has employed the concept of modality in the sense of Halliday in a conversational analysis.

Halliday looks at language from the point of view of the functions it serves and he explains its structure on this basis. The three functional components he has distinguished early on in the development of his theory are ideational, interpersonal, and textual (Halliday 1978: 112–113). Two of these are relevant for our purposes. The ideational function describes the logical and experiential structure of 'reality', i.e., that which is talked about. This corresponds closely to what is often called the referential or mimetic plane or dimension of discourse, and it is not very far from what we will call the dimension of utterance. The interpersonal function concerns the traces of interpersonal context that appear in texts, such as mother speaking to a child, professor giving a university lecture, etc. This is what we will call the enunciative dimension.

For Halliday, modality operates within the interpersonal function (1976). Speaker and hearer roles are created and maintained in speech by evaluating the certainty of what is being said in the thesis (or clause). Thus modalities only concern expressions like 'John must be very worried' but not expressions such as the following: 'You must build a gazebo', 'I can't build gazebos, I would if I could', or 'Well, you ought to be able to'. The latter are called 'modulations' by Halliday, and they operate on the ideational rather than the interpersonal level of discourse:

These have nothing to do with the speaker's assessment of probabilities. In these examples the auxiliaries must, can, etc., express various types of modulation of the process expressed in the clause; modulation in terms of permission, obligation, and the like. They are part of the thesis — part of the ideational meaning of the clause. (Halliday 1976: 199)

This distinction reflects the fact that auxiliaries can be used to signify two different things: 'You must be very careful' and 'You must be very careless', where the first renders either 'you are requested to ...' or 'it is obvious that you are ...', while only the latter interpretation is meaningful for the second. Because of this duality, ambiguities occur and it is
interesting to see how such ambiguities are resolved (Halliday 1976: 200–201).

Modality and power

Modality in the Hallidayan sense is often associated with power. In her application of this concept in conversational analysis, Weiyun He (1993) observed that in university counseling discussions, counselors were using both 'high' modalities indicating that they are certain about what they said, and 'low' or 'weak' modalities for uncertainty (Halliday 1985: 75), whereas students were mostly using only the latter.

Fowler et al. (1979) have elevated the concept of modality to one of the focal points in their theory. They call themselves 'critical linguists', referring to their interest in unveiling power structures and ideology in the use of language. Modality reflects for them power differentials between the participants in communication. For example, parents may use very direct forms of speech acts addressing their children ('You must come'), while children between themselves tend to use indirect forms like declaring the source of authority ('Mummy says you must come') (Fowler et al. 1979: 205; Kress and Hodge 1979: 123).

Power relations may be articulated not only by modal structures in the linguistic sense. Forms of politeness, as well as spatial and temporal determinations, among other things, also indicate interpersonal relationships between the speaker, the hearer, and the object of speaking. For example, the use of the present tense indicates affinity — and thus certainty — in the sentence: 'It is raining now'. In another formulation by Kress and Hodge (1979: 122–128), modality is understood in a more limited sense as a duality of certainty (as we would say, epistemic modalities) and power (we would say deontic modalities). Both vary in degrees and get realized in almost any manner, both linguistic and paralinguistic. However, even certainty or uncertainty of utterances is interpreted to be an indication of power relations.

Hodge and Kress (1988) have developed this approach further, calling it 'social semiotics'. The dimension of affinity expresses the status of knowledge or the facticity of the mimetic system. An impersonal editorial, for example, which makes unquestioning claims about the world, expresses high affinity. It asserts its categorizations, social persons, places, and sets of relations as true. In contrast, low affinity, expressed, for example, by hesitations and by using the first person singular 'I' for the narrator ('I think ...'), represents the mimetic content as more or less uncertain. Modal analysis is an integral part of their interest in a critical

Towards a conceptual organization of modalities

For a general theory of modalities, the dual meaning of auxiliaries may not be the optimal starting point. The distinction between modality and modulation is not clear. As Halliday comments himself, even modulations — especially of the ‘obligation’ or ‘ability’ type — typically involve the speaker’s judgment, as in ‘Jones must swing’ or ‘Smith can swim’, either as a source of the obligation or as an evaluator of the fact. We would add that all such ‘intrusions’ of the speaker into the ideational plane invest a value in what is spoken of, albeit in very different ways depending on what specific modal structures are employed.

As a general principle we endorse the distinction between modalities that evaluate the truth or certainty of an utterance and other kinds of modalities, such as obligation, desire, etc. We also agree that the former are characteristic of the interpersonal or enunciative dimension and they are theorizable only in that context. However, the other modality types also reflect (often implicit) attitudes of a speaker and construct values in discourse.

In our view the ‘social semiotics’ or ‘critical linguistics’ conception of modalities is both too narrow and too wide. It is too narrow in limiting the semantic functions of modality to the relationship between the author and the receiver. It is true that insofar as values appear in text or speech, they are always values from the standpoint of a speaker/author image. However, it is important to distinguish two different cases: those in which the subject issuing an utterance is explicit, and those in which this is not the case. From the point of view of analyzing values, the Hallidayan definition, where modalities operate only within the interpersonal function of language, is too restricted even if understood very widely in terms of power relations. Values are constructed modally in the most transparent narratives, classifications, or other kinds of utterances, which have almost no explicit interpersonal (or in our terms, enunciative) structure.

On the other hand, the scope of modality is too large if it includes all possible structures that express the position, attitude, or point of view of the speaker to what is being said. We agree that semantic categories of modalities cannot be unambiguously operationalized at the level of language use, let alone inductively reconstructed from natural language(s). Nevertheless, modalities are only one among several layers of meaning.
indicating the speaker's or author's relationship to what is being said or written and to whom.

The dimensions of utterance and enunciation

The most interesting perspective in critical linguistics and sociosemiotics is the distinction between what is said about the world on one hand, and the structures that articulate the relationship between the speaker/author and addressee/reader on the other hand.

No text functions without an uttering subject. Even the most 'transparent' literary romance or news report, which may pretend to report 'objectively' events that have happened in an imaginary or real world, implies a narrator who tells a story, and also someone who could be reading it. These narrators and readers are textual constructs and therefore we call them speaker/receiver images (Sulkunen 1992). In most texts the structures of authorship are quite complex, and there is considerable conceptual diversity in their analysis (Chatman 1990: 74–108; Rimmon-Kenan 1983: 86–89; Goffman 1981; Genette 1988: 135–154). We do not want to go into details here; we simply call the structures of authorship and reception the enunciative dimension of texts while the 'facts', 'stories', etc. reported are called the dimension of utterance (Greimas and Courtès 1989: 363–566). The distinction between these dimensions is abstract but indispensable for the production of values and for the conceptual organization of modal structures.

Values are produced through modal structures in both dimensions, but in different ways. Let us first clarify how these dimensions differ. In Greimassian terminology, the formation of discourse develops from simple deep structures to rich and complex discursive structures in what is called the generative trajectory (parcours). The deep semiotic level consists of simple utterances of being and doing. Utterances of being state that the subject is or has something; utterances of doing state that the subject transforms one state of being to another one. These will be chained to form rich and complex expressive structures (Greimas and Courtès 1979: 124). This is the level we call 'utterance'.

Utterances are always connected to the speaker-now, to the here and now of the context in which the utterance is issued. This connection is regulated by so-called shifters, a term borrowed from Roman Jakobson (1971), which are of three kinds: actorial (what is the relationship between the speaker and the persons or things that appear in the utterance), spatial, and temporal. All of these may or may not be deictic, and they
model of relationships between objects and subjects. Modalities can be mapped onto this model.

In the qualifying test, the hero is given the motivation to perform a task. This motivation defines the object valuable (desire, will) and the hero responsible for achieving it (obligation). These are ‘virtual’ modalities, properties of the subject and the object ('being'), and they render meaningful what the subject does ('doing') (being regulates doing). Ability and knowing how to do, on the other hand, are ‘actual’ modalities which make the subject’s action understandable by another action (doing regulates doing). In the final phase the hero is recognized as victorious, as being what she or he is. In a later article (Greimas 1983a) the latter comes to represent so-called epistemic modalities (belief, certainty): the modal qualities of willing and obligation are realized.

Thus there is a series — virtuality, actuality, and realization — according to which modalities can be grouped. Another dimension is related to whether the modalities stem from the subject or object itself or whether they are imposed by another subject. The first dimension is called endotactic, the latter exotactic. The following six-fold table (Greimas and Courtès 1979: 231; 1982: 195) is a modified summary of this classification:

<table>
<thead>
<tr>
<th>MODALITIES</th>
<th>VIRTUALIZING</th>
<th>ACTUALIZING</th>
<th>REALIZING</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXOTACTIC</td>
<td>having to</td>
<td>being-able</td>
<td>knowing</td>
</tr>
<tr>
<td>ENDOTACTIC</td>
<td>wanting</td>
<td>knowing how</td>
<td>(recognition)</td>
</tr>
</tbody>
</table>

These are the basic modalities, each of which may be projected on a four-fold table (the ‘semiotic square’) as follows. Obligation or having to (prescription) do A is contrasted with an obligation not to do A (interdiction), and these are complemented with non-obligation to do A (permission) and non-obligation not to do A (optional). Similar 'semiotic squares' can be generated for all of the basic modalities. For example, willing or wanting A (where A may be an object or an act) belongs to the same set as refusal (will not-A), acceptance (not-will not-A), and compliance (not-will A).

A complication arises from the fact that even the basic modalities are related. Interdiction to do A, for example, would make little sense without the subject’s desire to do A. This reflexion tends to develop into a very complex system of interrelations between a large number of modal expres-

The early Greimassian approach is highly abstract and not completely convincing. Despite the non-inductive intentions of the approach, the resulting principal modal categories reflect the system of French modal auxiliaries with a distinction between ability (pouvoir) and knowing (how to do) (savoir), both of which are related to their respective semantic universes, power and knowledge.

Since the 1970s, Greimassian semioticians have suggested several logical solutions to the organization of this complex area of semantics. One problem has been to integrate the classical alethic modalities referring to the certainty of a proposition with others such as will and obligation. Another problem is the interdependency of modalities such as obligation implying the (hidden) presence of desire (Zilberberg 1989: 1–3).

There seems to be no axiomatic road to a comprehensive taxonomy. In our view any overarching logical principle of organizing modalities fails to incorporate nuances in a sufficient way to account for meanings in phrases such as 'It is too cold to go for a walk' or 'Mr. A might wish to go for a walk after dinner'. The reasons for these difficulties are three. First, modal structures always imply an evaluation by the subject of the enunciation (too cold in whose opinion? in what modal sense?). Modalities are intersubjective relationships rather than logical categories. Second, modal structures are usually combinations of modal relationships between the enunciator and the actants appearing in the utterance (the enunciator believes that it is possible that Mr. A wants ...). Third, the apparently logical method of generating modalities by the 'semiotic square' is not satisfactory. For example, the series of deontic categories obligation-interdiction-permission-optionality is in actual language use a dimension of degrees rather than a set of distinct possibilities. Furthermore, the overlap between modalities (e.g., willing and obligation) in natural language use cannot be captured by formal logic.

In discourse analysis, it is better to agree on a set of modal terms such as willing, obligation, etc. that serve as labels for modal groups. Each group consists of several related modal relationships with different degrees of intensity.

In order to arrive at such an agreement it is necessary to make a distinction between two kinds of modal evaluations: (a) those that explicitly imply an observer-speaker, a subject of enunciation, and (b) those that apply even if the observer-speaker is only implicit or transparent. The first type will be called enunciative and the latter pragmatic modalities.
Enunciative and pragmatic modalities

Enunciative modalities: Veridictory and epistemic

Our proposal for the organization of basic modal groups is based on the fact that one part of modal structures makes the subject of enunciation explicit. This is the case with the modalities in the Hallidayan sense: the qualifications of a proposition that evaluate its degree of certainty. Whenever someone says ‘It may be raining’ or ‘Is it raining?’ this implies a statement of uncertainty on behalf of the observer-speaker and thus makes the subject of enunciation visible. In fact, all utterances are regulated by such modal qualifications. However, when the qualification is unquestioned certainty (‘I know/am sure that it is raining’), it is normally left unsaid and the speaker image remains invisible or transparent as an omniscient narrator with full access to perfect and unquestioned knowledge of the world. This kind of ‘degree zero’ epistemic modality (cf. Kiefer 1987: 80, 92) is common in popular novels or in some news material that pretends to be objective reporting.

However, whenever a modal qualification on the certainty of the utterance does appear, the enunciatior inevitably enters the scene, and therefore we call this group of modalities enunciative. Enunciative modalities define the degree of certainty of an utterance from either one of two positions: that of a speaker-observer and that of an addressee. Speaker and addressee refer here to communicative positions as they appear in the text.

The two cases should be distinguished, because they generate different kinds of evaluations of the truth of an utterance. In the first case, the speaker evaluates the state of the world, comparing its appearance with his or her knowledge of how the world actually is. This generates what Greimas and Courtés (1982: 369) call persuasive modalities or modalities of veridiction. They can be summarized in the semiotic square shown in Figure 2 (see also Greimas and Courtés 1989: 570–572; Bertrand 1989: 116–123). The speaker may persuade the addressee that what appears actually is (truth) or is not the case (deceit, illusion), or what does not appear the case nevertheless is (secret) or is not true (error).

In the second case, the text depicts the speaker image in the role of an addressee. An utterance appears to the speaker as a belief, and the speaker assesses its truth against her or his true knowledge. This is called interpretative doing (Greimas 1983d: 118–119; 1987b: 168). The utterance may express a belief that is (knowing) or is not knowledge (assumption), or it may express a non-belief in what is (doubt) or is not known (imagination), as in Figure 3.
Which of these sets of enunciative modalities are employed depends on the communicative position in which the speaker image is placed. The depicted speaker, addressing us as hypothetical auditors, may either interpret knowledge that has already been transmitted to her or him and evaluate it for us, or the speaker (image) may persuade us of something that may or may not appear to be true to us.

In scientific texts, for example, it is usual that the author first takes the position of an addressee to other scientists, to judge their knowledge as partly correct and partly incorrect. This functions like the qualifying test in a story: it formulates a lack and sets a task for the present author. After having acquired legitimacy in this way, the ‘present author’ moves
on to the veridictory or persuasive square to convince the reader of a truth about the world which may or may not be apparent.

In other types of texts, such as popular novels, the enunciative modalities may remain at or close to degree zero. The speaker image reports unquestionable knowledge of the world and of beliefs with the competence of an omnipotent and omniscient subject. What is told in the utterance is not in any way questioned, and for this reason, the speaker image remains invisible although present. We therefore call this kind of speaker image 'transparent'. There is no gap between knowledge and the events of the story. The reverse is the case in literary texts, where the story itself may be fragmented, while the reflexive narrator occupies the dominant role vis-a-vis the subjects he or she is talking about.

_Pragmatic modalities_

The other major group of modalities operates in utterances where the communicative relations between speaker and addressee are not necessarily explicit. These are modalities that qualify the value of doing or being something but not the certainty of knowledge. Such modalities are familiar from stories about heroes who feel the duty and recognize the value of achieving a goal, and then demonstrate their ability and skill in performing difficult tasks. Since the communicative structures are not necessarily explicit, and knowledge of a speaker or an addressee is not inevitably put into play when these modalities are employed, we call them **pragmatic**: they regulate relationships between subjects, objects, and events rather than knowledge of what is told about them.

Even pragmatic modalities raise conceptual problems, but only one remark is worth making here. In order to make a story interesting, some relations of obligation (having-to), willing (wanting), and ability (being-able) must be constructed in its course. French semioticians usually distinguish ability (*pouvoir*) from knowing how to do/be (*savoir*). This may reflect the semantic structure of the French lexicon, but there might be more interesting reasons to retain the distinction. ‘Knowing how’ is a property of a subject (‘I know how to swim’), as compared to ability that is related to a situation (‘I could swim across the river’). We call the former *competence* and the latter *ability* (see also Table 1).

It is important not to confuse competence with the enunciative modalities related to knowing, such as certainty, truth, and the variants in the respective groups of veridictory and epistemic modalities.
The semiotics of emotions

An interesting recent development in modal theory is the semiotics of emotions or passions. Modal structures are often combinations of different modalities in a narrative trajectory of a subject. In a seminal article ‘On anger’ (1983b [1981]; 1987c), Greimas proposed that certain passions or emotions such as anger or jealousy may be articulated somewhat like modal chains in a story. In a story the hero first has the will and obligation to act, then demonstrates ability and competence, and is finally recognized as having performed the task. In contrast to a story, the modal chain that develops into an emotion — anger, for example — requires a ‘fiduciary expectation’ between two subjects (which can be separate or syncretized) where Subject 1 believes that Subject 2 will realize his or her will and has assumed this as an obligation. If these expectations ‘break’, Subject 1 is disappointed or dissatisfied and this ‘leads to the explosion of anger’ (Greimas 1987c: 154) which can, in turn, give rise to a ‘program of compensation’: vengeance.

‘Passion’ is an ambiguous word because it refers both to an emotion and to a state of mind, even personality at times. Nevertheless, ‘the semiotics of passions’ has brought attention to a number of important points in modal analysis. First, modal structures can host a system of values independently of what action or state of the world is being modalized: avarice, for example, is an obsessive (devoir) will (vouloir) to possess regardless of the value, purpose, or function of the possessions.

Secondly, passions are modal dispositions or states of mind (‘états d’âme’) rather than actions or actual states of things (‘états de choses’). The fiduciary expectation that leads to anger need not be a real contract actually made between two subjects. It is a simulation of such a contract in the subject’s mind and can be completely imaginary; the emotional effect of its breaking is the same. As a result, modal chains that characterize emotions or passions are not distinct and linear as they would be in a narrative. Instead, they are simultaneous, non-discrete, and not chained in the logical order that rational action would require.

Thirdly, emotions or passions often imply excess, because they are insatiable states of mind rather than a series of events. Avarice is an excessive and overwhelming (obligation) will to employ competence and ability to acquire wealth; economic rationality, on the other hand, is realized in plans and in appropriate action from want to accumulation (Greimas and Fontanille 1991: 135–145).

The Greimas-Fontanille approach offers an interesting perspective for the analysis of the rhetorics of passion in persuasive discourse, as we will show in the following example.
'Non au ministère de la maladie' — the passion of modernity

As a sample text we have selected an article on public health policy in France (see Dubois et al. 1989). This article, authored by five professors of medicine — Gérard Dubois, Claude Got, François Grémy, Albert Hirsch, and Maurice Tubiana — started a spectacular public campaign which helped France to adopt anti-publicity legislation on alcohol and tobacco. The professors first submitted a commissioned white paper to the minister of health, Claude Evin, and then forced the political apparatus into action through a classic French model of independent intellectuals' public appeals. The legislation was adopted in 1990 and now is one of the most restrictive on alcohol and tobacco advertising in Western Europe.

The article (see Appendix) was selected not only for its importance as a starting point of the 'Evin affair' but also because it represents a remarkable sociological analysis of the public health issue. Furthermore, we consider it to be an exemplary case of persuasive rhetoric.

The argument of the paper, summarized in paragraph 11, can easily be fitted to the actantial model. The Anti-subject, particular interest groups, threatens the health of the French population, while the Subject, the State, fails to act. The Receiver is the French population (including the readers as well as enterprises). The weakness of the political system, captive of particular interest groups, exposes to misery and death particularly the frailest persons caught by their incapacity to master the society of consumption'. This 'story' is centered around the modality of ability, less of willing or the lack of it. The article simply assumes, i.e., creates the 'fiduciary expectation', that the objectives or ideals promoted by the authors are shared and desired by all. These ideals can be called object values (Sulkunen 1992): optimal use of scientific knowledge (2), leading a rich and healthy life (4), justice and equal chances with respect to illness and death (1, 3), transparency, respect of the majority opinion, and morality (11).

It is the lack of ability to realize these ideals that regulates their value and gives this article its extraordinary strength and character. Citizens are mutilated by addiction and manipulation in a way that is 'comparable to excision' and are 'deprived of their liberty'. The stakes are high: lost ability to realize the common social ideals puts at peril the human rights society in which we all want to live, sacrificing it to natural society 'where the first victims are the weakest and the most destitute' (3).

The rhetorical strength of the article is based on a particular way of combining the enunciative dimension with the dimension of utterance. The sender position of the utterance is occupied by the speaker-observer,
who makes demands (obligation) on the Government (13): 'The government must not hesitate in implementing a public health policy and not delay measures that have a general interest and the support of the majority of the population', and on politicians (8). This way of mixing the two dimensions is typical in political or ideological texts.

In this case, the speaker will convince the addressee by undergoing a series of transformations in enunciative modalities. These transformations generate a trustworthy and knowledgeable image of the speaker who can use this image as a resource to issue obligations for the Government.

The first part of the article is regulated by veridictory modalities; in other words, it consists of persuasive discourse. In the beginning, the speaker is invisible, stating in a neutral way the true opposition between an independent social policy and one that is dominated by economic interests (1). Thereafter follows a series of statements where the speaker claims to possess correct knowledge against certain illusions: the falsity of advertisement (2), the illusion that therapy could save and protect from noxious practices and their consequences (5), the deception of parallel medicine (7). Instead, it is a fact, known to experts, that prolonged life and expensive medical technology will soon make rationing and choice indispensable (5). Next, a contrast between common knowledge and expertise is made. In (6) the speaker first identifies with everybody: 'We know that life has a cost of some tens of francs per week of nourishment in certain countries and of hundreds of thousands of francs worth of medical technology in others. A not very demanding ethic allows us to accept that in numerous countries death is the consequence of these disparities'. Then the speaker reveals a 'secret', a fact about us that is not apparent: 'We still have some difficulties to recognize that in our own country some die because of our inability to master these risk factors and to ensure equality of access to prevention and treatment. It would be realistic to recognise our limits'.

From now on, the speaker is identified as the group of authors who have demonstrated their competence as possessors of expert knowledge. The authors are ready to start making demands (deontic modality) on the state, first on behalf of fair and sufficient evaluation of medical knowledge (7), and then in favor of widening the scope of health policy (8). In (9) they request that 'we' (the French) reveal what is false progress and set 'our' priorities with respect to real progress that is leading to a cost crisis.

Next, the authors temporarily adopt the position of an addressee to employ the epistemic modality of doubt: 'We are not convinced of the ability of our system of decision-making to make these choices' (10). Again, a distinction between the reader and the author is effected, but
this time the authors appear as co-citizens who all have been led to believe (fiduciary expectation) that the political system is there for making reasonable choices. Their experience justifies the author-citizens in questioning its ability to do this.

The rest of the article resorts to the two competencies of knowledge possessed by the authors: that of experts and that of experienced citizens, and uses these as a resource to convince the reader that their program is both well-informed and in the readers' interest.9

The values produced in this article emerge from modal structures both in the dimension of utterance and in its dimension of enunciation. On the level of utterance the article is about lost ability: ability of citizens to lead a valuable life, ability of society to realize its ideals, and ability of the political system to police private interests on behalf of citizens and 'the society of human rights'. It resembles the classic narrative structure of Western films where the hero steps in to defend the people against bandits because the sheriff is unable to do this, at least within the limits of his official mandate. The objectives of citizens are taken for granted, and their frustration at the inability of the political system arouses anger and appeals to the reader to support anyone who would undertake the task of recuperating the loss.

However, unlike Westerns, this story does not unfold to a victorious (or tragic) end. Although the expert authors' demands on the state are legitimated through a number of apparently factual statements, the force for the demands comes from the logic of passionate discourse. Few actions are outlined to 'eliminate a lack'; the loss of ability is a continuing state of frustration. Anger is aroused by asserting that an imaginary contract (the political system is there to make reasonable choices) has been broken. The skillful, often almost unnoticeable alterations in the referent of 'us' (experts, experienced citizens, the French), create an alliance between the reader and the authors. This kind of alliance could be termed a political contract, because it is grounded in legitimacy claims of the authors as experts but places both the addressee and the authors at equal footing in opposition with an enemy.

The passion of the article is very modern. The object values themselves (solidarity and justice, science, health, majority rule) are part of the modern welfare state ideology; the value invested in them by the modal regime of (lost) ability is even more so. Self-determination through reason, in individual life as well as in the society as a whole, is one of the most cherished values of modernity. That this value remains a passion instead of being transformed into action is typical of the traditional political activity of French intellectuals (Ory and Sirinelli 1986; Charle 1990). There is no subject-hero in the story, such as a political party, and
the authors do not place themselves in this position either. Their knowl-
dge does not appear as a competence in the technical sense of the term
used above: it is not a means to accomplish the task of recuperating the
lost ability. Rather, as experts and as experienced citizens they claim the
authority to make requests on behalf of the French people. Their role is
to articulate values; it is for others to act on them.

Appendix⁹

Le Monde 15/11/89

Point de vue
NON AU MINISTÈRE DE LA MALADIE!
par les professeurs Gérard Dubois, Claude Got, François Grémy, Albert Hirsch, Maurice Tubiana

Dans un texte sur la politique de santé remis à M. Claude Evin, ministre de la Santé (le Monde du 14 novembre), cinq experts avancent des propositions. Ils développent ici leur argumentation contre les drogues licites.

DANS une société dominée par l'économie, le débat sur la politique sociale se limite à la répartition des moyens financiers, au lieu de définir les objectifs et d'analyser les échecs, en particulier l'aggravation de l'inégalité des Français face à la maladie et à la mort.

Les responsables politiques sont inhibés par les groupes de pression économiques et sociaux ainsi que par la crainte de déplaire aux médias et aux publicitaires qui assurent leur promotion personnelle. Cette dérive est dans la logique d'une société où la fausse communication publicitaire tient lieu de présentation objective de la réalité et où le téléviseur remplace l'instituteur.

Quand la médecine était inefficace, l'inégalité acquise devant la mort provenait de l'alimentation du comportement individuel.

A la vision naïve du bon vivant insouciant et heureux, qui meurt un peu plus tôt que les autres mais après avoir 'profité de la vie', se substitue l'image moins acceptable d'une société qui développe les risques et réduit les chances de survie d'une partie de la population qui ne bénéficiera pas de l'utilisation optimale des connaissances.

Notre société de sélection applique à la santé les mêmes méthodes qu'à l'économie. Elle sauvé les plus aptes et abandonne les autres. Ce retour à la sélection naturelle indique l'abandon des idéaux de solidarité et de justice qui différencient une société des droits de l'homme d'une société de nature où les premières victimes sont les plus faibles et les plus démuni.

Quand une adolescente de douze ans allume sa première cigarette pour marquer son appartenance à un groupe et satisfaire à un conformisme, elle entre dans un processus d'intégration culturelle mutilant comparable à l'excision. Elle ampute à terme des possibilités fonctionnelles essentielles comme sentir un parfum, respirer et finalement vivre. Le conditionnement au tabac et au malheur est le résultat d'un conformisme manipulé par un marketing publicitaire disposant de 1 milliard de francs par