Reconsidering the logic of emotion

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Abstract

It is customarily assumed that propositional attitudes present two independent components: a propositional component and a psychological component, in the form of an attitudes. These two components are caught by means of two different methods: propositions by some model theoretic theory, psychological attitudes by making appeal to their functional or psychological role. Some authors have seek a convergence by individuating propositions by some Functional role semantics. In this paper I show that when it comes to emotional attitudes with propositional content, either the independence of proposition and attitude collapses or functional role semantics brings to unstable individuation conditions for propositions. Some consequences of these two outcomes are considered.

*Introduction*

In this paper I shall argue that either functional role semantics is at odd with the individuation of propositions when it comes to attribute emotional states with a propositional content or that the independence of propositions and psychological attitudes, as defined by Russell, does not hold in every case. I will proceed as follows: first, I will outline what is the classical distinction between a proposition and the related attitude when a propositional attitude is ascribed to one. Secondly, I will describe what are the main tenets of functional role semantics. Thirdly, I will argue that changing attitudes may entail changing the inferential or functional roles of the propositions ascribed, thus determining the dependence, or at least undermining the independence, between the attitude and the proposition. Finally, I will argue that either functional role semantics has to be abandoned or that the independence between the attitude and the proposition does not hold good in every case.

Propositional attitudes

Usually, it is assumed that propositional attitudes have two independent components: the propositional content and the psychological attitude. For instance, taking "John believes that Cicero denounced Catiline" as a paradigmatic example of an ascription of propositional attitude, it is customarily interpreted as attributing to John the psychological attitude of believing the propositional content embedded in the *that-clause*, that is, "Cicero denounced Catiline". Propositions are usually individuated by some semantic theory, while psychological attitudes are

caught by making appeal to their functional or psychological role. As Fodor (1987) used to say, believing is having the thought or proposition in question in one's own "belief box". So, the problem of determining the propositional content was the job for a semantic theory. Functional role semantics taken as a semantic theory was considered quite a good candidate because it promised to play two roles at once: giving identity conditions for propositions on one side and determining the psychological role of the attitudes on the other, given the functional character of the theory. My contention, though, is that the prospect for such a double role are deem and this also cast light on the limits of functional role semantics *per se*. In particular, when it comes to emotional attitudes with propositional content, either the independence of proposition and attitude collapses or functional role semantics brings to unstable individuation conditions for propositions.

Let us stipulate to call *intentional emotions* those mental states that present, along with a propositional component, an affective component as psychological attitude. A case in point would be something like: *S* fears that John will scream. Here the propositional component is *John will scream* while the affective component is the fear that S experiences while thinking that John will scream. As we briefly remarked before, this kind of reading follows Bertrand Russell's analysis of these mental ascriptions, considered the hallmark of our intentionality. He called them *propositional attitudes*. Propositional attitudes present two different components that can be taken apart: on the one side there is the attitude, i.e., the way in which the propositional component is entertained. For instance, one can believe, or desire, or wish that *p*, thus entertaining the propositional content that *p* via different psychological stances or attitudes. On the other side there is the proposition, which constitute the *content* of the attitude, such that one may have the same attitude toward many different propositions, as when one, at the same time or at different times, believes that *p*, that *q*, etc. It has been frequently noticed (see Fodor 1987) that these two components are quite independent one from the other, so that the identity conditions for the attitudes are different from that of the propositions or the content (propositional indeed) of these attitudes. As anticipated, we can not always defend such an independence if functional role semantics is endorsed.


*Functional Role Semantics*

The general idea behind "role" theories - either of functional or of conceptual sort (see more later) - is that the content of a mental state, usually expressed as a proposition,[1] is individuated by its role in the overall system of an individual's thoughts. For instance, Block has expressed the gist of such a view as follows: "the meaning of a mental representation is its role in the cognitive life of the agent" (Block 1999: 331). A slightly different formulation is due to Gilbert Harman according to which: "the contents of thoughts are determined by their construction out of concepts; and the

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1 In case one considers propositional attitudes.

content of concepts are determined by their 'functional role' in a person's psychology" (Harman 1987: 55). A more recent expression of this thesis, by Greenberg and Harman, is the following: "Conceptual Role Semantics is the view that the meanings of expressions of a language (or other symbol system) or the contents of mental states are determined or explained by the role of the expressions or mental states in thinking" (Greenberg and Harman 2006: 295) were an epistemological twist has been put on this semantic thesis.

Now, let's suppose that the notion of propositional content can encompass both the notion of representations, as expressed in Block, and thoughts, as mentioned in Harman. However, these definitions are somewhat different: while Block's notion of mental representation individuates functional roles at the level of propositional contents as wholes, Harman's definitions takes functional roles as applying directly to the constituents of propositional contents, that is concepts. A way to combine these two aspects, the whole propositional content and its constituents, can be found in Block: "A crucial component of a sentence's conceptual role is a matter of how it participates in inductive and deductive inferences. A word's conceptual role is a matter of its contribution to the role of sentences" (Block 1986: 628). So, the functional role of a propositional content is given in its participating in inferences of one kind or another, and the inferences in which it participates are determined by the role of the entities that constitute it, that is, concepts. Consequently, according to Functional Role Semantics, the content of a propositional content is determined by its functional role in the overall pattern of interactions with other contents and such inferences are determined by the constituents of the content itself, that is, by the concepts and relations included in the content. We have, then, that the content of a thought such as *the cat is on the mat* is given by the inferences, deductive, inductive or abductive, in which it occurs as premise, inferential step or conclusion. The inferences in which it occurs are determined by the concepts' roles that figure in the content, namely *cat*, *table*, *being on x, y*. In this way, Functional Role Semantics is a compositional theory.

*Logical features*

According to Davidson, *intensionality* or semantic opacity, "has been long recognized to ... distinguish talk about propositional attitude from talk of other things" (Davidson 1985: 475). Semantic opacity, widely regarded as the hallmark of intentionality, is a feature shared by sentences containing verbs like *believe*, *desire*, and all other verbs used to refer to mental attitudes. In these sentences, the substitution of co-referential expressions may change the truth value of the whole sentence - contrary to *Leibniz's law*. In short, it is said that it is not possible to substitute co-referring expressions *salva veritate*, that is, substitution does not necessarily preserves truth. For instance, if John believes that Cicero denounced Catiline and, as a matter of fact Cicero = Tully, we

cannot infer that John believes that Tully denounced Catiline because John may lack the relevant piece of knowledge, that is, the identity holding between Tully and Cicero.

Related features of such sentences are their failure to satisfy both the law of existential generalization and the principle of truth functionality. Examples of these features can be thus exemplified: John believing that U.F.O.s exist does not entail the existence of any flying saucer, showing that believing that *p* does not entail the existence of whatever state of affair *p* may designate. As to truth functionality, if it is true that John believes that U.F.O.s exist, the truth of such belief attribution to John is not a function of the truth of the embedded clause, such as *U.F.O.s exist*. It has been recognized that semantic opacity does not distinguish talk about propositional attitudes from other things, because modal operators as well present the same logical features. However, with the exception of Searle (1993), opacity is undoubtedly an widely recognized as a crucial logical aspect of propositional attitudes.

Now, intentional emotions too manifest *intensionality*. In this case, the failure of co-referential substitution applies *salva affectione*, that is to say, substitution does not necessarily preserve the emotional state. For instance, if John fears that Mark is going to be late, he should not necessarily fear that the father of newborn Mark jr. is going to be late because John may not have the news yet (see Anscombe 1967, Morton 1980 and Rorty 1980). However, this is not revealing of anything deep. After all, beliefs aim at truth while fears aim at certain affective value, so it is not very surprising that in both cases the substitution of co-referring expressions change the truth of the psychological attitude with which a given content is entertained.

It may seems that the parallel between intentional and emotional states goes thoroughly. In fact, both kinds of states present the relevant features of opacity previously mentioned, being subject to the failure of Leibniz's law, of existential generalization and being not truth preserving. However, I want to argue that the individuation conditions for propositions, which form the content of intentional states, differ whether such propositions are embedded as clauses into intentional verbs or into emotional verbs, so that intentional and emotional states part company in this respect. In particular, I will argue that the psychological attitude with which one entertains a given content affects the inferential relations of the propositional content, provided that one accepts a version or another of functional role semantics. Let me start with one example.

Compare the following two mental attitudes, one of emotive the other of intentional sort

*S* fears that *team A may lose the tournament*
*T* believes that *team A may lose the tournament*

Are S and T entertaining different attitudes toward the same propositional content? We can answer

in the affirmative provided that the identity conditions of the propositional content is kept constant. Functional role semantics, as we saw, establishes that such a content is individuated by the inferences in which the propositional content participates which, in turn, depend on its constituents. Suppose that the proposition *team A may lose the tournament*, let's call it proposition *p*, entails, among others, propositions such as *team A will play the tournament* and *there must be at least one loser in the tournament*.

These propositions constitute inferential links that ought to be independent from the psychological attitude -- of belief or of fear -- that is possible to establish with the original propositional content *p*. So, if one adheres to functional role semantics, the set of all propositions that are entailed by and that entails proposition *p* constitutes the *meaning* of the proposition *p*. This means that if the belief that *team A may lose the tournament* is ascribed to someone, she has to believe at least *some* of the propositions belonging to the set individuating the content of the proposition *p*. That is to say, she has to believe either that *team A will play the tournament* or that *there is at least one loser in the tournament*. Were she not to believe any of these, we would have no reason to attribute the belief that *team A may lose the tournament* to her.

If we now consider the same propositions as *relata* of an emotional state, in particular one of fear, in line of principle we should have the same conditions of individuation, that is to say, it ought to be possible to draw the same inferences drawn in the case of belief. However, this is not the case. If it is true that

*S* fears that *team A may lose the tournament*

it seems unreasonable to suppose that

*S* fears that *team A will play the tournament*

or that

*S* fears that *there must be at least one loser in the tournament*

In fact, this last proposition is not suitable for fear if one fears that *team A may lose the tournament*. So, the content of the propositional attitude is affected by the attitude with which it is entertained, contrary to widespread assumption. It is important to keep in mind that we are considering the inferences that one could draw keeping the psychological attitude constant. So, when we consider someone *believing* that *p* we consider what other kind of *beliefs* one is ready to entertain in order to

evaluate the content of *p* independently on the psychological attitude.

One may observe that the general constraint previously set establishes that in order to have a propositional attitude with content *p* one has to entertain *some* of the propositions that belong to the set of those that constitute the meaning of *p*. So, it is not necessary to hold exactly the *same* propositions. In general this is true. However, it seems quite plausible that, on request, individuals should at least express their assent to entertain, with the same psychological attitude, the other propositional contents belonging to the set that determines the individuation conditions of the original content. If one believes that *p* and this proposition entails *q* then, on request, one should assent to the belief that *q* as well, provided that one understands or has the relevant concepts to grasp such a content. With the case at hand, I have shown that this is not the case if the attitudes contrasted are those of belief and fear. Interestingly, the difference surfaces in the case of wishes as well. If one wishes that *team A loses the tournament* this does not entail that she or he wishes that *there must be at least one loser in the tournament*.

A second difference applies. If it is the case that

*S* believes that *team A may lose the tournament*

then it must also be the case that

*S* believes that *some team must lose the tournament*

However, if it is the case that

*S* fears that *team A may lose the tournament*

it is not the case that

*S* fears that *some team must lose the tournament*

because such a content is not sufficient to engender in S a fearful emotional state, or at least not as the previous one. On the same score, if it is the case that

*S* is happy because *team A won the tournament*

it is not the case that

*S* is happy because *some team won the tournament.*

What happens in case of emotional states, is that it is not possible to obtain an inference from *emoting that Pa* to its existential counterpart *emoting that ∃x (Px),* as it could be the case with intentional states, at least in this case. So, in case of emotional states is not possible to existentially generalize even within the scope of the attitude operator.[2]

The case of fear and wish is different from that of desire. As Quine pointed out, if I desire a sloop this desire of mine does not entail there is a sloop I desire. I can desire the removal of my, so to say, *slooplessness* condition. Many desires, then, are, as beliefs, *de dicto* while, if I am right, fears and wishes are, in many cases, *de re*. It is also possible to say that the cases in which it is possible to existentially generalize the intentional states do not coincide with those in which it is possible to existentially generalize the emotional states.[3]

*Consequences*

What I have said so far could have far-reaching consequences because it has been suggested by many (see Crane 2001, Ben-Ze'ev 2000, Goldie 2000) that some emotional states are nothing but intentional states endowed with an emotive component. If we were to accept such a view, imagining that the *fear that* has such an intentional nature entails that a state of fear would naturally presuppose a belief, and we should be certain that the propositional content of the fear is identical with that of the connected belief. We saw, on functional role semantics, two propositions are identical if and only if they have the same individuation conditions, which can be spelled out in terms of having the same inferential relations. However, we have shown that this is not the case.

Now, which consequences is possible to draw from these observations regarding the conditions of individuation of propositions when these are *relata* of intentional or of emotional states?

On the one hand, one may argue that if the inferential relations that individuate the propositions are different when these are embedded as contents of an intentional or an emotional states then we are confronting *two* different propositions. This view would support the conclusion that sometimes it is not possible to entertain a relation of belief *and* of emotion with the same proposition. Consequently, one might argue that this impossibility is a good argument to show that it is the very process of individuation, through inferential roles, that does not work. According to this view, it is the inferential role theory that should be abandoned, but it seems hard to accept such a conclusion,

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2 However, it should be kept in mind that existential generalization fails in case of propositional attitudes, but here we are within the scope of the quantifier.
3 On this see Gunther (2004) and (2007).

given the explanatory force and attractiveness this view has.[4]

On the other hand, one may stick with functional role semantics and suggest that it is essential to "prune" the inferential relations so to avoid any contrast between intentional and emotional relations. In this case, when an intentional emotion is present we would have two relations, one emotional the other intentional, between a subject and one and the same proposition. The first difficulty with such a way is that the pruning should have to cut the inferences that are not central in determine the meaning of the proposition, leaving only those that are essential to it and common to the intentional state and the emotional one. However, on what basis are we to decide which are which? This difficulty constitutes one of the most important weak points of inferential role semantics (cf. Putnam 1988; Fodor and Lepore 1992). As Putnam says:

If one cannot even informally indicate - without using such an expression as 'regarded by speakers as part of the meaning' or 'central to the meaning' - how one could decide *which* inferences and *which* beliefs fix the meaning of a word then the claims made on behalf of Conceptual Role Semantics have virtually no content (Putnam 1988, p. 53).

Alternatively, the other way is that of using the analytic / synthetic distinction, as Fodor and Lepore show, but this would place functional or conceptual role semantics in a worse position. This is then a blind alley.[5]

Is there a way out from this dilemma? It seems to me that the prospects for a way out are quite dim. Intentional and emotional states determine two different sets of individuating conditions for propositional contents, thus blocking the entailment from emotion to belief and other epistemic states. Some (e.g. Tye 1989) have thought that a noteworthy option would be adverbialism, the idea that considers propositional attitudes as general modifiers of the overall cognitive structure of an individual. One way to apply such a view would be the following: emotional states could be adverbial modifiers of intentional states such that, when one fears that $p$, the hidden logic is that she or he believes, with fear, that $p$. However, I do not think that is not possible to accept an adverbial solution, because there is no guarantee that the $p$ we fear about is the same we believe. So, it seems that the supposed independence of attitudes and proposition, a long-standing tradition stemming from Russell's work, should be abandoned or deeply revised.

If one drops functional role semantics may avoid this difficulties, but at the moment is not clear to me whether the difficulties here described affect or not other semantic theories as well.

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4  Fodor and Lepore (1992) would follow this conclusion.
5  See Gozzano (2006).

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