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The Role of Presuppositions and  
Default Implicatures in Framing Effects

Abstract. Framing effects have hardly been studied from the philosophy of language. The variations in how subjects respond to positively or negatively framed descriptions of the same issue have received attention from social science research, where, nevertheless, a naïve understanding of speech interpretation has undermined the different explanations offered. The present paper explores the semantic-pragmatic side of framing effects and provides an explanation of this phenomenon in terms of pragmatic presuppositions and default implicatures. It is argued that the problem of valence framing includes two overlapping phenomena; on the pollster's side, there are wrong pragmatic presuppositions as to the kind of context that is relevant for survey interpretation, whereas the addressee proceeds by automatically connecting a certain kind of frame to a certain kind of implicit information related to the most common context of use.

## 1 Introduction

Framing effects are a widely studied phenomenon in social sciences, commonly understood as variations in how subjects respond to different but objectively equivalent descriptions of the same issue. As empirical phenomena, framing effects have been established to a very high degree of reliability and robustness (Kuhberger 1998). On the theoretical side, however, they are highly controversial since they challenge a common assumption in economic methodology, the one

known as the 'principle of extensionality or invariance principle'. This principle

says that individuals' preferences should not be affected by variations in the description of a problem.

Now, within the field of economic methodology, there are two conflicting

ways of understanding framing effects; they can be regarded either as manifestations of our cognitive limitations, or as manifestations of our cognitive strategies. Only very recently a few attempts have been made at exploring the semantic-pragmatic side of this phenomenon. The present paper is intended to provide

a contribution in this direction. I will restrict my analysis to the so called 'va-

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lence framing effects',<sup>1</sup> i.e. effects caused by frames where the same issue is described either in positive or negative terms.

In the field of social sciences, the use of a wide variety of linguistic means to gather information about the subjects' beliefs, expectations, assessments or

plans of action has significantly increased. In this respect, the reliance on various kinds of surveys and interviews has extended substantially, and faces the

difficulties concerning the so-called 'framing effects'. Broadly speaking, these effects are related to the influence that different ways of presenting the same issue

may bear on the respondent's response. The aim of this paper is to elucidate the

semantic-pragmatic side of this problem, and, in particular, to explain how framing effects may be related to presuppositions and implicatures—this being a question that has been hardly dealt with in the standard literature on the subject. It is argued that different frames generate different inferential contexts by means of/through well-established linguistic practices.

The present account also challenges a common assumption in the sphere of economic methodology, usually referred to as ‘the principle of extensionality’ or ‘the invariance principle’ (Bourgeois-Gironde & Giraud 2009: 385–87), which establishes that individuals’ preferences should not be affected by variations in the description of a problem. It is thus assumed that different ways of presenting the same set of possible options should thus not change the subjects’ choices with respect to those options. Although behavioral economists have indeed diverged from the prevailing view in economics—arguing that framing effects should be approached not as mere cognitive flaws in the recognition of identical options, but as signs of the subjects’ attitudes toward different aspects involved in those options—the explanatory factors identified by them fail to capture the importance of some semantic-pragmatic elements involved in the interpretation of frames. The influential studies by A. Tversky and D. Kahneman (1981, 1991) certainly shed some light on the way individuals process information depending on how the latter is presented to them. Although they did that mainly by empirically ascertaining several psychological biases—like loss aversion and the endowment effect, which are activated according to the kind of frame being used—they also acknowledged that the reference point regarding the value of an outcome does not stay neutral but varies depending on what is induced by the frame itself.

The underlying semantic and pragmatic nature of this variation, however, is not analyzed by these authors.

After briefly characterizing framing effects and commenting on their standard explanation—which heavily relies on psychological loss aversion or the en-

☐ In what follows I will talk of ‘framing effects’ when referring to valence framing effects.

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dowment effect (section 2)—I will discuss the few attempts (Bourgeois-Gironde &

Giraud 2009: 385–87, Moscati 2012: 8) at providing a semantic-pragmatic explanation of them in terms of situated linguistic understanding and a revised notion

of extensionality (section 3). The remaining sections are devoted to examine the

nature of the implicit information conveyed by frames and explore its understanding in terms of presuppositions and implicatures (section 4). I will argue

that alternative frames trigger different interpretations regarding the most likely

context of use of the frame. Finally, I will conclude that the notion of default implicature best explains the way different information is conveyed by alternative

frames.

## 2 Framing Effects

As soon as the late 1990s, Levin, Schneider and Gaeth (1998) urged researchers to refine the typology of framing effects so that it became possible to account for the apparently inconsistent results achieved when trying to detect such effects.

The plurality of interventions, moreover, entails a corresponding plurality of

framing effects whose treatment requires equally differentiated procedures. In

the typology suggested by Levin et. al., three main kinds of valence framing effects are distinguished: the extensively discussed risky choice framing effect,

and two other effects often overseen or mistaken for the latter, namely, attribute framing and goal framing. As explained by the authors (1998: 151, 181), each frame differs from the others in what is framed, what the frame affects, and how the effect is measured.

In the risky choice framing, the complete set of outcomes from a potential

choice involving options with different levels of risk is described either in a positive or in a negative way. The framing effect is here measured comparing the

rate of choices for risky options in each frame condition. Risk aversion would explain the fact that, when presented in negative terms, the riskier option is chosen

by respondents more often than the safer one. A wide variety of experiments on risky choice,<sup>2</sup> from bargain situations to medical treatments, shows that when the outcome is described in terms of gains (lives saved, earned income), subjects'

tendency to take risks diminishes. By contrast, such tendency increases when outcomes are expressed in terms of losses (lost lives, incurred debts). The paradigmatic case of risky choice framing effect is illustrated by the so-called "Asian disease

<sup>2</sup> See Levin et. al. (1998: 154–157) for a collection of experimental results obtained within the domain of risky choice framing effects.

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problem" (Tversky & Kahneman 1981). In this task, the two equivalent pairs of independent options with different level of risk are the following: a) a sure saving of

one-third of the lives versus a one-third chance of saving all the lives and a two-thirds chance of saving no lives; b) a sure loss of two-thirds of the lives versus a

one-third chance of losing no lives and a two-thirds chance of losing all the lives.

The majority of subjects select the first option in the positively framed version of the task, and the second option in the negatively framed version.

In the form of framing called 'attribute framing', the positive or negative description of some characteristic of an object or event affects item evaluation,

which is estimated by comparing the attractiveness ratings for the single item in each frame condition. The associative processes based on valence explain that positively described objects or events are more positively valued. This result has been established with much higher reliability and robustness than the other two kinds of framing effects compared by Levin et. al. (1998: 160). The fact that evaluations vary as a result of positive or negative framing manipulation has

been established for issues as diverse as consumer products, job placement programs, medical treatments, industry project teams, students' level of achievement or the performance of basketball players.<sup>3</sup> Ground beef, for example, was

rated as better tasting and less greasy when it was described as 75% lean rather than as 25% fat. Similarly, students' performance was rated higher when their scores were expressed in terms of percentage correct or percentage incorrect.

Analogous results were obtained in the rest of cases.

Finally, in the case of goal framing, the same consequences of a conduct are

specified either in positive or negative terms. The positive frame focuses attention on the goal of obtaining the positive consequence (or gain) associated

with a given behavior, whereas the negative frame focuses attention on avoiding the negative consequence (or loss) associated with not performing such behavior. The variation in how persuaded an agent is to make or not make the decision to perform a certain conduct is regarded as an effect of the variations in the frames applied. The effect itself is measured by comparing the rate of adoption of such conduct under each frame condition. Experimental evidence shows that the negatively framed message, that is, the one emphasizing avoidable losses, proves more persuasive than the same message framed positively, and therefore stressing the potential gains. Real examples where goal frames are at use can be found in studies on the promotion of health, on endowment or on social dilemmas. Most subjects appear more inclined to adopt a certain conduct—like for ex-

See also Levin et. al. (1998: 161–163) for a lengthy compilation of experimental results related

to attribute framing effects.

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ample breast self-examination, use of public resources or of a credit card—when they receive information stressing the potential losses derived from not engaging in such conduct than when presented with information highlighting the potential profits resulting from engaging in it.

In the above-mentioned examples, individuals show to be more persuaded

to adopt a given behavior when descriptions emphasize, respectively, the decrease in the probability of detecting cancer if no self-examination is carried

out versus the increase of such probability in case a self-examination is performed, the losses suffered by the individual who contributes to the public

goods versus the foreseen gains if the individual contributed to them, and the losses due to not using the credit card versus the benefits derived from its use.<sup>4</sup>

Despite the growing interest raised by the problem of framing effects, the

majority of studies on these effects are focused on their diagnosis, while the attempts at explaining and controlling them are still extremely tentative and fragmentary. As already pointed out by Tversky and Kahneman (1981, 1991) in several of their influential studies on framing effects, the task of devising frames must

be done by taking into account individuals' susceptibility to changes in reference points or in what is perceived as the status quo regarding some issue. Different frames would lead to different choices of reference points and, consequently, to a different way to encode the outcomes as gains or losses, which accordingly would bring about a different selection of options.

In discussing some of the anomalies affecting their prospect theory (Kahneman & Tversky 1979), both authors appeal to the possible occurrence of most

likely intertwined phenomena like loss aversion and the endowment effect.

These phenomena would emerge in most cases due to some framing conditions in which the reference point regarding the value of an outcome does not stay neutral but varies depending on what is induced by the frame itself. Let us recall that prospect theory, as opposed to classical theory, is committed to the view that

risk aversion is dependent on a reference point. Under that assumption, it is predicted that risk aversion is linked to the domain of gains, and risk seeking to the

domain of losses. In their 1979 paper, Kahneman and Tversky established that



the above tendency could be reversed depending on the framing employed for the same pair of options. An initial remark in that direction can be found in some of their comments on the isolation effect (1979: 271), that is, individuals' inclination to ignore those components shared by alternatives and to focus on those making them different. Since there is more than one way to decompose a pair of alternatives into shared and distinctive components, the different

☐ The wide range of real cases collected by Levin et. al. (1998) can be found in 169–171.

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ways of decomposition may also prompt different preferences. This point is made more explicit as both authors refer to the reference point assumed by individuals and identifiable with those individuals' status quo or current state:

“However, the location of the reference point, and the consequent coding of outcomes as

gains or losses, can be affected by the formulation of the offered prospects, and by the expectations of the decision maker” (1979: 274).

Kahneman and Tversky go into great detail as to how reference points may vary,

emphasizing that those reference points fixed by the status quo may shift as a result of encoding losses and gains relative to expectations that differ from the ones

determined by the status quo. They also mention more specific cases where different encodings of the same pair of options create discrepancies between the reference point and the actual situation. According to them, this is exactly what happens when the choice is encoded in terms of final outcomes, as suggested from

decision theory, instead of in terms of losses and gains (1979: 286–87).

In addition to loss aversion, endowment, preservation of the status quo and

the tendency to ignore similarities, Levin and his collaborators point to the activation of positive associations in memory as the main mechanism responsible

for attribute framing effects (1998: 164–5). Positive stimuli generated by a frame would yield some associative responses that, in turn, would cause a

clear increase in the level of approval that each individual assigns to the positively described option as opposed to that assigned to the negatively described

one. It has even been demonstrated that the mere activation of positive associations with respect to one of the options presented for a given choice brings

about substantial positive distortions of that option against the other one (Russo, Medvec, & Meloy 1996: 103–107).

Turning now to the attempts at explaining goal framing effects, it is worth stressing the strong empirical support for the hypothesis of the negativity bias

(Taylor 1991: 68–71). According to this hypothesis, individuals pay more attention to negative information than to equivalent positive information, showing

themselves more influenced by the former than the latter. Since the 1990s, some of the explanations for the different framing effects have been partially unified; more specifically, loss aversion is now understood as a subclass of the negativity bias, and the status quo bias is in turn regarded as a subclass

of the loss aversion bias. In all these cases, the rejection caused by a loss is higher than the desire to obtain a gain of the same magnitude (Levin et. al. 1998: 177).

To summarize, we have seen so far how risky choice framing effects have been explained on the basis of loss aversion, endowment, preservation of the status quo and the tendency to ignore similarities (Kahneman & Tversky 1979),

how attribute framing effects have been accounted for in terms of associative responses and selective attention mechanisms (Russo, Medvec, & Meloy 1996:

103–107), and how negativity bias has been emphasized as the main factor behind goal framing effects (Taylor 1991: 68–71). It is also worth examining those

empirical findings pointing to variables that diminish or prevent such effects. In the case of risky choice framing, for example, it was demonstrated that when some question about the subject's reasons for a certain choice was added to the survey, then the framing effect was diminished or even eliminated. It is

what Larrick, Smith and Yates call "the reflection effect" (1992: 199), which, according to their results, would make it possible to reverse framing effects by

means of reflection on the issue presented within the frame. In a similar vein, Smith and Levin experimentally showed that individuals with a lower need for cognition were more affected by framing effects than those with a higher need for cognition: framing effects were hardly noticeable among the latter (Smith

& Levin 1996: 283). As is well known in the field of psychology, the need for cognition constitutes a personality variable reflecting the individuals' disposition to

perform cognitive tasks that require effort.

Experimental results suggest that factors other than the above also have a bearing on the scope of framing effects. These factors include the domain of problems presented, the traits of the experimental subjects, the magnitude or probability of potential outcomes, and the categories applied in verbalizing such outcomes (Levin et. al. 1998: 153). For instance, subjects are more inclined to take risks related to health issues than related to finances. The other two cases

mentioned above, however, could be covered by the general case where the amount of information handled by the subject is inversely proportional to the scope of the framing effects (Schoorman et. al. 1994: 520). Notice that, as already commented, the variations in such amount may be due to variations intrinsic to the frame, and basically dependent on how detailed the frame is, or to variations

in the subjects, mainly related to their need for cognition or degree of competence in the kind of subject presented. With respect to the traits of the experimental subjects, it has been found that experts or students in a certain field tend to

be less affected by framing effects when confronted with options evaluable from such field. Similarly, it has been verified that replacing expressions like 'many' or 'few' with numerical values lowers the intensity of framing effects. In the study by Schoorman et. al. mentioned earlier, it has been experimentally established that the subject's degree of involvement or responsibility concerning a given issue can also eliminate the bias produced by the framing of the issue.

The situation is somehow different in the case of the bias caused by the attribute frame, for, as noted earlier, the sort of effect produced by this frame is the most

homogeneous and clearly verified among ones caused by the valence frames.

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Thus, despite the different domains of problems or the differences between subjects, the positive description of an item attribute, as opposed to its negative description, will almost always favor the more positive evaluation of both the attribute and the corresponding item. However, also in the case of attribute framing, a

lower intensity of the bias has been experimentally determined when there is, on the subjects' side, a low degree of involvement as to the issue described (Marteau 1989: 90–93, Millar & Millar 2000: 860–63). We find here again a phenomenon

that suggests an inverse relationship between the intensity of the framing bias and the level of processing of information provided to the subject. Therefore, this phenomenon might support the hypothesis, backed up by the experimental work of Maheswaran and Meyers-Levy (1990: 365), according to which the more involved an experimental subject is in the issue described, the more detailed

their processing of the information related to the issue. Moreover, several experimental studies have shown the occurrence of a closely related phenomenon,

namely, that the evaluation of real items is less affected by framing bias than the evaluation of hypothetical items. Attribute framing effects are also diminished when subjects are asked to explain their answers or give reasons for them.

As seen in the former cases, the degree of involvement in the topic presented, together with the tendency of the subjects to make a cognitive effort, are inversely related to the intensity of goal framing effects.<sup>5</sup> Perhaps because of the

greater structural complexity of goal framing, there are more variations in operationalizing this framing, which ultimately entails a less homogeneous evidence

for goal framing than for attribute framing (Levin et. al. 1998: 176). More specifically, such operationalization can be done either through simple negation (not

obtaining profits) or through alternative terminology (losing the possibility of obtaining profits). Even if it seems obvious that linguistic variation may influence

the strength of all sorts of valence framing effects, there are more potential linguistic variations in the case of goal framing, since the latter involves describing

the consequences ascribed to some behavior as opposed to those ascribed to not performing such behavior. As Levin and his co-workers emphasize, in order to

clarify when the responses of the subjects are dependent on semantic variations, it is necessary to develop an empirical study on language itself (1998: 174).<sup>6</sup>

☐ Numerous references to empirical studies that point to this issue can be found in Levin et. al. (1998: 174).

☐ In his 1992 paper, Rolf Mayer provides some clues to develop the kind of study suggested

above. There he refers to some semantic aspects relevant in framing effects, such as the clustered nature of meaning, the impact of thematic roles or the distinction between discursive back-ground and discursive front.

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Despite the seeming diversity of explanations for framing effects, there are some explanatory variables shared by all of them. These explanations, in fact, all point to a common basic phenomenon, i.e. the fact that the rejection caused by a loss is higher than the desire to obtain a gain of the same magnitude. Moreover, in all cases the main explanatory variables associated to this phenomenon are:

a) the negativity bias, that is, the tendency to pay more attention to negative information than positive information (Taylor 1991: 68–71), which includes loss aversion and preservation of the status quo (Kahneman & Tversky 1979); and

b) the grasp or inference of implicit information about reference points (Kahneman & Tversky 1979), which concerns the implicit standard that is used in

assessing the value of a potential gain or loss.<sup>7</sup>

Standard explanations of framing effects, however, face some serious limitations. There are two main problems undermining these explanations. On the

one hand, psychological variables like loss aversion seem unsuited to explain response shifts in cases where the framed options are related to neither risk nor possible gains or losses, e.g. in cases of attribute framing of issues like the performance of basketball players or students' level of achievement. On the other hand, a naive understanding of speech interpretation seems to be underlying the assumption of the principle of invariance. To overcome these shortcomings,

I am going to focus on what I regard as the most promising approach to the problem of framing effects, which entails exploring the connection between information and framing. Surprisingly this side of the problem has not been as carefully

examined as its psychological side. Yet, as already noted, if we consider the relation between information and framing we find empirical evidence of an inverse relationship between the intensity of the framing bias and the amount of information provided to the subject, or the level of processing of such information

(Schoorman et. al. 1994). For instance, using numerical values instead of natural

language quantification or adding to the survey some questions about the subject's reasons for a certain choice have been proven to diminish the corresponding framing effects. These phenomena suggest that when information is not provided by the frame, addressees 'complete' such information—and they do that in

a way unexpected by the pollsters. In parallel to this empirical evidence, there is

an increasing acknowledgment of differences in the implicit choice-relevant information conveyed by frames. A new emphasis on choice-relevant information-

☐ Reference points, in this sense, can be also understood as implicit assumptions about the sta-

tus quo.

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al equivalence as opposed to mere extensional equivalence between frames has been made accordingly. Against this background, the need to examine language and linguistic practices involved in frames becomes more and more clear.

### 3 Earlier Attempts at Explaining Framing Effects

#### In Semantic-pragmatic Terms

There have been a few attempts at explaining framing effects in general on the

basis of the traditional semantic distinction between extension (what is designated by an expression) and intension (the way of determining extension),

which all questioned the way the principle of extensionality is usually understood or applied.

In the field of philosophy of economics, for example, Moscati has recently

argued for understanding framing effects as doxastic effects caused by the intensional discrepancy between extensionally identical descriptions. Surveys employed by Tversky and Kahneman in their experiments included extensionally

equivalent descriptions of outcomes and probabilities which, nevertheless, intensionally differed by virtue of the way uncertainty was presented, either in

one-stage games or in two-stage games (Moscati 2012: 7). Moscati points to the



problem of referential opacity in intensional contexts as what would explain the apparent irrationality of subjects' choice reversals (2012: 8). According to this author, surveys constitute intensional contexts where descriptions are interpreted as tied to beliefs. The apparent manifestations of irrationality would then be the consequence of an apparent co-extensionality, mistakenly taken as real by those researchers who overlook the opaque nature of intensional contexts such as that of subjects' beliefs. He conceives framing effects more generally, "as the effects, on beliefs, preferences or decisions, of intensionally different descriptions of an extensionally single object" (Moscati 2012: 7–8). This framework highlights the economic relevance of interactive beliefs and interactive knowledge—that is, respectively, beliefs or knowledge that an individual has about what other individuals believe or know about the world—i since in many cases individuals take action on their basis (Moscati 2012: 14). Other authors like McKenzie and Nelson (2003) or Bourgeois-Gironde and Giraud (2009) develop a similar approach in claiming that frames bring with them a leakage of choice-relevant information about the speaker's reference point. Therefore, rather than being objectively equivalent, alternative frames would leak information allowing one to infer the existence of certain background condition from the speaker's choice of frame. Bourgeois-Gironde and Giraud 190 María Caamaño-Alegre

(2009: 385–87) make use of the distinction between intension and extension with the purpose of explaining the mechanism by which framing effects come to happen. This distinction would make it possible to account for those cases where different descriptions of the same problem prompt different choices.

Both authors draw attention to the fact that, in economic methodology, the principle of invariance or extensionality goes beyond the logical principle, establishing the co-extensionality between expressions whenever the latter are interchangeable *salva veritate* (i.e., whenever the truth value is preserved). In the context survey research, what needs to be guaranteed by means of co-extensional descriptions is not only the truth value preservation but also the preservation of whatever information is relevant for making decisions. What needs to be specified, therefore, is the kind of information regarded as relevant for purposes of deciding among the options presented. Only after such information had been specified could framing effects be ascertained as violations of the extensionality principle in the contexts of decision under study. Violating extensionality would then imply that choice-irrelevant information determines the choices or judgments made by the subjects.

'Intension', however, is used by these authors in a sense that may include explicit contents (conventional meaning, truth conditions) as well as implicit contents (speaker's meaning, contextual information). Unlike the standard notion of intension, usually restricted to explicit contents, this broad notion is tightly associated with implicit contents, whose nature, however, remains highly underdetermined. In fact, the emphasis should be placed only on implicit contents, since the intensional aspect has traditionally been equated with explicit contents. Furthermore, if we grant that alternative valence frames are usually designed not only to guarantee interchangeability *salva veritate*, but also so that they share the same explicit contents, then response shifts induced by alternative frames must be due to differences in their implicit contents. To be clear,

when the above authors talk about intension, most likely they are pointing to implicit contents related to doxastic elements attributable to the speaker by the addressee.

Once implicit contents are brought to the foreground, two related questions arise: a) what is the nature of the implicit information conveyed by extensionally equivalent frames sharing the same explicit contents? And b) how is the implicit information conveyed by the frames? Drawing on some empirical data presented

below, my suggestion to answer the first question is that the (choice-relevant) implicit information conveyed by the frame is about the most likely context of use

of a frame, or, to be more precise, about some typical background conditions corresponding to such context. This information is not part of what is asserted in the

frame, but rather part of what is assumed about the context whenever a certain

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frame is employed. The resulting assumption concerns neither the intentions of any particular speaker, nor any other particular contextual aspect surrounding the framed utterance, since surveys are usually non-conversational contexts where both the 'speaker' (pollster) and the framed issue are absent. In implicitly conveying contextual information typically associated with a frame, valence framing induces an addition of a proposition to the proposition expressed by an utterance, which brings us to the second question. The addition induced by

framing seems to occur through a process of standardization, i.e. by way of a regular pattern of use or choice of a frame whenever certain contextual conditions

have arisen. This is also suggested by recent empirical data on frame choice.

Going back to the views put forward by Moscati as well as Bourgeois-Girarde and Giraud, it should be noted that they all indirectly point to an essential feature of framing effects, namely, a doxastic (or knowledge) condition concerning familiarity with the usual background conditions of frame choice. Nevertheless, by placing the focus on the speaker's beliefs about reference points rather than on the typical contextual conditions determining frame choice, they fail to capture the ultimate nature of the phenomenon under study. Consequently, they wrongly assume that addressees make inferences from the use of a frame to the speakers' beliefs and from them to certain background conditions obtaining. The process of standardization governing framing effects, however, suggests that the addressees' inferences are made from the use of a frame directly to certain background conditions obtaining.

So far, I have only mentioned some basic features of framing effects that have not been properly discussed in the literature. However, I have not yet provided a framework within which those features could be explained and made more precise. In particular, I have not explored the different notions—like presupposition, implicature, default meaning, etc.—that could help to better understand the role that implicit content plays in framing effects. The main candidates to play this role will be examined in the next section.

#### 4 Implicit Content and Framing Effects

Before examining the different available notions that could be applied to characterize the implicit content conveyed by frames, let us take a look at the empir-

ical evidence supporting the view so far adopted here.

Some empirical data collected over the last decade show that listeners (or readers) are able to make inferences about current or presupposed states from the speaker's (pollster's) choice of frame (Sher & McKenzie 2006). Note that the inference is from choice of frame to a presupposed state, not from an utterance to a

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belief/intention and from the latter to a presupposed state. In some of the cases studied, depending on whether the glass was described as half empty or half full, readers were able to infer its previous volume of liquid (the inference being that the glass was previously completely full or completely empty, respectively).

A hypothesis that has been developed for natural language quantification—but which, as argued by Moxey, could be generalized to valence framing—is

that focus and polarity together are the main kind of presupposition trigger (Ingram 2010, Moxey 2011). The intuitive idea is that negation is most informative

if interpreted as a denial of a positive alternative (i.e. a complement set) and vice versa. Focus can thus be originated by a choice between alternative frames,

thereby yielding a soft presupposition (or assumption) trigger regarding the existence of a complement set—a full glass as opposed to a half empty glass or the

reverse. Valence framing leaks information about a complement set that is usually part of the objective context when a reference set is mentioned in a description (Ingram 2010, Moxey 2011). Empirical research on natural language quantification supports the claim that negative quantifiers (like 'not many' as opposed to 'a few') lead interpreters to infer that the small amount denoted is in contrast to a larger

supposed amount. Conversely, terms like 'few' (Sher & McKenzie 2006) 'leak' information about a higher reference point. This shows that, as interpreters, we seek out information not only about what is in fact the case, but also about what is assumed about the context, especially if deemed choice-relevant. Consequently, choice of expression implicitly conveys information on the facts while conveying the facts themselves. This information is tightly connected to usual opinions or expectations on the facts in question and rooted in a standard choice of frame alternatives in certain contexts. As interpreters we seek out such information as part of what we understand given the writer's message.

Interestingly, Moxey has extended this 'presupposition denial account' of focusing properties of natural language quantification also to valence frames in general (2011: 122–3). The label for the account refers to the basic assumed fact that, in interpreting negation, we presuppose that it involves a denial of a positive alternative (i.e. a complement set) since this maximizes the information we can get from the utterance—by the same token, we presuppose that a positive frame involves a denial of a negative alternative. The polarity of natural language quantification serves to frame quantity information in either a positive or a negative way. Each quantifier activates a normal pattern of focus on a complement set relative to the reference set (the overall set would include both sets). Now, as

Moxey illustrates with several examples, this very account can be generalized beyond the domain of natural language quantification. An utterance like 'John

didn't eat a cheese sandwich' places in focus a positive alternative, i.e. that

John might have eaten a cheese sandwich, but this state of affairs did not hap-

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pen (Moxey 2011: 119–121). Focus can thus be originated by a choice between alternative frames, thereby yielding a soft presupposition trigger regarding the existence of a complement set—a full glass as opposed to a half empty glass or the

reverse. Valence frames, therefore, leak information about a complement set that is usually part of the objective context when a reference set is mentioned in a

description. Going back to one of our former examples, it becomes clear that, depending on how the reference set is described in a sentence (for instance, a piece

of beef as being 75% lean), there is a focus on a complement set, i.e., on the assumed average qualities ascribed to the sort of thing included in the reference set

(pieces of beef being usually less than 75% lean).

After summarizing the main empirical insights into addressees' assumptions based on the speakers' choice of frame, the next step is to identify the notion that best captures all the above features. The possible candidates should account for the following features of the phenomenon under study:

a) it involves an addition to the proposition explicitly expressed by the utterance (the proposition that the glass was empty before being half full is

added to the proposition that the glass is half full);

b) the addition is part of the addressee's interpretation of the utterance, not

part of what the pollster's meant by the latter (the addressee, not the pollster, assumes the glass was empty before being half full);

c) what is added concerns not current but typical contextual conditions associated with the use of a frame (there is no glass in the present context, but

the utterance is interpreted by considering how the typical situation is at the times when that kind of utterance is framed in a certain way);

d) the addition is about a complement set relative to a reference set explicitly mentioned in the utterance (an empty glass relative to the half full glass);

e) the addition is triggered by a focus on a complement set, resulting in turn from a choice of a frame over the other alternative (focus on a glass being empty before being half full as a result of choosing the positive frame 'half full' over the alternative negative frame 'half empty');

f) the addition is automatic (as soon as the frame is identified the assumption about the previous state of the glass as being half full or half empty is made);

g) the addition is easily cancellable (if a description of the previous state of the glass as being full is explicitly added to the positively framed utterance

about the half full glass, then the usual assumption that the glass was previously empty is cancelled).

Since the authors dealing with the empirical data talk about presupposition and lexical alternatives, first I am going to explore the possible application of these  
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two concepts and then I will consider implicature in general as well as default implicature in particular, all widely discussed notions that have proven relevant in understanding the nature of implicit contents. On the other hand, given our



present purpose, the details and debatable points in the analysis of these notions are not going to be tackled here. Instead, I will only consider a schematic

and rather uncontroversial version of them in order to see whether they can accommodate and shed some light on the above phenomenon.

#### 4.1 Exploring the role of presuppositions in framing effects

Let us start by considering presupposition. It is commonly understood that one sentence presupposes another whenever the second is true regardless of the

truth or falsity of the first. That is to say, a presupposition projected from sentence  $s$  is also projected under negation  $\neg s$ . ‘The present king of France is

happy’ presupposes the proposition that there is a king of France, which is triggered by the definite description included in the sentence. Since assumptions

triggered by frames are not projected under negation, they do not fit this notion of presupposition. From the sentence ‘the glass is not half full’, we would not assume that it was previously empty; in all likelihood we would not know what to think about the state of the glass prior to not being half full. However, it is customary to distinguish between a semantic conception of presupposition and a pragmatic one (Simons 2013, Potts 2015). Semantic presuppositions would

be linguistically triggered by some lexical item—like the definite description construction ‘the-noun-phrase/singular common noun’ in the example just mentioned. They are necessary to determine the truth conditions of the sentence projecting them, which entails that, whenever a presupposition projected from a sentence is false, the sentence is not truth-evaluable—again like in the example.

Assumptions triggered by frames are clearly not necessarily involved in deter-

mining their truth value of framed sentences, or, to put it differently, the truth

of the latter can be evaluated without taking into account the assumptions that they convey.

It is possible to find a more promising approach to the problem, then, if we move on to pragmatic presuppositions. After all, according to the Stalnakerian picture, they are not primarily projected from sentences (not even from generic uses of sentences) but from the agent's conversational dynamics (Simons 2013: 7). He characterizes pragmatic presuppositions as the agent's beliefs

about common ground (Stalnaker 1974, 2002: 716), i.e. about common beliefs regarding what propositions are accepted by all parties in a conversation. To put it

more intuitively, presuppositions could be equated with beliefs about what is taken for granted in a conversation, and therefore about the background of beliefs shared by the interlocutors or the background of propositions treated by

them as true for some reason. The hearer's identification of a speaker's presuppositions would thus require the identification of the latter's intentions and beliefs in a conversational context. Simons' example of a contextual presupposition would be a case in point; if the chair of a meeting, which is supposed to

start at 3:00, says to the audience 'OK, it's 3 o'clock', hearers would assume that it is time to start. In this case there is a complete proposition that is literally expressed and has nothing to do with starting the meeting—the fact that it is 3 o'clock—and something is added to this, namely, the proposition that it is time for the meeting to start, which constitutes a presupposition projected from the

speaker's conversational dynamics. This addition is indeed not required to deter-

mining their truth value of framed sentences, or, to put it differently, the truth

of the latter can be evaluated without taking into account the assumptions that they convey.

mine the truth value of the explicitly expressed proposition. As a consequence,

presupposition failure would not result in the truth-non-evaluability of such proposition. Note, moreover, that these pragmatic contextual presuppositions are not required to pass the negation test, that is, if the chair said 'OK, it isn't 3 o'clock', the assumption would no longer be that it is time for the meeting

to start. So, it seems that the main difference between presupposition and conversational implicature vanishes. In so far as the notions of pragmatic presupposition and conversational implicature merge, all the considerations below are applicable to both.

The question is whether the focus on a complement set originated by a

choice between alternative frames is such as to trigger a wrong pragmatic presupposition on the addressee's side regarding the pollster's beliefs about common ground.<sup>8</sup> One essential aspect of Stalnaker's notion of pragmatic presuppo-

□ In discussing lexical alternatives as a source of pragmatic presuppositions, Dorit Abusch (2002: 8–11) argues that focus introduces an alternative set, which is turned into a pragmatic existential presupposition if the speaker pragmatically presupposes that some alternative is true. Although this view may seem at first promisingly close to the explanatory scheme I am looking for, there are important differences between the approach endorsed by Abusch and

the one that Ingram, Moxey, Sher and McKenzie suggest. First, in alternative semantics, alterna-

tives are considered part of the linguistic meaning (Fălăuş 2013); more precisely, they are seen as

lexically encoded opposites ('stop' would encode 'continue' as its alternative). By contrast, in the

presupposition denial account, the complement set is neither part of the linguistic meaning of

the utterance nor understood as an opposite to the reference set. Second, focus is understood only as an intonationally prompted phenomenon according to alternative semantics, while in the presupposition denial account it is regarded as dependent on the choice of frame. Third, in frames, the kind of pragmatic presupposition triggered by focus is not about the existence of an alternative set (i.e. an opposite) but about the existence of a complement set (i.e. not an opposite but a standard contrast class). There is no single obvious opposite for a half full

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sition is its emphasis on the importance of identifying the speaker's intentions

and beliefs (1974, 2002), and it is this very aspect that makes it difficult to accommodate the kind of presupposition triggered by valence frames. The sort of framing used in surveys operates in non-conversational textual contexts where there

is no speaker. In order to overcome this difficulty, the modified notion of pragmatic presupposition introduced by Marina Sbisà (1999: 330), explicitly developed to be applicable to text understanding, may prove useful. She argues

that pragmatic presuppositions are shared beliefs about the objective context rather than about others' representations of objective context. Shared beliefs would be the result rather than the essence of common ground. One of the

main ideas behind her view is that not only speakers carry pragmatic presuppositions, but also sentences do. Her account of pragmatic presupposition is developed to be applicable to text understanding, and so it proves relevant for generic

non-conversational written contexts where the speaker is absent, like in the case of surveys. Beliefs about objective context could thus be understood as including beliefs about background conditions involved in framing effects.

We could try to reconcile Stalnaker's and Sbisà's views by arguing that the common ground involved in framing may be more complex than usually thought

and include assumptions not only about the others' beliefs concerning some implicit information that is taken for granted (for instance, '25% fat' being equivalent to '75% lean') but also about what conditions of the objective context make

it more appropriate to use one frame rather than the other (average level of fat being usually under 25% makes it more appropriate to use '25% fat' instead of '75% lean'). Now, if we decide to go down this road, we should be able to explain why common ground is not shared in survey contexts, that is, we would have to

account for the fact that pollsters and addressees consistently hold different assumptions concerning the appropriate conditions for using one frame over another in survey contexts, even though they all take for granted the equivalence

between '25% fat' and '75 lean'. Notice that all that is required for those assumptions is a competence as users of frames (knowing how), not a propositional

knowledge of the competence (knowing that).

So we can arrive at the following explanation of framing effects in terms of pragmatic presuppositions: where pollsters presuppose that, in a survey context, describing a piece of beef as being '75% lean' is equivalent to describing it as being '25% fat', respondents take it as stressing that percentage over the glass, since 'a not half full glass' ambiguously suggests many different alternatives to "a half full glass", 'an empty glass' being only one of them. Thus, despite employing similar terminology,

alternative semantics and the presupposition denial account of framing effects diverge in important ways.

usual percentage, which would be presupposed to be lower than 75%. The disagreement arises, then, because (within survey contexts) pollsters do not endorse the respondents' assumptions regarding the relevance of both the usual percentage (below 75%) and the typical linguistic practice consisting in choosing a positive frame to stress a gain with respect to the average context (or a negative one to emphasize a loss with respect to the average context).

Two comments are in order here. First, none of the above assumptions are related to the speakers' intentions or beliefs, but rather to certain objective conditions concerning the status quo (the prevalent states of affairs), and to certain objective facts about linguistic practices typically related to those conditions.

Second, pollsters do endorse such assumptions outside survey contexts, otherwise there would be no typical pattern of frame choice, and empirical evidence does confirm such pattern. Thus an interesting point is that the key explanatory variables are to be found in the objective contexts respectively connected to well-entrenched linguistic practices. There are facts about (frame) use that have a life of their own regardless of intentions on the part of the participants in a linguistic exchange. This is precisely why it is also difficult to explain the way that frame effects relate to defective contexts, i.e. contexts where some of the participants have false beliefs about common ground. When frame effects happen, there are false beliefs, neither about the objective context nor about the other participants' beliefs regarding such context, but only about whether the objective context, instead of an idealized context, is the one to be taken into account to inter-

pret the sentence.<sup>9</sup>

After all, the main disagreement between pollsters and addressees lies in

how they represent the context by default in surveys: pollsters assume an idealized context whereas addressees assume the most likely context of use.<sup>10</sup> Frames

☐ This problem has also been pointed out by Jones in his Gricean analysis of economic experiments: “This means that it may be that some aspect of the experiment reminds subjects of a norm existing outside the experimental laboratory. The experimenter did not intend for this norm to be followed and so a systematic misunderstanding by the subject may occur as a result” (Jones 2007: 171).

☐☐ This conclusion is in tune with Norbert Schwarz’s view on ‘the logic of conversation’ in questionnaire research: “(...) research participants go beyond the literal meaning of the information provided by the researcher and draw on the pragmatic rather than the semantic meaning of the researcher’s contributions. The researcher, however, evaluates participants’ judgments against a normative model that draws only on the logical implications of semantic meaning at the expense of the pragmatic implications of the researcher’s utterances” (Schwarz 1996: 7). His approach, however, mainly provides a Gricean analysis of research communication, showing that conversational norms (and, thus, implicatures) influence question interpretation (Schwarz 1996: 15–16). As argued below, although the Gricean framework explains some general aspects

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operate in a peculiar, more systematic, linguistically marked fashion than suggested by the traditional notion of pragmatic presupposition. Pace Stalnaker, the key point here does not lie in what beliefs or intentions we attribute to the actual speaker/pollster, but rather in what typical contextual information emerges when a certain frame is chosen over other options. The speaker's actual beliefs lose importance in comparison to standard or well-entrenched uses of different linguistic frames.

The common ground involved in framing effects includes at least two assumptions, on the side of the respondents, regarding the objective context.

One is about reverse properties (25% fat being the reverse property of 75% lean), whereas the other assumption concerns what prevalent conditions (or status quo) of the objective context make it more appropriate to use one frame rather than the other (average level of fat being usually under 25% makes it more appropriate to use '25% fat' instead of '75% lean'). It is important to stress that pollsters do endorse these assumptions outside survey contexts, for empirical evidence confirms the typical patterns of frame choice.

#### 4.2 Implicatures and framing effects

It could be argued that the intuition behind this account of presuppositions involving well-entrenched or crystallized uses—i.e. the fact that negation is most informative if interpreted as a denial of a positive alternative and vice versa—



nicely fits Gricean maxims of quantity and relation,<sup>11</sup> and that the inference

prompted by frames can be better accommodated by applying the notion of generalized conversational implicature (Grice 1975) rather than the idea of pragmatic

presupposition. Implicatures are inferences in which the inferred proposition bears no truth functional relation to the utterance contained in the text. They are taken to arise from the interaction of the proposition actually expressed in

the utterance, certain features of the context, and the assumption that the speaker involved in framing effects, some essential features of the latter are better captured by the notion

of default implicature, which in turn is closely connected to that of default meaning. Note, moreover,

that valence framing is not included in Schwarz's discussion of the formal features of questionnaires (1996: chapter 5). The same goes for Jones' proposal to apply the Gricean framework

in order to clarify the notion of understanding involved in economic survey research and experiments (Jones 2007).

☐☐ The first states that one should try to be as informative as one possibly can, and give as much information as is needed, and no more, the second, that one should try to be relevant, and say things that are pertinent to the discussion.

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er is obeying the Cooperative Principle. In the case of generalized conversational implicatures, the inferences have 'crystallized' as a result of the standard use of a propositions expressed by the utterances, and so the context becomes irrelevant. An implicature of this kind is one which does not depend on particular features

of the context, but is instead typically associated with the proposition expressed (in this case, with the frame chosen).

The notion of generalized conversational implicature may supplement the idea of pragmatic presupposition in a significant way, particularly in what concerns those additions connected to the typical use of a frame. Nevertheless, within the Gricean framework, the hearers' inferences are always primarily about the speakers' beliefs or intentions rather than about the objective context, and this would clearly be in conflict with my remarks made above. Furthermore, this is the same problem as the one already pointed out with regard to Stalnaker's notion of pragmatic presuppositions.

If, at least for the case of valence framing and text understanding, we relaxed both Grice's notion of conventional implicature and Stalnaker's notion of pragmatic presupposition so as to leave out the requirement concerning the content of the inferences, then framing effects could be explained on the basis of these notions as prompted by implicit information supplementing the information conveyed by the assertion. Such supplementary information would make it possible for the addressees to update their representation of the objective context. On the other hand, if we took a stricter view on presuppositions like Sbisà does (1999: 332–335), and were to understand presuppositions as assumptions (related to objective context) that ought to be shared and that should be taken for granted for an utterance to be acceptable, then it is not clear that framing effects could be accounted for in terms of pragmatic presuppositions.

In this case we might rather have to rely instead on conversational implicatures, since, even when they are about the objective context and happen to be shared

knowledge, they are not necessarily subject to any normative requirement concerning the representation of the objective context. To say that a piece of beef

is '75% lean' when that percentage is below the average certainly does not make the utterance unacceptable, while—to use Sbisà's example—to say that 'John realized that he was in debt' when we know that John is not in debt does make the utterance unacceptable (1999: 334). It seems, however, that the very notion of acceptability involved here may allow for different, more or less strict characterizations. According to Stalnaker, for example: "a speech act is conversationally acceptable in the relevant sense just in case it can reasonably be expected to accomplish its purpose in the normal way in which the normal purposes of such speech acts are accomplished" (1974/1999: 51). Thus, it could

be argued that describing a piece of beef as being '75% lean' when that percent-  
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age is below the average does after all violate 'the normal way' in which that frame is used for conversational purposes. Since the possible resolution of this dispute is clearly beyond the purpose of this paper, I will limit myself here to showing that, in cases where conventional implicatures are shared knowledge about the objective context, they retain the main intuitive features associated with pragmatic presuppositions.

All in all, the problem of valence framing is twofold, including two overlapping phenomena that create the 'perfect storm' conditions for survey interpretation to go astray. On the pollster's side, there are wrong presuppositions concerning the kind of context that the respondent will take into account in interpreting

an utterance. Within survey contexts, pollsters operate with the idealized assumption that describing a piece of beef as being '75% lean' is equivalent to describing it as being '25% fat', and do not endorse the respondents' assumptions regarding the relevance of the typical linguistic practice consisting in choosing a positive frame to stress a gain with respect to the average context (or a negative one to emphasize the converse).<sup>12</sup>

The pollsters' mistake can be due to two different situations: a) they know

the kind of default reasoning usually involved (when a certain frame is employed) but wrongly believe that the addressees will be able to identify the

ideal nature of survey contexts and suspend such reasoning; b) they do not know what kind of default reasoning is usually involved (when a certain frame is employed) and wrongly believe that the ideal nature of survey contexts is common ground. Either way we have a defective context due to the pollster's

wrong presupposition regarding (common ground on) the relevant context, although in a) that goes together with endorsing a wrong informative presupposition as to the possibility of changing the common ground in survey contexts so

that respondents assume that the idealized context is the relevant one for interpreting the sentence. Informative presuppositions occur whenever a speaker utters a presupposing sentence perfectly knowing that the presuppositions of the

sentence are not part of the common ground, but at the same time believing that they will be common ground following the utterance (Simons 2003: 16–20). So,

a) describes the possible case where pollsters mistakenly presuppose that the idealized nature of the relevant context for interpreting an utterance will become common ground once the respondent receives the utterance in a survey context.

□□ This kind of disagreement concerning presuppositions quite naturally fits the notion of soft trigger, i.e. an optional presupposition that can occur only when it fits into the context and can be easily suspendable (Abush 2002).

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Addressees, by contrast, proceed in quite a different manner. We have explored the possibility that generalized conversational implicatures are essentially involved in their understanding of framed survey questions. However, there

are some remaining problems that undermine the plausibility of this approach;

in particular, the fact that the addition is automatic (as soon as the frame is identified, the corresponding assumption is made), and the fact that it arises locally

(as soon as a construction reveals the kind of frame used, the addition is triggered).

As I will show in the next section, the notion that proves most useful in accounting for the above issues is default implicature. In connecting a certain

kind of frame to a certain kind of implicit information, addressees operate by default interpretation, and such interpretation is not suspended in the survey context. To summarize, presupposition, whether informative or not, plays a role on

the side of the pollster, and default interpretation does so on the side of the addressee.

#### 4.3 Understanding framing effects in terms of default implicature

As emphasized by Katarzyna Jaszczolt (2014), despite the fact that there is no consensus as to how default interpretations should be understood, the notion

of default meaning proves helpful in distinguishing between salient, automatic interpretations and costly pragmatic inferences. A generic characterization of default meaning is stated by her as follows: “(...) default interpretation of the speaker’s utterance is normally understood to mean salient meaning intended by the speaker, or presumed by the addressee to have been intended, and recovered (a) without the help of inference from the speaker’s intentions or (b) without conscious inferential process altogether” (Jaszczolt 2014).

Notwithstanding the reference to intended meaning in the first lines of the above definition, point a) immediately rules out inference from the speaker’s intentions as an element playing any role in default interpretations. Both points a) and b) stress the context-independent nature of default interpretation, which becomes more obvious in cases where default meanings are clearly triggered by a construction—as happens in the case of framing effects. To use one of Jaszczolt’s examples, we interpret the sentence ‘Many people liked Peter Carey’s new novel’ as meaning, by default, ‘Many, but not all people liked Peter Carey’s new novel’. The same way that such interpretation is automatically and locally prompted by the construction ‘many x’, the sentence ‘the glass is half empty’ includes the negative frame construction ‘half empty x’, which locally triggers by default the interpretation ‘the glass that was previously full is now half empty’.

As pointed out earlier, there is no agreement on whether context-independ-

ence, locality, cancellability and exclusion of conscious inference are essential properties of default interpretation. Consequently, there are also conflicting views on the semantic, pragmatic or even grammatical nature of default meanings. In order to avoid issues that would by far exceed the limits of the present discussion, I am going to draw attention solely to those aspects of default meanings that prove most relevant in understanding framing effects. What seems to be clear is that the very notion of default meaning calls for a recognition that utterance interpretation involves a variety of mechanisms, in the form of conventions and heuristics pertaining to rational communicative behavior. Addressees' shortcuts to meaning recovery constitute one of such mechanisms. These shortcuts, which are generated by a process of standardization in the use of a construction, are based on assumptions regarding both scenarios and human mental processes. In the cases where these shortcuts or defaults operate, context and inference may not play any significant role in the addressees' recovery of meaning (Jaszczolt 2010/2015: 744).

The characterization of default implicature that best accounts for the phenomenon of framing effects includes all the above-mentioned properties (context-independence, locality, cancellability), being rather close to Stephen Levinson's notion of presumptive meanings (Levinson 2000), which deviates slightly but significantly from Grice's notion of generalized conversational implicature,

particularly as regards the features of locality and independence from the speaker's intended meaning. According to the Gricean picture, non-literal interpretations only occur after the addressee has grasped the literal meaning of the uttered sentence, i.e. they are a global phenomenon related to the overall

explicit meaning of the sentence. Levinson argues, on the contrary, that some

lexical constructions can locally and by themselves prompt non-literal interpretations by the addressees. The sentence 'Some boy came' is interpreted as 'Not

all of the boys came' by virtue of it including the word 'some' that by itself leads to the interpretation 'not all' (Levinson 2000: 36–37). Analogously, the positive frame construction 'half full' by itself triggers the reading 'previously empty and now half full'. Also, negative frame constructions like '20% fat' or '20% errors' are understood, respectively, as expressing 'being 20% fat and

above the average level of fat' and 'having 20% errors and being above the average levels of errors'. The same way that Levinson explains cases like 'some' by

appealing to the Q-heuristic ('what isn't said, isn't'), we could appeal to the following heuristic for the case of frames: where a positive frame is chosen, it can

be assumed that the positive property is above average—and the same goes for

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negative frames. It is no coincidence that Levinson's reflections on the 'bottleneck of communication' closely resemble Kahneman's views on the practice of

'thinking fast' as opposed to 'thinking slow' (Kahneman 2011). Simultaneously minimizing usage of linguistic tools and maximizing meaning recovery leads to a poor linguistic articulation followed by a fast processing by the addressee.



Hence, unsurprisingly, the easy and relatively frequent cancellability of local additions, a feature that has been noted by Levinson and that, as shown before, is also shared by local additions triggered by frames.

On the other hand, Jaszczolt's notion of defaults embraces two kinds of default meanings, i.e., cognitive defaults, triggered by the properties of human inferential system, and social, cultural and world-knowledge defaults, triggered by the shared background on social conventions and knowledge of both cultural and physical properties of the environment (Jaszczolt 2010/2015: 746–750).<sup>13</sup>

These two sources of default meanings would automatically yield certain information whenever a certain construction is employed—or, if we endorsed Jaszczolt's wider account, whenever a certain typical situation occurs.<sup>14</sup> To use her

own example, world-knowledge defaults would be responsible for interpreting 'and' as 'and as a result' in sentences like 'The temperature fell below -10 degrees Celsius and the lake froze'. As for inferential system defaults, they would explain the default referential as opposed to the attributive interpretation of definite de-

?? In Jaszczolt's view, these defaults could combine with other components of meaning such as

knowledge of word meaning and sentence structure, knowledge of the situation of discourse and

conscious pragmatic inferences (Jaszczolt 2010/2015: 750). Depending on whether the contribu-

tion of defaults and conscious pragmatic inferences is more or less salient, they could or could

not be regarded as part of the explicit meaning. Since my goal here is not to develop a theory of

meaning, but just to show the special usefulness of the notion of default meaning to explain

framing effects, the merger representation of meaning is only mentioned for purposes of contex-

tualization of her ideas.

?? A somehow striking consequence of applying default semantics in explaining framing effects

is that added contents creating these effects might not be regarded as implicit contents but instead as explicit ones. From this approach, explicit contents are not primarily defined in terms of

literal meaning, but in terms of salience (Jaszczolt 2010/2015: 743). To be clear, according to this

view, given the salience of many instances of implicatures, they could be considered as providing the explicit meaning of the uttered sentence (Jaszczolt in 2010/2015: 745–6, 749 emphasizes

the ample experimental evidence showing that the explicit meaning of a sentence often corresponds to implicatures). In this respect, default semantics diverges significantly from other Gricean approaches, which do keep the syntactic constraint on what is said. As a consequence, salient meanings are orthogonal to the explicit/implicit distinction. Since adherence to this feature

of default semantics is not required to support the present analysis, a minimal notion of default meaning is here applied together with the traditional distinction between explicit and implicit contents.

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scriptions like in 'The author of Don Quixote fought in the Battle of Lepanto' (in-

terpreted as 'Cervantes fought in the Battle of Lepanto').

In the case of framing effects, the shared cultural background regarding standard uses of frames is definitely involved in triggering default meanings.

Whether they are also cognitive defaults related, for instance, to the human tendency to operate with contrast classes and to project the past onto the present, is

an interesting question that goes beyond the limits of the present paper. A straightforward relation between default interpretation and framing effects

seems to emerge once we summarize the above points and retrieve the seven features of framing effects mentioned at the beginning of the section. The fact that

framing effects involve an automatic, frame-triggered addition to the proposition expressed by the utterance (features a, d, f) clearly accords with the notion of

default implicature. As soon as the frame is identified, without mediation of conscious inference or consideration of the context, an assumption about a complement set (relative to a reference set explicitly mentioned in the utterance) is triggered. The fact that, despite not being meant by the pollster, such implicature is

made by the addressee on the basis of the standard conditions associated to the

use of a frame (features b, c) further reinforces the presumptive, context-independent nature of frame interpretations. Moreover, both the source and the content of default interpretations involved in framing effects—that is, both the competence in frame choice and knowledge of usual background objective

conditions concerning complement sets (features c, d, e)—suggest that at least

some cultural and world-knowledge defaults play an essential role in such phenomenon. Finally, the easy cancelability of assumptions triggered by frames (feature g) clearly shows that, even if standardly connected to frames, the first should not be explained in terms of semantic presuppositions.

## 5 Conclusion

On the side of the addressee, framing effects result from default interpretations triggered by focus and polarity that in turn are generated by a choice of frame.

This kind of interpretation, which concerns assumptions about objective background conditions for framing, is triggered by standardized, well-entrenched linguistic practices involving a certain choice of frame given some prevalent states

of affairs. On the side of the pollster, the problem arises due to the pragmatic presuppositions assumed, within survey contexts, with regard to the relevant context for interpretation.

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