



Anything negatives can do affirmatives can do just as well, except for some metaphors

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Abstract

In this study I look into some of the functions people believe are specific to negation vis-à-vis affirmation in order to question the asymmetry between the two, which is the received view prevalent among many formal linguists, pragmatists, and psycholinguists (see, Horn 1989; Clark and Clark, 1977). On the assumption that “[m]uch of the speculative, theoretical, and empirical work on negation over the last twenty-three centuries has focused on the relatively marked or complex nature of the negative statement vis-à-vis its affirmative counterpart” (Horn, 1989:xiii), I examine here the extent to which negation is indeed pragmatically different from affirmation. Based on findings from both naturally occurring and laboratory data, I argue against an asymmetrical view of negation and affirmation (for a different view, see Horn, 1989:201). The pragmatic and functional similarity found here between negation and affirmation can be explained only by higher level processing mechanisms that are governed by pragmatic sensitivity (Giora, 1985; Sperber and Wilson, 1986/1995).

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1. Introduction

In Hebron, in the slow
Death like summer . . .
No Jewish youth wrote on
No wall no slogan “And Abraham
Said to God Let Ishmael live before thee”
(Laor, 2004:67, my translation, RG)

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Evidence from conversations and written texts renders suspect the widely received view that negation is fundamentally different from affirmation (for a review, see Givón, 1993, 2002; Horn, 1989). The consensus is that the affirmative (*The police chief here is a woman*) “asserts a simple fact” (about the police chief: that she is a woman), whereas the negative (*The police chief here isn’t a man*) “adds an assumption listeners may well believe” (that the police chief is a man), and of which they are being disabused (Clark and Clark, 1977:241; see also, Verhagen, 2005). Thus, “in terms of their communicative pragmatics . . . affirmative and negative assertions turn out to be two distinct speech acts (Givón, 2002:250; see also, Bossuyt, 1983). However, a look at the various roles assignable to negation in discourse discloses a wide range of affinities between negatives and affirmatives in terms of their use (section 2).

While the similarity of negative and affirmative may appear remarkable in itself, the very fact of its existence needs to be explained. What makes it possible? On the basis of findings reflecting online processes, I argue that it is discourse-sensitive cognitive machinery that allows negatives and affirmatives to have similar products. Indeed, findings show that comprehension mechanisms, assumed to be automatic following negation (Hasson and Glucksberg, this issue; Kaup, 2001; MacDonald and Just, 1989), are instead governed by discourse considerations (Giora et al., 2004a, in preparation-a; Glenberg et al., 1999; Kaup and Zwaan, 2003). This flexible cognitive machinery, while corroborating discourse findings, primarily explains the variability of the roles assignable to negation in discourse (section 3).

Where, however, negatives seem to be different from affirmatives, this uniqueness lies in their tendency to induce nonliteralness, which, in the absence of a rich and supportive context, is not a property assignable to their affirmative equivalents (section 4).

2. Anything negatives can do affirmatives can do just as well, and vice versa

Is there anything unique about negation? Is a negative use of an expression or utterance fundamentally different from its nonnegative use? In what follows I show that discourse roles uniquely attributed to negation, such as explicitly denying, rejecting, implicating the opposite of what is said, eliminating concepts within the scope of negation so that their accessibility is reduced, or producing meta-linguistic negation are not peculiar to negatives and can be easily carried out by affirmatives. I further show that negatives can be treated as affirmatives in that they may effect mitigation rather than elimination of concepts, be used as intensifiers, suggest comparisons, obey discourse coherence requirements, affect concepts’ classification, follow the principle of discourse resonance, and enjoy pragmatic priority in the same way that affirmatives do. These effects do not distinguish literal from nonliteral language. Out of an explicit context, however, negatives might give rise to unique effects allowed by affirmatives only when specific contexts are made explicit.

2.1. Denial and rejection

On the face of it, negatives seem functionally different from affirmatives in various respects. Particularly, whereas affirmatives are by and large taken to be unmarked and communicate that a particular property holds for a certain state of affairs, “negation is a linguistic operator that enables one to communicate explicitly that a particular property does not hold for the state of affairs under consideration” (Kaup et al., submitted for publication, in press). Thus, clausal negation, for instance, “is used to deny or reject a proposition” (Biber

et al., 1999:158; see also Givón, 1993:188; Tottie, 1991), “deny some prior expectation” (Clark and Clark, 1977:241; Horn, 1989), or, more generally, indicate inadequacy (Atlas, 1989; Foolen, 1991). Is this, then, the *differentia specifica* of negation? Not quite, as is evident from Annie Oakley’s use of an affirmative operator (*Yes*) and an affirmative statement (*I can*) to communicate explicitly that a particular property (*You can’t*) does not hold for the state of affairs in question¹:

- (1) “Anything you can do I can do better
I can do anything better than you”.
“No you can’t”
“**Yes I can**”
“No you can’t”
“**Yes I can**”
“No you can’t”
“**Yes I can yes I can**”
(<http://www.stlyrics.com/lyrics/anniegetyourgun/anythingyoucando.htm>)

The following is a conversational example (cited in Pomerantz, 1984:74), which similarly illustrates that disagreement can be just as well communicated by means of affirmation:

- (2) R: ... well never mind. It’s not important.
D: Well, it **is** important.

Note further how “play” is rejected by “am” with no recourse to negation:

- (3) Don’t ask me to play his mother. I **am** his mother. (Kidron, 2002)

Or consider the affirmative statement issued by the Israeli deputy chief of staff, Major General Dan Halutz, who denies allegations that he is immoral:

- (4) I am a moral person. (Galily, 2004)²

Similarly, “size **does** matter” in “Stematski is a huge book marketer, and size does matter” (Handelsalz, 2005) uses an explicit affirmative marker (the Hebrew ‘yes’, equivalent here to the English affirmative ‘does’) to dismiss an assumption (that ‘size doesn’t matter’) which is not even made explicit in the immediate context.

It seems, then, that denying, objecting to, or disconfirming is not specific to negation and can be similarly conveyed by both affirmatives and negatives.

¹ Emphases are added to all the examples cited here.

² Halutz stated this in his affidavit, presented to the High Court of Justice, which demanded an explanation for his comments in the hearing at which his appointment as deputy chief of staff was challenged. The petition questioning Halutz’s moral values was presented by *Yesh Gvul*, the *Public Committee against Torture in Israel*, and by several writers and intellectuals.

In July 2002, after dropping a one-ton bomb on Shehadeh’s house in a densely-populated Gaza neighborhood, killing 16 Palestinian civilians, including nine children, and wounding dozens more, Halutz was quoted as saying: “What do I feel when I drop a bomb? A slight bump in the airplane”, adding also “I sleep well at night”.

But would negation on its own be always used to reject a statement or disagree with it? This is not necessarily true either. For example, according to Heinemann (2005), in a Danish corpus of more than 150 telephone conversations, only 8% of the negatives are used to convey disagreement, disconfirmation, or rejection (for similar data, see Ford, 2001; Schwenter, 2005a, 2005b; Tottie, 1991; Tottie and Paradis, 1982:312). And on the other hand, there is ample evidence showing that negation can be affiliative and supportive (Heinemann, 2005; Pomerantz, 1984; for a review, see Yaeger-Dror, 2002a, 2002b). Indeed, the following emphatic, prolonged “No:::.” in line 6 indicates acceptance of the state of affairs described. It is supportive of the speaker’s attempt to deny that she has drunk too much (Jefferson, 2002:1346):

(5) [JG:II(a):3:2:mso]

(Co-workers Maggie and Sorrell went to a wedding reception where Maggie had some sort of momentary blackout and felt ill. Next morning she phones Sorrell at work to say that she will not be coming to work, because she is going to the doctor)

- 1 Maggie: .hh because I(c) (.) you know I told Mother what’d ha:ppened yesterday
 2 there at the party,
 3 Sorrell: [°Yeah.°]
 4 Maggie: [a ::]n d uh, .hhhhh (0.2) uh you know she asks me if it was
 5 (-) because I’d had too much to dri:nk and I said no=
 6 Sorrell: (-) =[N o ::::.]
 7 Maggie: =[because at the t]j:me I’d only ha:d,h you know that drink ‘n a ha:lf
 8 when we were going through the receiving line.
 9 Sorrell: Rj:ght.

Similarly, the negative response in line 14 conveys Krista’s agreement and alignment with Fie’s observation that ‘being your own person is all right’ (Heinemann, 2005):

(6) TH/M2/1/Fie and Krista I/Neg36

(About Krista’s daughter-in-law, Natalie.)

- 1 Krista: Ah hun er sgu ås’ sød
 Yes she is PRT also sweet
 Yes she bloody well is sweet as well
 2 Natalie=
 Natalie=
 Natalie=
 3 Fie: =Jahm’ det a’ hun [da]
 =Yes-but that is she [PRT]
 =Yes but of course sh[e is]

- 4 Krista: [Ja]en
[Yes] a
[Yes] a
- 5 dejlig pige
lovely girl
lovely girl
- 6 Fic: .jerh. [Ja]
.yeah. [Yes]
.yeah. [Yes]
- 7 Krista: [(]) Men ås' sig
[(]) But also one
[(]) But her own
- 8 Krista: selv al'så
self PRT
person as well you know
- 9 Fic: Jerh.
Yeah.
Yeah.
- 10 Krista: Helt bestemt.=
Whole definitely.=
Quite definitely.=
- 11 Fic: Jerh, men det gør [da heller
Yeah, but that does [PRT neither
Yeah, but that doesn't matter

12 Krista: [(

[(

[(

13 Fie: ikk' noget]

not something]

anyway]

14 Krista: →)] Nej det gør det

)] Nej that does it

)] **No it surely**

da ikk'.

PRT not.

doesn't.

Like affirmation, negation too can be used to confirm, endorse, or support. Negation, then, does not necessarily deny or reject the assumptions within its scope. By the same token, affirmatives need not always communicate approval or endorsement. Both negation and affirmation may be used to deny or endorse, depending on their context of use.

2.2. Communicating the opposite

Do negatives and affirmatives necessarily give rise to different implicatures? Will only negatives communicate the opposite of what is said? In addition to the preceding examples, the following one, taken from John Kerry's speech (in which he was accepting the nomination of the Democratic Party to be their candidate for President) serves to demonstrate that both negative and affirmative statements can be used to bring to the fore implicatures that similarly differ from what is said (inserted in square brackets):

- (7) I will be a commander in chief who will **never** mislead us into war [as opposed to Bush, who did]. I will have a Vice President who will **not** conduct secret meetings with polluters to rewrite our environmental laws [as opposed to Dick Cheney, who did]. I will have a Secretary of Defense who will listen to the best advice of our military leaders [as opposed to Donald Rumsfeld, who didn't]. And I will appoint an Attorney General who actually³ upholds the Constitution of the United States [as opposed to John Ashcroft, who didn't] (Corn, 2004).

Both negatives and affirmatives then serve here the same purpose of communicating a different state of affairs than the one stated, without having to discard that which is stated or that

³ On *actually* being a reversal marker, see Taglicht (2001).

which is within the scope of negation. (On Kerry being viewed as implicating Bush's administration, see Purdum, 2004.)

2.3. Markedness

That affirmation is the unmarked base form from which the negative is derived seems to be a long-standing and widely agreed upon view (e.g., Frege, 1977; Just and Carpenter, 1971). This need not be true pragmatically, though (Israel, 2004). As shown by Israel (in press), many negative constructions as indicated in (8–9) – known as negative polarity items and negative idioms – do not have any direct affirmative counterpart and need not presuppose their affirmative counterfactual (on negatives presupposing their affirmative counterparts as opposed to affirmatives, which do not, see Givón, 1978, 1993:188–190, 2002:250; see also Hasson and Glucksberg, this issue for a review):

- (8) a. Clarissa **didn't lift a finger** to help her brother.
 b. *Clarissa lifted a finger to help her brother.
- (9) a. Lola **isn't all that** interested in the human genome project.
 b. *Lola is all that interested in the human genome project.⁴

Pragmatically, then, it is not quite clear that negatives are necessarily based on their affirmative counterparts. Instead, at times, they make up the pragmatically unmarked form. And, at times, they might even give rise to novel affirmative derivatives. Consider the following excerpt (10), taken from an article by Keret (2004), in which the author, a Jewish Israeli writer, is describing the checkpoint abuse of Palestinian civilians by an Israeli soldier (Udi), which he was witnessing. In this example, the conventional negative – *didn't give a shit* – is later echoed in an affirmative manner which invokes the conventional but further adduces a novel flavor (on optimal novelty see Giora et al., 2004b):

- (10) A happy father who had bought his three-year-old son a birthday cake imprinted with a picture of the child had also violated the code and was detained. The official reason—he didn't wait in line like everyone else. When I tried to explain that the people in the queue had let the father get ahead of them because the cream cake would spoil if he waited in the heat, Udi gave me a smile, and from behind the barrel of his gun, which was pointed in the general direction of my chest, explained that he **didn't give a shit**. Not a very surprising statement considering that an hour earlier he had been just as stingy with his **shit** when he ignored the distress of a 70-year-old man who had been discharged from the hospital that day after heart surgery and was finding it difficult to stand in the hot sun for such a long time.

The following (Du Bois, personal communication, 30 August 2004) is a conversational example suggesting that the affirmative use is a marked case, as opposed to the unmarked negative from which it derives:

⁴ Israel's point though is that while the *sentences* lack any affirmative counterparts, the propositions those sentences express do have affirmative counterparts (i.e. 'that C did help her brother' and 'that L is very interested in the human genome project').

- (11) But that teacher really liked me and I made like hundreds on all tests because I just knew that <unclear> for that and I probably all forgot that now or is stored in that part of memory that just **doesn't give a shit**

<unclear> or what they did.

But uh,

it **gave a shit** then.

(LSAC [Longman Spoken American Corpus] 1082-01)

Or consider the notorious exchange recurrent in *Wayne's world* (Spheeris, 1992):

- (12) Garth: **No way**, Wayne.
Wayne: **Way**, Garth.

And although *could/couldn't care less* might now have equivalent functions, it is the affirmative that is the derivative. While the earliest citation in the OED of the negative is from 1946, the earliest citation of the affirmative is from 1966.⁵

Note that even relatively less rigid or entrenched negative routines seem to form the unmarked constituent from which the affirmative is derivable (on pleonastic negation or covert negatives, see Horn, 1978:176 and Croft, 1995, 2000:135). In these cases, it is the affirmative that 'presupposes' the negative rather than the other way round. Consider the Hebrew line in (13), literally saying, "There is what to compare to", which evokes the Hebrew negative routine "There is not what to compare to" (equivalent to *Nothing compares to . . .*):

- (13) **Yesh** ma le-hashvot. (Strasler, 2004)

And the recent Israeli government slogan *There is no partner* (for peace negotiations) which is evoked any time a leftist party claims *There is a partner*.

Even non-polarity items are sometimes swayed toward the negative. For instance, a Google search (19 October 2004) reveals that "I'm not worthy of" occurred more frequently (3750) than its affirmative counterpart "I'm worthy of" (2880). Similarly, "couldn't help it" occurred more often (79,300) than "could help it" (34,000). Similarly, according to Stefanowitsch and Gries's (2003) corpus search, 100% of the occurrences of *worry* in imperatives are negative imperatives (*don't worry*). Note further that some negative items (*I don't think*), which have an alternative affirmative (*I think*), assume different interpretations than their affirmative equivalent, suggesting that pragmatically they are not derivatives (see Tottie and Paradis, 1982).

Online measures also support the view that negation is not always the marked case. Negative idioms (*I don't know my right from left*) took less time to read than their affirmative equivalents (*I know my right from left*) even though the latter are shorter. Such finding supports the view that when negation is salient (Giora, 1997, 2003) it is the affirmative that is marked. By contrast, affirmative idioms or fixed expressions (*The grass is greener on the other side of the fence*) took longer to read in their negative than in their affirmative form (Meytes and Tamir, 2005).

Like affirmatives, then, negatives too can constitute the pragmatically unmarked interpretation from which the affirmative is derivable or which they presuppose. These 'basically negatives', then, need not be idiomatic or highly entrenched.

⁵ My husband is a lethargic, indecisive guy who drifts along from day to day. If a bill doesn't get paid he could care less (*Seattle Post-Intelligencer* 1 November 21/2, 1966). I thank Fay Wouk for this info (emailed to cogling@ucsd.edu October 26, 2004).

2.4. Suppression effects

In psycholinguistics, negation is taken to function as an instruction from a speaker to an addressee to discard the negated concept from the mental representation and replace it with an alternative opposite ('the suppression hypothesis'; for evidence, see Hasson and Glucksberg, *this issue*; Kaup, 2001; MacDonald and Just, 1989). Negation should thus shift focus away from the negated concept toward an alternative replacement. In psycholinguistic terms, this means that comprehenders actively reduce a concept's levels of activation to base-line levels or below (Gernsbacher, 1990). If indeed negation triggers suppression of information within its scope, while affirmation never invites suppression, negation and affirmation would be processed differently. However, if negation does not necessarily invite suppression, it would require no unique processes.

Though suppression should be dealt with in terms of online procedures (see section 2), discourse evidence might nonetheless prompt us to believe that negated information need not be automatically discarded from memory. For instance, for the following (originally Hebrew) poem to make sense, comprehenders should retain rather than suppress the information within the scope of negation so that the desirable *it* at the end of the poem becomes meaningful (Wallach, 1997:30):

- (14) And that's **not** what'
 I'll satisfy
 my hunger **no**
 That's **not**
 what
 'll ease
 my mind
no
 that's **not** it.

For "it" to make sense, we should be able to conceive of it in terms of what will 'satisfy the speaker's hunger' and 'ease her mind'—the sought for properties to be retained in memory though introduced via negation.

One could argue, though, that there are no available antonymic alternatives in (14); hence no suppression is triggered (as might be deduced from Fillenbaum, 1966; Mayo et al., 2004). But even with the availability of an alternative antonym, negation does not always invite suppression. For instance, when I say that the road is 'not wide' I don't mean it is 'narrow' (Giora et al., 2005a; Paradis and Willners, *this issue*). In the same way, in example (15), in which the journalist echoes the Israeli Treasury Minister's aggressive attack on the poor who he holds responsible for their poverty, the negation cue does not invite suppression of the negated concept ('poor') and its replacement with an available opposite ('rich'), as would be predicted by Fillenbaum (1966) and Mayo et al. (2004):

- (15) If they would only work, they would **not be poor**. (Golan, 2004)

Or when Bush said *Yes, the not-rich. That's all of us*, he could not have expected his audiences to replace *not-rich* with 'poor' (given that his last reported income amounted to \$822,000 and his assets were worth as much as \$19 million):

- (16) Bush warned that John F. Kerry was going to blather endlessly about how he was only going to soak the rich to pay for trillions of dollars of new spending.

“In the campaign, you’ll hear, we’re only going to tax the rich,” Bush said. “That’s what you’ll hear . . .

“You see, if you can’t raise enough by taxing the rich, guess who gets to pay next?” Bush asked. “Yes, *the not-rich*. *That’s all of us*.” (Kamen, 2004)

Such examples argue against the suppression hypothesis, according to which a negated concept should be automatically eliminated and replaced by an alternative opposite, should this be available. If, indeed, suppression following negation is not automatic, then negatives and affirmatives need not be radically different.

There is, however, evidence suggesting that, at times, negated concepts do give way to alternative opposites. Consider the following example, where the nouns within the scope of negation are replaced by an alternative—the *Bush White House*:

- (17) **Private Lynndie England** did **not** make the decision that the United States would not observe the Geneva Convention. **Specialist Charles Graner** was **not** the one who approved a policy of establishing an American Gulag of dark rooms with naked prisoners to be “stressed” and even – we must use the word – tortured – to force them to say things that legal procedures might not induce them to say. These policies were designed and insisted upon by **the Bush White House**. (Al Gore at New York University, May 26, 2004)

A similar example comes from an Israeli conscientious objector’s letter to the Defense Minister in which *choice* is explicitly replaced by *obligation*:

- (18) I have a moral obligation – **not a choice but an obligation** – to refuse to participate in the occupation and to struggle against the institutions that cancel such basic human rights. (Tsal, 2004)

The empirical question is of course whether the replaceable concept, e.g., the notion of ‘choice’, is indeed suppressed and discarded from memory. At this stage, suffice it to say that, given that the contrast between ‘choice’ and ‘moral obligation’ is the crux of the matter here, it is implausible to assume that the negated concept is wiped out. (For online evidence regarding suppression, see section 3.)

Consider also a conversational example (cited in Du Bois, 2004c) in which *not smart* is replaced by *stupid*:

- (19) (Risk SBC024: 299.283-310.952)
- | | | |
|---|-----------|--------------------------------|
| 1 | JENNIFER: | <vox> Look at you being smart. |
| 2 | | (1.0) |
| 3 | DAN: | (H) @ |
| 4 | | (0.7) |
| 5 | | I’m not smart ? |
| 6 | | (0.3) |
| 7 | JENNIFER: | You’re stupid </vox>. |
| 8 | | (0.9) |

- 9 DAN: Don't call me stupid.
 10 JENNIFER: Mm.
 11 (1.3)
 12 (KISS)
 13 (2.1)
 14 Alright.

Indeed, at times, negation invites suppression and replacement of the negated concepts with an available alternative. Is it, however, also possible to use an affirmative to replace an opposite? The following exchange (cited in Du Bois, 2004d), in which one opposes an affirmative (*love*) by an affirmative opposite (*hate*), suggests that it is:

- (20) A: I **love** gravy.
 B: I **hate** gravy.
 (LSAC 1653-01)

Consider further an example taken from the film *Kill Bill Vol. II*. The Bride has just taken a pregnancy test, and the assassin, Karen, is at her door. They each have the other at gunpoint, when The Bride tells the assassin that she's pregnant. The assassin then says "bullshit", to which The Bride replies:

- (21a) Any other time you'd be one hundred percent **right**. This time you're one hundred percent **wrong**. (Tarantino, 2004)

Or consider the following exchange where *I love you* is replaced by *you love yourself*:

- (21b) John: (holding out his hands) Chris, I do love **you**.

Christina: Yeah, you loved me enough to leave me! you're just like everybody else. The only one you love is **yourself**. Well, I'm sick of it. You'd all be happier without me! (Applegate, 2004)

In sum, whether negation triggers suppression of negated concepts and invites their replacement by an alternative opposite is determined by context; whether affirmative concepts are replaceable by an alternative opposite is also a determined by context. Replacement by an alternative opposite is not the 'prerogative' of negation, then. Rather it is modulated by discourse considerations.

2.5. Accessibility of concepts within the scope of negation

If negation does not necessarily induce suppression of negated concepts, then information within the scope of negation should be as accessible as nonnegated information. Indeed, information within the scope of negation can be referred to by high accessibility markers. As shown by Ariel (1990), use of high accessibility markers such as pronouns, person verbal agreement markers, zeros, or ellipses indicates that the mental representations referred to are deemed easily retrievable by the speaker. Consider, for instance, the effect of negation in the title of an article by Leibowitz (2004) – *No crisis is an island—except here* – on the accessibility of the assumption within its scope (*crisis is an island*). Does it reduce the accessibility of the negated concept? Apparently not, which allows it to be treated as highly accessible in the subsequent clause (*except here*), so much so that it could be elided. (On ellipsis and accessibility, see also Koptová, 1998; Kuno, 1972; on except construction, see Reinhart, 1991.)

Similarly, in the following example (22), all the activities within of the scope of negation appearing in the first paragraph (italicized) are referred to by a high accessibility marker (*These things*) in the next paragraph, indicating their assumed accessibility:

- (22) America's domestic agencies *never mobilized* in response to the threat. They *did not have direction, and did not have a plan to institute*. The borders *were not hardened*. Transportations systems *were not fortified*. Electronic surveillance *was not targeted* against a domestic threat. State and local law enforcement *were not marshaled* to augment the FBI's efforts. The public *was not warned*. **These things that were not done** must have been not done by somebody, but that somebody, and the somebodies reporting to him, are not criticized by name, although knowledgeable readers who closely read the text get the drift easily enough (Powers, 2004).

Moreover, it is on account of its accessibility that information within the scope of negation can prime oncoming concepts. Thus, it's *not a big deal* that primes *huge deal* in (23a,b) and *undue* that primes both *due* and *overdue* in (24):

- (23) a. Being gay is **not a big deal** but being divorced is a **huge deal**. (A gay guy on Israeli Docu Channel 23.6.05)
 b. Nope. rsync and cvs both clobber resource forks. **Not a big deal** for many file formats, but for a few, it's a **huge deal**. (Anonymous, 2003)
- (24) The president considers this an **undue** restriction of his powers. It's not only **due**; it's way **overdue**. (Editorial, Saturday 30 July 2005)

Consider further a quote from a recent speech by Bush, which made him a laughingstock, but which is easily explainable in terms of the accessibility of negated information (indicated here by a VP deletion):

- (25) Our enemies are innovative and resourceful, and so are we. They never stop thinking about new ways to harm our country and our people, and neither do we.
 (<http://www.whitehouse.gov/news/releases/2004/08/20040805-4.html>)

This wouldn't be considered a hilarious slip of the tongue were negated information indeed discarded from memory.

Such uses, then, testify to the accessibility and retainability of information within the scope of negation. It is this accessibility and retainability of information within the scope of negation that makes negated and nonnegated information potentially equivalent in terms of the way they can shape discourse.

2.6. Emphatic effects

A further look at how negation is used shows that there are instances suggesting that, instead of being a suppressor operator, a negation marker might, at times, be an intensifier, highlighting the information within its scope. Consider, for instance, the following, originally Hebrew

examples, often referred to as “expletive” or “spurious” negation⁶ (my verbatim translation, RG):

- (26) **What haven’t they said** about silicon implants, that **they are** . . . (29 August, 2004, Israeli Channel 2)
- (27) **Who wasn’t there** in the coronation balls in Little Rock and Washington? **All the who’s and who’s** in the entertainment industry . . . (Maiberg, 2004)
- (28) Mars in Cancer activates her lunar side by 180 degrees. **What will not be** [Whatever will be], it **will** always **be** accompanied by lots of emotions . . . (www.toses.co.il/horoscope_sex.asp—an astrological website in Hebrew; cited in Eilam, 2005).

Results of a Google search of such Hebrew constructions are illustrative. They indeed support the view that the use of negation here is emphatic. While, for instance, they reveal that a negative construction such as *What you will **not** do* (which in English translates into ‘whatever you will do . . .’) and its affirmative equivalent *What you will do* are of different frequency, they further show that the negative use is unambiguous, having only the emphatic interpretation under consideration here (in 97% of the cases). In contrast, the affirmative is equivocal and conveys this particular emphatic meaning in only 30% of its uses. Interestingly, however, most of these affirmative uses (63.3%) are furnished with an intensifier or strengthener (‘all’), which induces the emphatic reading. Another 20% use a repetition (as in ‘do what you will do’), which is another emphatic device. Only 16.6% are not furnished with any strengthening modifier. Such results suggest that when an emphatic negative is not used, other emphatic devices are recruited (Henn, 2005; for similar results of a MSN search see Eilam, 2005).

In the following conversational example, the emphatic role of negation is even more pronounced (italicized for convenience). The multiple use of negation markers helps amplify the fact that the number of volunteer lawyers is huge even though this number is not specified:

- (29) “I’ll tell you an interesting story about lawyer recruitment,” says Stephen Zack, the smooth talking Miami attorney leading John Kerry’s army of election lawyers in Florida . . . Zack won’t say exactly how many lawyers he’s recruited to work for Kerry on Nov. 2, but local media have reported the number at around 2,000. *“There **isn’t** a day that I **don’t** walk down the street here in downtown Miami that I **don’t** have a lawyer come up to me and volunteer,”* he says (Manjoo, 2004).

That negation need not necessarily subordinate or suppress information is also clear from its use as new information introducing device (Giora, 1994; Giora et al., 2005a):

- (30) **What** Channel 33 of the Broadcasting Authorities **hasn’t done** for years the new Knesset channel **did** within a week . . . (Asheri, 2004)

In addition, negative interrogative requests come across as more assertive compared to positive interrogative requests. While the latter are accompanied by mitigation and meet with the addressee’s resistance, the former are not mitigated and result with the recipient’s compliance (Heinemann, this issue).

⁶ For a review of the widespread cross linguistic phenomenon of “expletive” or “spurious” negation, see Eilam (2005) and Izvorski (2000).

In contrast, then, to what some psycholinguists assume of negation, some of its uses draw attention to the negated concept rather than shift focus away from it. Interestingly, some such uses convey the same stance when used in the affirmative (Hebrew examples such as *Whatever you [do / do not do], they will frown upon you*), again, disclosing some affinities between affirmation and negation (see earlier, e.g., *Could/Couldn't care less*).

However, the suggestion that the negative use is at times more emphatic than the affirmative use still needs to be further established empirically (on expletive and exclamative negation see Eilam, 2005; Haspelmath and König, 1998).

2.7. Mitigation effects

If negation does not necessarily discard information from memory, it can affect interpretation in various ways just as affirmatives do. While it might, at times, act as an intensifier, it can also hedge information within its scope. Indeed, earlier works (Giora et al., 2004a, 2005a, 2005b; Tottie, 1991; Tottie and Paradis, 1982) demonstrate that among other things, negation mitigates or curtails the interpretation of the negated constituent, rather than discarding it altogether (see also Horn, 1989:50–51; Jespersen, 1924/1976, 1933/1964). Thus, by using negation in “The game **hasn't** started yet and Stumpy got 2 goals an assist and 3 on the +/-?” (Estey, 2003), the speaker does not really intend this use literally. Rather, negation is used here as a mitigator, indicating that the game barely started. This is conveyed by hedging the notion of ‘started’ via negation, which allows the contrast between a short time and multiple achievements to get across. It is via this contrast that the achievement gets amplified or even emphasized.

In the following conversational example (*American Democracy is Dying* SBC012, taken from Du Bois, 2000) negation is intended to mitigate a description while repairing it (see also Couper-Kuhlen and Thompson, 2005):

- (31) MONTROYA: ... I mean,
 from the time that you start .. kindergarten,
 to the time that you .. graduate from the university,
 (H) it's **constant**,
 .. **not constant**,
 .. *but* somewhat of a **consistent** .. bombardment .. of values,
 .. attitudes,
 et cetera,
 ... reinforcing the nature of the political system,
 ... and the virtues .. of ... participating in the political process.

Constant is thus weakened by means of negation and consequently receives a mitigated reading—that of *consistent*.

Similarly, in the following, *not all* receives a mitigated interpretation in the form of *most* (cited in Ariel, 2004):

- (32) Yeah **not all** charge by the quarter. **Most** do but not all do. (LSAC)

Mitigating or weakening by means of negation applies to metaphors as well. The following makes use of a Hebrew metaphor (*shoe*) which connotes worthlessness. Mitigating or reducing this concept (*shoe*) results in something that is a degraded version of it (e.g., *sole*) thus communicating a stronger sense of worthlessness:

- (33) If you ask me, then Moshe's new girl-friend is **not a shoe**, she is a **sole**. I can't figure out what he found in that dumb person. (Taken from Altit and Arvatz, 2005; my translation, RG)

Note that mitigation can be effected by means of a corrective affirmative turn in the same way that a corrective negative turn can. The following conversation (34) took place during a visit paid by Mofas (the Israeli Defense Minister) to the home of a bereaved Jewish family whose daughter had been killed by a suicide bomber. Hadas, the victim's sister, is accusing Mofas of murdering her sister. She is then corrected by her mother and weakens 'murderer' to 'accomplice' (my translation, RG):

- (34) Hadas: Why, because you **murdered** our sister, that's why Mom deserves answers
 Mother: Hadas, Hadas, Hadas, hold on please. The one who murdered her is the suicide bomber. We ... hold on ...
 Hadas: Sorry, **an accomplice**. (Israeli Channel 10 News edition, 15 June, 2003)

Speakers, indeed, are aware of the mitigating effect of negation. Hence, when they do not aim at hedging, negation is emphasized, often by some reiteration, such as introducing an additional negative operator, or by emphatic intonation:

- (35) US told not to use Israeli bullets in Iraq
 Israeli-made bullets bought by the US Army should be used for training only, not for combat in Iraq and Afghanistan, US lawmakers have told army generals. Since the army has other stockpiled ammunition, "**by no means, under any circumstances** should a round (from Israel) be utilised," said Representative Neil Abercrombie of Hawaii on Thursday—the top Democrat on a House of Representatives Armed Services subcommittee with jurisdiction over land forces (Al Jazeera, 25 June 2004; <http://english.aljazeera.net/HomePage>).

Comparable to naturally occurring instances, our experimental findings showed that negation indeed hedges retained information, resulting in a toned-down interpretation of the negated concepts. For instance, in Giora et al. (2005a), items such as *not pretty* received a 'less than pretty' rather than an 'ugly' interpretation. This was true regardless of whether they were unmarked (*pretty*) or marked (*ugly*). In both cases, they were viewed as occupying a non-polar position on the (pretty-ugly) polarity scale.

Similarly, when asked to break bad news politely, people opted for a negated positive ('not succeed') rather than an affirmative ('fail') complement. Indeed, because some of the positive aspects of the negated concepts must have been retained, they diluted the interpretation of the negated concept, which could then 'ease the pain' (see also Fraenkel, 2005).

If negation is, at times, a hedge, is it different from affirmative hedges? In Giora et al. (2005a), we found that it is not, at least not essentially so. For instance, we showed that negation is comparable to other modifiers such as 'fairly'. Although 'not' is a stronger modifier than 'fairly', diminishing the concept more drastically, still, like 'fairly', it only hedges the concept within its scope. Thus 'fairly rotten' was rated as closer to 'rotten' than 'not rotten' and 'fairly pretty' was rated as closer to 'pretty' than 'not pretty' (for more evidence on the weak effect of affirmative modifiers, see also Paradis, 1997). Both, however, were distinctly removed from concepts occupying the opposite ends of the scale. Such findings argue that negation is a mitigator, comparable to affirmative alternatives, albeit stronger.

To further test the mitigation hypothesis, we also looked into the effects of negation on ironic expressions. Recall that, according to some views, irony relies on some substantial gap between

what is said and the situation referred to (Colston and O'Brien, 2000; Giora, 1995). According to the mitigation hypothesis, negating an ironic expression should narrow down the gap rather than eliminate it, resulting in mitigating rather than in annulling the irony. Findings indeed show that negating an ironic overstatement (*He is not exceptionally bright* said of an idiot) did not wipe out the ironic stance of its affirmative version (*He is exceptionally bright* said of an idiot) but only toned it down.⁷ The end-product was thus a weaker but still a noticeable one. These results are comparable to results induced by affirmative mitigators ('looks like'), although, here too, affirmative operators seemed to be somewhat weaker hedges than negation (Giora et al., 2005b).

Even when no specific context was provided, the negated version scored high in ironiness, in fact, higher than the affirmative equivalent. We argued that since negation often produces mitigation, such mitigation overtly breaches the Manner Maxim (Grice, 1975; see also Horn, 1989:304) even when no global context is provided. Indeed, since weaker, shorter alternatives to top-of-the-scale expressions are available ('bright', 'smart'), resorting to a much longer expression (*not exceptionally bright*) invites an implicature. This implicature makes available the approximately opposite, ironic interpretation.

This was found to be also true of Hasson and Glucksberg's (this issue) negative metaphors. Indeed, since, by and large, Hasson and Glucksberg used negative top-of-the-scale expressions (e.g., *The train to Boston was no rocket*; *Some school-teachers are not encyclopedias*), such expressions invited an ironic reading compared to non-top-of-the-scale equivalents (*The train to Boston was not fast*; *Some school-teachers are not informed*), as shown by Giora et al. (2004a).

Overall, such findings support the view that both negation and affirmation may affect mitigation similarly, suggesting that negation is not pragmatically unique.

Negation, then, is not essentially different from affirmation, and, as far as later interpretation processes are concerned, it can be as effective as affirmation, especially insofar as it promotes discourse goals.

2.8. Metalinguistic repair

While negation may induce one kind of repair by means of mitigation (Couper-Kuhlen and Thompson, 2005), it can also induce metalinguistic correction by what is termed metalinguistic negation. Metalinguistic negation has been acknowledged to retain the concept it negates while removing its implicature (Carston, 2002; Horn, 1989; Lev Ari, 2004). It thus constitutes another discourse use that defies the suppression hypothesis. The following (cited in Horn, 1989:372) indeed exemplifies the need to retain rather than reject the information within the scope of negation:

(36) Winning isn't everything—it's the only thing.

For many, such a metalinguistic use seems peculiar to negation. However, a closer look at affirmatives shows that they might produce a similar reading. Consider the following, an originally Hebrew slogan discussing two Israeli football teams—*Maccabi* and *Ha'poel Tel Aviv*:

(37) There is just one thing *Maccabi* likes better than winning—winning over *Ha'poel-Tel Aviv*.

⁷ This was also replicated for negated understatements (*That was not a bit inconsiderate*), which got across as ironic, albeit to a lesser extent than ironic overstatements (*That was really thoughtful*), as shown by Link and Conrow (2005).

Or consider the examples taken from Noh (2000) cited in Carston (1999:20) which, in spite of the absence of negation, have all the crucial properties of metalinguistic negation:

- (38) A: Would you like some tom[eiDouz]?
 B: Well, I'd prefer some tom[a:touz].
- (39) A: Did you see mongeese?
 B: I only saw mongooses.

Even what seems an exclusive role of negation – producing metalinguistic correction – is not specific to negation. Negatives and affirmatives, then, are not as different as some might assume.

2.9. *Negative events as events*

That negation can be pragmatically equivalent to affirmation is also evident when negated acts or events are treated as events. In example (22), the negative description of ‘not doing’ something is to be recorded as an event just as an affirmative description of ‘doing’ something is. Similarly, in the following, the acts of ‘not smelling’ and ‘not doing’ are still acts performed on an object:

- (40) The man in black pulled from his dark clothing a small packet and handed it to the hunchback. ‘Open it and inhale, but be careful not to touch.’ Vizzini took the packet and followed instructions. ‘I smell nothing.’ The man in black took the packet again. **‘What you do not smell is called iocane powder.** It is odorless, tasteless and dissolves instantly in any kind of liquid. It also happens to be the deadliest poison known to man. (Goldman, 1973:153)
- (41) **“What all the other reports on 9/11 did not do is point the finger at individuals,** and give the how and what of their responsibility. This report does that,” said the intelligence official. “The report found very senior-level officials responsible.” (Scheer, 2004)

In the same way, witnessing something that did not take place counts as witnessing something that did. Thus, seeing Khrushchev “not banging” his shoe is just as much an event as seeing him “banging” it:

- (42) The celebrated shoe was allegedly banged on Oct. 13, 1960. A New York Times correspondent, Benjamin Welles, reported that . . . Khrushchev “pulled off his right shoe, stood up and brandished the shoe at the Philippine delegate on the other side of the hall. He then banged his shoe on the desk.”
 Yet another Times man, James Feron, who was at the United Nations but did not write a story recalls, “I actually saw Khrushchev **not banging his shoe**” (Taubman, 2003).

2.10. *Can negatives be received as affirmatives?*

Some can. There is evidence that negative questions can function as affirmative statements. A look at addressees’ responses to negative interrogatives testifies that such questions are interpreted as affirmative assertions (Heritage, 2002). For instance, President Clinton’s disagreement with such an interrogative from UPI’s Helen Thomas (line 6) suggests that he interpreted it as an affirmative statement of opinion as shown below (see Heritage, 2002:1432):

- (43) 1 IR: W'l Mister President in your zea:l (.) for funds during
 -> 2 the last campaign .hh **didn't you put the Vice President** (.)
 3 **an' Maggie and all the others in your (0.4) administration**
 4 **top side .hh in a very vulnerable position**, hh
 5 (0.5)
 6 IE: -> **I disagree with that**.hh u- How are we vulnerable because ...
 (Presidential Press Conference: 7th March, 1997)⁸

There is also enough evidence suggesting that tag questions, whether negative or affirmative, affect conversation similarly. They have similar affective and facilitative functions and they can similarly be used as a conversation monitoring device (Cameron et al., 1988; Coates, 1996; for a different view, see Heritage, 2002).

2.11. Comparison

If negation does not necessarily induce the suppression of the negated concept, it can serve to draw comparisons in the same way affirmatives might (see also Labov, 1972). In the following example, the utterance *he had no intention of making an impression* could be seen as suggesting an implicit comparison with those that do, which indeed is made explicit later on in the context (*it is primarily intent on making an impression*):

- (44) On the birth of the melodrama
 Whose heart wasn't torn at the sight of Itsik Ochayon, the father from Sderot, who, in totally heart-rending, more so than a thousand Shakespeares, described, before the camera of Channel 10 news (Monday, 20:00), how, at the sight of his baby son, Afik, lying dead on the pavement in front of the kindergarten, he called, as if unbelieving, "get up, here comes Daddy, get up". His words were unbearably sad, because he had **no intention of making an impression** on anyone . . .

A lot less tragic, and even less philosophical, was the attempt of Micky Haimovits, Channel 10's journalist for Sderot, to play, on that very evening, the role of the tragic playwright. As if competing with the tormented father, this Antigone for the poor displayed "the last drawing" of Afik's, "depicting a kid who is going to the kindergarten" . . . This is exactly what you study at theatre school: you learn that an imitation of the tragic cannot but be a melodrama, using the props of the tragic, and speaking like a tragedy, with one exception: it is primarily **intent on making an impression** (Tsiper, 2004; my translation, RG).

2.12. Nonliteral language

2.12.1. Negative metaphor

If negation does not necessarily discard information from memory this should also apply to negative nonliteral uses. The following examples demonstrate that indeed negated metaphors retain their metaphoric meaning in the same way affirmative metaphors do (for a different view, see Hasson and Glucksberg, *this issue*). This is true of both conventional and novel negative

⁸ "Negative questions are well-known to have a bias toward an affirmative answer. Indeed, this is one way that negatives and affirmatives seem to be asymmetrical, since unmarked (i.e., affirmative questions) do not show such a systematic bias" (Michael Israel, personal communication, 5.9.05).

metaphors. Recall the example mentioned earlier – *No crisis is an island—except here* – which retains the metaphoric meaning of *island* to the extent that material in the antecedent (*crisis is an island*) could be elided. Consider also the following (originally Hebrew) slogan advertising the happy hour at a restaurant – *They say life is no Luna Park. (With us it just is)* – in which the metaphoric sense of *Luna Park*, which literally means ‘amusement park’, can be elided because it is retained in memory, in spite of the negative cue.

If negation does not do away with the metaphoric sense of negative metaphors, negative metaphors will resonate with earlier utterances regardless of whether these utterances are figurative or literal, just as nonnegative metaphoric uses do. Metaphor resonance pertains to such activation of affinities across metaphoric utterances as exemplified in (45). Example (45) is also an instance of metaphor resonance in which a metaphor is paraphrased via both repetition and novelty (*not saints. Not angels*) just as do corresponding affirmatives (for evidence of affirmative metaphor-resonance, see Giora and Balaban, 2001):

- (45) We are **not saints. Not angels**. Still, there are as yet no trains from Jenin to concentration camps in the Negev. *No tall smokestacks*. Nonetheless, in *The Guardian* and in *Le Monde* there is a need to make *this comparison* daily. To say of the Jews that they are a bit like the Nazis (Apelfeld, 2004; my translation, RG).⁹

Or consider the metaphoric extensions of the source domain (*tradeoff*) in (46), which testify to the availability of the metaphoric and literal meanings of the metaphor within the scope of negation (Giora, in press):

- (46) The road map does **not** include such an obvious *tradeoff*. Instead it goes back to the old mistake of giving a huge *credit* to a suspicious *debtor*. It gets back to the belying medicine of postponing the *pay day* (Shavit, 2003; my translation, RG).

Indeed, if negation does not do away with the metaphoric sense of the negated metaphor, this will allow later utterances to resonate with the various senses of negated metaphor, regardless of whether these utterances are figurative or literal. For instance, the Hebrew conversational example (47) exhibits a late context primed by the literal meaning (*fast*) of the negated metaphor (*not a jet*), suggesting that that meaning has not been suppressed by the negation marker:

- (47) A: Listen, with your car, you are there, at most, in 5 minutes ...
 B: Come on ... My Daihatsu is **not a jet**. A *fast* car ... superb car ... But there's a limit ... (Taken from Altit and Arvatz, 2005; my translation, RG)

Apparently, the seemingly irrelevant literal meanings of metaphors do not get suppressed automatically, in spite of negation, which allows elaborations on them in the following utterances (for a different view, see Gernsbacher et al., 2001; Glucksberg et al., 2001; Hasson and Glucksberg, this issue).

2.12.2. Negative irony

If negation does not necessarily discard information from memory, negative statements should come across as ironies, when intended as such, just as affirmative statements do, when intended

⁹ Note, again, how negative literal clauses can establish affinities in the same way affirmatives do, so much so that the comparison established via negation (*there are as yet no trains from Jenin to concentration camps; No tall smokestacks*) is treated as given (*this comparison*), though it is spelled out later on.

ironically. In both cases, it is the more salient meaning, often the literal one that allows for the irony to be projected. (On the involvement of salient meanings in the comprehension of irony, see Dews and Winner, 1999; Giora, 1995, 2003; Giora and Fein, 1999; Giora et al., 1998; Schwoebel et al., 2000). In the following example, both the ironic and comparative readings are licensed, in spite of negation:

- (48) Soldiers as lifeguards, girls in the turret
 The call to replace the striking lifeguards with soldiers is indicative of a disdain for the professionalism of the strikers, as if anyone and everyone could get up on a surfboard and rescue a drowning person. Why even pay so much money for it? *They're only lifeguards, after all, **not** consultants for a tourism project on a Greek island who are permitted to earn millions* (Shohat, 2004).

The availability of the ironic reading of this example (involving also an implicit reference to a presumed culprit, the Israeli businessman and consultant, David Apple, implicated in the so-called 'Greek island affair') testifies to the almost inevitable retention of the information (*consultants*) within the scope of negation. It is this retained information that allows for the difference between what is said (via negation) and what is referred to to become visible and project the same ironic stance projected by affirmative ironies.

2.13. Discourse coherence

If negation does not necessarily discard information from memory, negated information should obey discourse requirements and constrain text organization and progression in the same way that nonnegated information does. Indeed, the following example attests that negatives do not differ from affirmatives in the way they affect text organization. For instance, negatives should obey the Relevance Requirement (Giora, 1985) tacitly posited for nonnegated discourse. They should therefore bear affinities to the text discourse-topic, i.e., to the superordinate abstraction level category which subsumes the text's set of properties, and in which they can be included as members (Giora, 1985, following Rosch, 1973 and Rosch and Mervis, 1975). Thus, the choice to describe a Palestinian victim as "unarmed" (as opposed to an equivalent 'civilian') obeys the Relevance Requirement (Giora, 1985), given that the topic is killing armed people or people involved with arms:

- (49) The IDF scored a significant success yesterday when for the second time in two weeks it foiled an attempted **Qassam rocket launch** with an airborne strike against the **two men preparing the launch**. But the army also shot dead an unarmed man in Nablus when it tried to cope with rock throwing Palestinians In Nablus, where paratroopers uncovered an explosives lab in the casbah, troops fired their weapons in response to rock and block throwing by Palestinians in the central Nablus area. According to military sources, the troops spotted an **armed** man and then fired at someone watching from a window. Palestinian sources said the dead man was 32-year-old Zuheir Aladaham, who was **unarmed** and uninvolved in the clashes. Using rubber bullets, the troops wounded 15 other Palestinians, mostly teens. (Harel et al., 2004)

Indeed, in our studies (Giora et al., 2005a), participants found that sentences such as *What I bought yesterday was not a bottle but a jug* were acceptable whereas *What I bought yesterday was*

not a bottle but a closet were significantly less so (despite their realistic probability). This finding demonstrates that negation affects taxonomical text organization in just the same way that affirmation does (Giora, 1985, 1988).

By the same token, just like affirmatives, negatives have to obey the Graded Informativeness Requirement (Giora, 1988), according to which less informative/less specific information should precede novel or more specific information. New information, then, should be introduced gradually, so that any incoming message is more informative or specific (but not too informative) compared to the one that precedes it, relative to a given discourse topic, which should be the least informative message, constituting the superordinate abstraction level category of which the more specific items can be included as members. Discourse structure (posited for nonnarrative sequences) then should mimic a prototype oriented taxonomical structure, which is ordered from the least to the most informative member in the set (Giora, 1988). Thus, *No headlines, no reports, not even a mention* are all classifiable as instances of the category *Not a word has been written*:

- (50) **Not a word has been written** in Israel about the life and death of Nabil Jardat, who lived quietly and died quietly. **No headlines, no reports, not even a mention** of the killing of this clothing merchant and father of eight, who was on his way home to Silat al-Hartiya from his store in Jenin about two weeks ago, holding his young son on his lap, when a soldier apparently shot at him from a tank, without any warning or obvious reason—and killed him. (Levy, 2003)

Similarly, in the excerpt (51) taken from John Kerry's speech (Corn, 2004), the new information ("freedom"), following a prior negative clause, is novel, that is, unpredictable from that clause (negating "fear"):

- (51) The future **doesn't** belong to *fear*; it belongs to *freedom*.

Note, however, that its informativeness is graded. Its gradedness is a consequence of its adherence to the Relevance Requirement (Giora, 1985) which guarantees its inclusion within the category of things that may shape human's future (in which both "freedom" and "fear" can feature as members). Negatives and affirmatives then equally obey discourse coherence requirements.¹⁰

2.14. Discourse resonance

Negative constituents also abide by the requirement to maintain discourse resonance to the same extent that affirmatives do. Discourse resonance is "the catalytic activation of potential affinities across utterances", which, while evoking affinities, also induces change (Du Bois, 1998). Illustrative in this respect is the following example, in which the choice of a negated constituent is as sensitive to context as affirmative alternatives are. The following excerpt is taken from a letter to the editor by a jailed conscientious objector. It follows the Resonance Principle (Du Bois, 2004a, 2004b), according to which "resonance tends to be maximized in discourse". Indeed, a profuse use of negative phrases is preferred (*not proud; not happy*), despite

¹⁰ There is also evidence coming from Hebrew discourses showing that negatives (*lo=no*) and affirmatives (*naxo-n=indeed*) are functionally equivalent in that they are both givenness markers (Ziv, 2004).

available affirmative alternatives, which are less resonant ('ashamed'; 'sad'; my translation, RG):

- (52) I am not an occupier. Period
 I am **not proud** of my people, I am not proud of my country, I am **not proud** of the deeds done on behalf of my security, I am **not proud** of sitting in jail for refusing to serve this occupying army (and I am **not happy** about the opportunity to suffer because of my principles) (Ya'acobi, 2002).

Like affirmatives, then, negatives affect text progression and organization in accordance with coherence and resonance principles and they similarly exhibit discourse sensitivities.

3. The processes and products of negation

In their naturally occurring environments, negatives and affirmatives seem to have similar discourse interpretations and effects. Can the time course of processing negation explain the affinities found between negatives and affirmatives? The temporal aspects of processing negation can be divided into two stages: (i) the initial, comprehension stage, which occurs approximately within 150–350 ms following offset of the stimulus and which involves lexical processes; and (ii) the later interpretation stage, which occurs approximately within 500–1000 ms following offset of the stimulus in question and which involves the products of suppression or retention (and modification) of initial outputs. Cognitive machinery that (a) allows lexical access to be insensitive to negation and (b) induces retention or suppression of initial outputs, depending primarily on their discourse relevance and role, will be able to account for the pragmatic affinities found between negatives and affirmatives. In what follows, I therefore examine the initial and later processes of negation.

3.1. Initial processes: Are early processes sensitive to negation?

Findings from online experiments, using various methodologies such as reading times, lexical decision, lexical and pictorial probe recognition, and evoked potentials, show that lexical access following negation is insensitive to the presence of negation.¹¹ Both negatives and affirmatives give rise to salient affirmative concepts only. For example, reading times of affirmative (*some bread*) and negative (*no bread*) constituents did not exhibit differences (MacDonald and Just, 1989). By the same token, when tested initially, at a 150 ms interstimulus interval (ISI), lexical decisions to probes ('nice') related to the salient affirmative meaning of the primes were similarly facilitated, compared to unrelated probes, regardless of whether the primes were affirmative (*This dress is pretty*) or negative (*This dress is not pretty*). By contrast, they were not facilitated following an antonymic control (*This dress is ugly*; Giora et al., 2005a). Similarly, in Hasson and Glucksberg (this issue), lexical decisions to affirmative-related probes ('fast') at short (150 ms, 500 ms) ISIs were facilitated following both affirmative (*The train to Boston was a rocket*) and negative (*The train to Boston was no rocket*) metaphoric utterances, compared to a neutral condition. Furthermore, in Kaup et al.

¹¹ This finding is particularly interesting for languages where negation precedes the concept within its scope (such as English or Hebrew).

(submitted for publication), this held for pictorial probes as well. Immediately (250 ms) after offset of the target sentences (*There was no eagle in the sky/There was no eagle in the nest*), only responses to visual probes substantiating the affirmative meaning of the negated concepts were facilitated. Evidence from brain waves also corroborates earlier findings. When event-related brain potentials were recorded from the scalp, contextually incompatible concepts (*A robin is/is not a tree*) elicited large amplitudes of N400 brain waves (associated with difficulty to integrate an incompatible concept into the sentence context), regardless of negation and truth functionality. However, they did not, when concepts were contextually appropriate (*A robin is/is not a bird*) (Fischler et al., 1983; Hald et al., 2005).

These findings were replicated in a sentence-picture-verification paradigm. In Lüdtkke et al. (2005) participants were presented sentences that were followed by a pictorial probe ('ghost') 250 ms after offset of the target sentences. These sentences were either true and affirmative (TA) (*In front of the tower there was a ghost*), false and negative (FN) (*In front of the tower there was no ghost*), true but negative (TN) (*In front of the tower there was no lion*), or false and affirmative (FA) (*In front of the tower there was a lion*). The priming conditions were only those including the word (*ghost*) congruent with the pictorial probe ('ghost'). Indeed, conditions (TA/FN) involving a prime (*ghost*) facilitated response times and resulted in small amplitudes of N400 brain waves, regardless of negation. In contrast, conditions without priming (FA/TN) lead to slower response times and enhanced N400 amplitudes.

In all, these findings indicate that, initially, processing is insensitive to negation. Affirmative and negative constituents give rise to similar concepts.

3.2. Later interpretation processes: Are later processes sensitive to negation?

While initial processes result in similar outputs, it is later processes that determine the final shape of these outputs. Thus, later processes may either retain (to various degrees), or totally eliminate the outputs of earlier processes. If later processes are sensitive to discourse considerations and affect the outputs of negatives and affirmatives in the same way, depending on their discourse role, this would account for their pragmatic affinities. Evidence to the contrary will fail to explain their functional similarities.

Indeed, there is evidence suggesting that, in some cases, when targets are tested out of a global context, negation induces suppression as a default strategy. Although under such circumstances, negation does not interfere with initial lexical processes, it does affect levels of activation of initial outputs. Thus, when probed after a 1000 ms delay, initial levels of activation of concepts within the scope of negation were reduced to base-line levels (Hasson and Glucksberg, *this issue*). At a longer (1500 ms) delay, negated concepts even prompted the activation of alternative concepts (Kaup et al., *this issue*). Such findings, then, demonstrate that, when given enough processing time and when no global context is made explicit, negation is a powerful suppressor reducing the accessibility of negated concepts (see also MacDonald and Just, 1989 Experiment 2, but not 3).

There is, however, further evidence that suppression following negation is not necessarily the only default strategy. Rather, findings in Paradis and Willners (*this issue*) show that, when no global context is provided, it is mitigation that is prompted. In Paradis and Willners (*this issue*), participants were presented with affirmative and negative statements involving scalar adjectives (*The road along the coast is/is not narrow; The road along the coast is/is not wide*). They had to mark the position of the target (*road*) on an 11 point 'path-motorway' scale. Negated sentences

resulted in non-polar positions on the scale as opposed to affirmative items, which occupied the scale's end positions. This was particularly true for scalar (as opposed to dichotomous) concepts.¹² Such results demonstrate that negation invites modification, which translates 'not wide' to 'less than wide' (or 'fairly narrow') rather than to 'narrow'. It also translates 'not narrow' to 'less than narrow' (or 'fairly wide') rather than to 'wide' (for similar results, see also Fraenkel, 2005; Giora et al., 2005a). Although the time it took to scale the items was significantly longer for the negated than for the nonnegated adjectives, indicating that the negative items were more difficult to scale, this need not be associated with suppression effects, since no comparison to affirmative modifiers was made.

In addition, however, there is evidence showing that, at times, it is retention that is induced as a default strategy. Evidence from behavioral and event related brain potentials recorded at a long delay (of 1500 ms) showed no effect of negation. Thus, both affirmative and negative sentences (*In front of the tower there was/was no ghost*) facilitated response times to pictorial probes ('ghost') and resulted in small amplitudes of N400 brain waves elicited by these probes (Lüdtke et al., 2005). Such results attest to the insensitivity of late processes to negation, which renders affirmative and negative processes alike.

In sum, evidence from online behavioral and event related brain potentials measures available so far suggests that, in the absence of an explicit global context, negation induces both suppression and retention or mitigation as default strategies.

3.3. Context effects

3.3.1. Suppression versus retention/mitigation

Crucial, however, is the question of the effects of contextual constraints on the interpretation processes of negatives and affirmatives. How will global context considerations select between default processes invited by local cues and affect the products of negated information? For instance, will suppression of negated concepts, shown to be operative out of a global context (Hasson and Glucksberg, *this issue*), be triggered even if global cues alert the comprehender to the contrary? In Giora et al. (2004a), we examined this issue while testing the effects of late context (which allowed 1000 ms processing time) on a given negative utterance. Our findings show that negation is hardly effective when global considerations, such as relevance and coherence maintenance (Giora, 1985; Sperber and Wilson, 1986/1995), invite retention rather than suppression of recently mentioned information. In particular, we show that suppression following a local cue such as negation is not obligatory and would not be induced unless invited by the global context. Thus, when context required retention of information within the scope of negation, suppression was not prompted. Instead, comprehenders retained negated information because it was deemed useful for coherence purposes. However, a global signal to the contrary, such as a topic-shift, prompted suppression of recently mentioned information, regardless of whether the utterance was affirmative (as shown by Gernsbacher, 1990) or negative (Giora et al., 2004a), suggesting that retention is not obligatory either.

Thus, when the negative metaphors used by Hasson and Glucksberg (*this issue*) were followed by a coherent late context (53), incompatible meanings of target words ('fast'), related to the affirmative sense of the negative metaphor (*no rocket*), were not dispensed with. Rather, they

¹² In the literature, a scalar concept is gradable (e.g., wide) while a dichotomous concept knows no degrees (e.g., alive/dead; odd/even).

were retained and primed related targets (*fast*) in the late context. As a result, they were more accessible in the coherent late contexts than in the incoherent late contexts (54). This difference, however, was not observed when targets of controls (55–56) were compared:

- (53) The train to Boston was no rocket. The trip to the city was **fast** though.
(Coherent string)
- (54) The train to Boston was no rocket. The old man in the film spoke **fast**.
(Incoherent string)
- (55) She poured me a glass of water. The trip to the city was **fast** though.
(Coherent string Control)
- (56) She poured me a glass of water. The old man in the film spoke **fast**.
(Incoherent string Control)

Further analysis showed that the facilitation effects were not a consequence of the ease of processing coherent versus incoherent discourses. Rather, facilitation was afforded by a discourse cue, suggesting that information mentioned recently might become relevant later on and should therefore be retained for further processes, even while locally alerted to the contrary (see also example 47).

Similar effects were found for prior context. For instance, [Glenberg et al. \(1999\)](#) showed that negated and nonnegated items took equally long to read when preceded by a supportive context. For example, following a context discussing the choice of color for a new couch, negative and affirmative target sentences – *The couch was/wasn't black* – took similarly long to read. However, following a context lacking such relevant information, targets involving negation took longer to read than those that did not. Such findings demonstrate the facilitative effects of relevant prior context on the processing of negated information. Information within the scope of negation, which is perceived as coherent with prior context, is retained for purposes of maintaining this relevance relation so that it may be mappable on that context or integrate with it ([Gernsbacher, 1990](#); [Giora, 1985, 1996](#); [Sperber and Wilson, 1986/1995](#)).

Similarly, in an attempt to replicate [Giora et al.'s \(2005a\)](#) findings in a specific context setting, [Giora et al. \(in preparation-a\)](#) embedded the originally context-less items in a supportive context. Recall that in [Giora et al. \(2005a\)](#), 150 ms following the target sentence, affirmative meanings were facilitated as compared to controls, regardless of negation. These findings were now replicated at a longer ISI. They show that, even at a long ISI of 750 ms, lexical decisions to probes related to the salient affirmative meaning of the negated prime were facilitated, as compared to unrelated probes. Thus, following *All my girl-friends indeed have good taste but I have to admit that the dress Sarit is wearing is **not pretty***, the related probe ('nice') was responded to faster than the unrelated one ('rice'). Such results support the view that when the affirmative meaning of the negated concept is relevant to prior context, it is retained rather than suppressed.

That global context considerations reign supreme is also demonstrated by [Kaup and Zwaan \(2003\)](#). [Kaup and Zwaan](#) showed that a concept's accessibility was affected only by its presence in or absence from the situation model. While concepts absent from the situation described lost accessibility (57c,d), concepts present in the situation described gained in accessibility, regardless of negation (57a,b). Thus, 1500 ms after participants read target sentences, they were faster in responding to a color probe mentioned in the target and present in the situation than to a

color probe mentioned in the target but not present in the situation described. This was true regardless of whether the concept was negated or not (but see results at a shorter ISI):

- (57) Susan was lying in bed trying to fall asleep. Tomorrow would be her tenth birthday. She always had problems falling asleep the night before her birthdays. She already knew that she would be getting a new bike for her birthday. She had overheard a conversation between her parents the other night. This morning Susan had gone into the garage and had looked at the new bike. Now she was trying to imagine what her friends would say about her new bike. Susan thought that they would like the bike,
- (a) and she was glad that the bike had a blue frame. (Affirmative/Present)
 - (b) she only wished that the bike didn't have a blue frame. (Negative/Present)
 - (c) she only wished that the bike had a blue frame. (Affirmative/Absent)
 - (d) and she was glad that the bike didn't have a blue frame. (Affirmative/Absent)

Probe Word: BLUE

Final Sentence: At midnight Susan finally fell asleep.

When will context facilitate activation of alternative, antonymic interpretations of negated information? According to Mayo et al. (2004), when late context is consistent with an available opposite of a negated concept and the task involves congruence judgments, the available alternative will get activated and facilitate processing of related descriptions. Mayo et al. studied negation effects on various types of concepts: concepts, termed bipolar, which have a ready-made antonym at their disposal ('tidy'/'messy'), and concepts, termed unipolar, which do not ('adventurous'/'not adventurous'). Mayo et al. asked their participants to judge whether a description following a negated concept was congruent or incongruent with that concept. Later on, they presented their participants with the congruent and incongruent behavioral probes and asked them to write down the description as it had been presented to them.

They found that for congruence judgments, negative bipolar descriptions gave rise to an alternative antonym. In contrast, unipolar descriptions retained their negated affirmative. Thus, having read a sentence involving a bipolar adjective such as *Tom is not a tidy person*, participants were faster to judge *Tom forgets where he left his car keys* as congruent than to judge *Tom's clothes are folded neatly in his closet* as incongruent. However, the opposite was true for sentences involving unipolar adjectives. Having read *Roy is not an adventurous person*, participants were slower to judge *Roy is stressed by any change in his life* as congruent than *Roy loves to travel to distant places* as incongruent. Findings in Mayo et al. (2004), then, show that when a late context or task require congruence assessment, the availability of a complement concept allows a focus shift from the negated concept to its alternative opposite, which results in facilitating congruence judgments. Such findings support the view that (when enabled), replacement of information following negation is sensitive to discourse demands.

However, when the task required memory of the descriptions, both unipolar ('not adventurous') and bipolar ('not tidy') items were remembered accurately equally well (62% versus 70%), suggesting that when verbatim memory was required, the strategy applied was retention rather than suppression.¹³

¹³ For more information on the effects of the type of concept negated, see Fillenbaum (1966), Fraenkel (2005), and Levine (2002).

In sum, when contextual information was available, later interpretive processes of negatives and affirmatives were similarly sensitive to discourse considerations. Information coherent with either prior or late context was retained, irrespective of local negation cues to the contrary. Similarly, information present in the situation model, and thus available for further discussion, was retained, regardless of negation. Information incoherent with the oncoming context was dismissed as irrelevant, whether negated or not; information dispelled from the situation model and probably of no use for the next discourse segment was discarded from memory, even when nonnegated. Such findings account for evidence from naturally occurring discourses supporting the retainability of information within the scope of negation when relevant for further processing, and its disposal when useless or irrelevant. Importantly, they show that, even though, in the absence of a global discourse, negated concepts may be suppressed, the presence of such global considerations effects their retainability. The products of negatives and affirmatives are thus the outputs of cognitive machinery that is governed by discourse-relevance considerations and is less sensitive to local considerations.

4. What negatives can do better: on negation and nonliteralness

(And the writer said / in a special broadcast / from
his home / in a look as sharp / as his pen / in pure language
like his daughter: no, no, no, / blood is not / water
blood is definitely / a liquid, and / nevertheless
it comes off with the washing)
(Laor, 2004:44, my translation, RG)

In what way might negation be different from affirmation, if at all? Negation might be deemed instrumental in giving rise to novel meanings not envisaged within its affirmative use, when it induces mitigation rather than total suppression.

Consider, for instance, the title of the excerpt in (58), which communicates a metaphoric interpretation via negation that might not come across as promptly via its nonnegated use. The excerpt in (58) describes a film by a Palestinian film maker (Arasoughly, 2001). Its title – *This is not living* – alludes to abstract, nonliteral qualities of ‘living’. References to affirmative ‘living’ in the next sentence, however, make sense only literally:

- (58) **This is not living**
A film portrait of eight Palestinian women from different social and religious backgrounds exploring how they **live** war and imagine peace. These are ordinary lives which make up the news and which the news makes invisible (Avi Mugarbi, personal communication, 3.10.05).

Note also a similar example in which the meaning of “live” is metaphoric:

- (59) We **don’t** live, we survive. (Gori, 2002)

Or the metaphoric interpretation of *you are not a girl* when leveled at a tough Israeli woman soldier serving in the territories:

- (60) When my soldiers say to me ‘you are **not a girl**’, then, regardless of how chauvinist it is and although I think girls can do anything just like boys, it flatters me nonetheless.” (Ushpiz, 2005; my translation, RG)

A Google search reveals that 83.3% of the occurrences of a negative statement such as “Blood is not water” are intended metaphorically. In contrast, its affirmative counterpart – “Blood is water” – receives such an interpretation only in 19% of the cases.

Are these metaphoric meanings made available because the utterances are literally false or realistically impossible (Grice, 1975)? Not necessarily. Consider a teenager saying to her older sister “You are not my mother” which is true, yet metaphoric, as is of course “Blood is not water”. Although these are literally true statements, their immediate interpretation makes sense only nonliterally.

Note that many of these negative instances have figurative meanings even though no rich context is provided nor, at times, any explicit context at all. Indeed, when tested out of a specific context, such (Hebrew) negatives (*You are not my maid; You are not my mother; This is not a game; This is not food*) received significantly more metaphoric interpretations than their affirmative non-modified counterparts (*You are my maid; You are my mother; This is a game; This is food*) and their affirmative modified versions (*You are just about my maid; You are just about my mother; This is nearly a game; This is nearly food*). They were also rated as more pleasurable than their affirmative non-modified counterparts (Giora et al., in preparation-b).

Why would negation render such statements figurative? One possible explanation follows from the view of negation as mitigation. Given the mitigation effect of negation, negation would not dispose of the negated concept but only hedge it. Thus, *X is not my maid* does not exclude *X* from the category of ‘maids’ or from the category of ‘my maids’ made available by the negated concept, but instead weakens it and renders it a non-prototypical member in the specified category. Similarly, *Y in Y is not food* would still be a member of the ‘food’ category though a marginal one. Negation then does not disqualify category membership but rather reshuffles the membership status. The marginality status of negated concepts allows them to retain category membership in the same nonliteral way that *My job* (in *My job is a jail*) is allowed to be included in the set (of limiting and stifling things) labeled ‘jail’.

Why is this reading peculiar to negation? Recall that negation can assert the negative while retaining the affirmative. Whereas the affirmative (‘my maid’) indicates the relevant category, the negation marker determines the designated referent’s (‘you’) non-prototypical membership in that category. Why isn’t this allowed by an affirmative hedge? As shown earlier, an affirmative hedge might not be a strong enough mitigator and would, therefore, not reduce prototypicality status significantly enough to allow for a nonliteral interpretation. (On the relatively weak effect of negatively matched affirmative hedges, see Giora et al., 2005b)

Out of a specific context, then, when no global discourse considerations are visible, negatives and affirmatives might differ. At least some instances of negative utterances come across as nonliteral, whereas their affirmative counterparts do not. It seems that, for these affirmatives to project a nonliteral interpretation, they require a specific context.

5. Conclusions

5.1. Is suppression following negation obligatory?

Results from many online experiments involving reading times, lexical decisions, probe recognition, and brain waves have shown that, in the absence of an explicit global context, both negated and nonnegated utterances activate salient meanings (Giora et al., 2005a; Hasson and Glucksberg, this issue; Kaup et al., submitted for publication). Initial processing, then, is insensitive to negation and, contra MacDonald and Just (1989), is not susceptible to inhibition

effects following negation. Such processes, then, make available salient meanings. Would they be suppressed when negation is integrated into the mental representation? Findings indeed show that, when extra processing is allowed, a local signal such as negation often diverts attention away from initial representation or triggers suppression of initial outputs (Hasson and Glucksberg, *this issue*; Kaup et al., *submitted for publication*). Such findings support the view that, following negation, suppression is at times a default strategy.¹⁴

Still, although suppression could be a preferred strategy, it is by no means the only one. Other online measures have demonstrated that when the task is scaling, participants retain at least some of the features of the negated concept and opt for a mitigated interpretation (Paradis and Willners, *this issue*). These findings are further corroborated by results from off-line measures, which attest to the same effect. They show that negation often mitigates information rather than discards it from memory (Fraenkel, 2005; Giora et al., 2005a, 2005b). They also show that, at times, this mitigation results in novelty, inducing less or nonsalient meanings (Lev Ari, 2004), including nonliteral ones that are not allowed by equivalent affirmatives (Giora et al., *in preparation-b*). Mitigation, then, is another default strategy invited by negation. This on its own argues against the suppression hypothesis, which assumes that suppression following negation is obligatory.

5.2. *Is negation unique?*

Negation could be unique if it induced suppression automatically and exclusively. However, various findings show that although suppression is a default strategy, it is not automatic. Indeed, various studies have shown that, when contextual information is available, suppression is sensitive to relevance and coherence-based discourse goals such as those specified in Giora (1985) or Sperber and Wilson (1986/1995). For instance, in Giora et al. (2004a), suppression was not triggered once the processor suspected that the information within the scope of negation might become useful in the next discourse segment. By contrast, suppression was triggered when the next segment was deemed irrelevant. In Glenberg et al. (1999), suppression was not triggered when the negated concept was deemed relevant to information recently mentioned. Again, suppression was triggered when the prior context was deemed irrelevant. In Kaup (2001) and Kaup and Zwaan (2003), it was not induced when negated information was present in the situation model, while it was when nonnegated information was absent from the situation model. Because suppression is not automatically and exclusively prompted by negation, negation cannot be unique.

Indeed, many discourse functions assumed to uniquely distinguish negatives from affirmatives, such as denying, rejecting, disagreeing, repairing (both linguistically and metalinguistically), eliminating from memory, communicating the opposite, attenuating or reducing the accessibility of concepts and replacing them with alternative opposites, are equally enabled by affirmatives. Similarly, discourse roles assumed to uniquely distinguish affirmatives from negatives, such as representing events, conveying agreement, confirmation, or affective support, highlighting and intensifying information, introducing new topics, conveying an unmarked interpretation, establishing comparisons, effecting discourse coherence and discourse

¹⁴ Evidence from Mandarin Chinese grammar (and other languages such as Hungarian) might lend support to the view that more often than not, negation deactivates the accessibility of nouns. Unlike affirmative sentences, no classifier is used in Mandarin Chinese in negative sentences, suggesting that nouns in negative sentences are not intended to be referred to in the next discourse segment (Hopper and Thompson, 1984:717). Similarly, in some languages, verbs in negative but not in affirmative clauses, “often fail to qualify for full verbal status”, suggesting that negated events are inhibited (Hopper and Thompson, 1984:734).

resonance, are equally enabled by negatives. Such evidence attesting to some functional affinity between negative and affirmative interpretations can only be explained by processing mechanisms that do not operate obligatorily but are instead sensitive to global discourse considerations. By no means can they be explained by suppressive mechanisms that are automatically induced by negation, as assumed by some psycholinguists (Hasson and Glucksberg, *this issue*; Kaup, 2001; MacDonald and Just, 1989). Rather, it is high-level cognitive machinery that is sensitive to pragmatic considerations that can explain the many findings discussed above (but see Horn, 1989, Ch. 3 for a different view).¹⁵

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¹⁵ Such view expressed here fits in well with Atlas' 1989 sense-generality view of negation, which right now seems to be basically related to scope. " 'Not' is not ambiguous but is 'general in sense among exclusion and choice-negation interpretations' that is, among presupposition-canceling and presupposition-preserving.

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