

“A good Arab is *not* a dead Arab – a racist incitement”: On the accessibility of negated concepts

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Abstract

According to the teachings of negation in psycholinguistics, concepts within the scope of negation are eradicated from the mental representation and replaced by available antonyms. Thus, given enough processing time, *He is not alive* is represented as *He is dead*. However, a systematic look at natural language use suggests that this is not always the case. Instead, concepts within the scope of negation often remain accessible to addressees so that they can refer to them later on in the discourse (“Not **alive** but **evolving**”,¹ “It’s not **alive** but it was [**alive**]”,² “Not **dead** but **dying**”³). That concepts within the scope of negation are not suppressed unconditionally is established here by both offline and online experimental data showing that, when relevant either to early or to late context, concepts within the scope of negation are not discarded. Instead they remain active in the minds of speakers and listeners who integrate them into their discourse representation.

No winners, just broken hearts (Damelin 2006)

1. Introduction

Does *not dead* always mean ‘alive’; does *not alive* always mean ‘dead’? When hearing “Bush isn’t a Nazi”, do we deactivate the concept of ‘Nazi’ and activate instead an alternative opposite such as the concept of ‘a peace seeking person’? Linguists and psycholinguists have long been intrigued by the effects of negation on information within its scope. The consensus, probably inherited from logic (where $q \neq \sim q$; see Horn [1989] 2001), is that

negated concepts are discarded from the mental representation in order to allow a focus shift from the negated concept to an available alternative. Thus, *open* in *The door is **not open***⁴ gives way to an alternative opposite – *closed* as in *The door is **closed*** (Kaup, Lüdtke, and Zwaan 2006; see also Fillenbaum 1966; Hasson and Glucksberg 2006; Kamp 1981; Kamp and Reyle 1993; Kaup et al. in press; Kaup 2001; Langacker 1991; MacDonald and Just 1989; Mayo, Schul, and Burnstein 2004; and see Giora 2006 for more details).

Indeed, when presented with sentences in isolation, participants' responses to a probe word (*bread*) were slower following a negative statement (*Every weekend, Mary bakes **no bread** but only cookies for the children*) than following an affirmative statement (*Every weekend, Mary bakes **some bread** but no cookies for the children*). Such findings attest to the reduced accessibility of the concepts within the scope of negation (MacDonald and Just 1989, Experiments 1–2; but see Experiment 3). Similarly, out of a specific context, when readers were allowed enough processing time (~750–1500 msec), negative and affirmative statements were represented differently. Whereas in the affirmative (*The door is **open***), the target concept (*open*) remained accessible, in the negated counterpart (*The door is **not open***), its initial levels of activation were reduced to baseline levels (Hasson and Glucksberg 2006) and below (Kaup, Lüdtke, and Zwaan 2006; for a review, see Giora 2006). Even in the presence of a specific context, the availability of an alternative opposite ('tidy'/'messy') allowed for a negative description (*not a tidy person*) to be represented in terms of its antonymic schema ('a messy person') as shown by Mayo, Schul, and Burnstein (2004; for similar results for words presented in isolation, see Fillenbaum 1966).

The (originally) Hebrew example cited in the title, however, begs to differ. It serves to question the assumption that negation is an operator that obligatorily effects the elimination of the negated concept from the mental representation. The slogan *A good Arab is not a dead Arab* made up part of an ad in the *Herut* party's campaign in the recent Israeli elections. This ad section was removed by the Central Election Committee chair, Judge Dorit Beinisch, who found that it "*clearly* makes reference to a familiar, blatantly racist slogan: *A good Arab is a dead Arab*". Therefore, the judge concluded, "this is an *explicitly* racist saying, which will most probably hurt the feelings of the Arab population if allowed to air" (Alon 2006). In spite of the fact, then, that *a dead Arab* appeared within the scope of

negation, in the mind of the judge, it was retained rather than suppressed (as it would have been in the mind of the ad's target audiences).

Indeed, speakers are aware of the resistance of salient meanings to suppressive negation effects. Consider the following (jocular) example, in which the speaker is aware that his addressees might be inspired by ideas he manipulatively introduced via negation (*none of you*), as his final statement suggests:

- (1) Now, I'm sure that **none** of you out there will abuse your new configuration power, such as by writing a macro that would play a song from "South Park" every time a user types a certain key combination. But if you decide to do it, *you didn't get the idea from me.* (Haugland 2006)

Addressees, on their part, are not insensitive either. In the following, the journalist (Shelakh 2005) reports on Amir Peretz's (head of Israeli Labor party and currently the Defense Minister) election campaign, while describing his use of negation as self-defeating:

- (2) "I will **not** let the prime minister's [Sharon's] health become **part of the campaign**," he [Peretz] said, thereby making it, of course, **part of the campaign**.

Similarly, in the following, prefacing a piece of advice by negation allowed its 'effective' communication upon which the addressee indeed acted (Kelley 2006):

- (3) A.D.A. Douglas Koupfer: He **effectively** counseled his client to skip trial and run. Now, he prefaced this by saying he **was not legally permitted to give such advice**. But, come on, he gave it all the same, and the client did in fact, flee.

Or consider how the following negative statements by William Bennett were treated as affirmatives by both the addressees and the speaker himself (as discussed in Zizek 2005). On his call-in program *Morning in America*, William Bennett said: "But I do know that it's true that if you wanted to reduce crime, you could, if that were your sole purpose, you could abort every black baby in this country, and your crime rate would go down. That would be an **impossibly** ridiculous and morally reprehensible thing to do, but your crime rate would go down." The White House spokesperson's

reaction to this followed immediately, as reported in Zizek (2005): “The president believes the comments were not appropriate.” Not surprisingly, as commented on by Zizek, two days later, Bennett qualified his statement: “I was putting a hypothetical proposition... and then said about it, it was morally reprehensible to recommend abortion of an entire group of people. But this is what happens when you argue that ends can justify the means.” This is exactly what Freud meant when he wrote that the Unconscious knows no negation:⁵ The official (Christian, democratic...) discourse is accompanied and sustained by a whole nest of obscene, brutal racist and sexist fantasies, which can only be admitted in a censored form” (Zizek 2005).

Similarly, in the minds of the addressees, what is prefaced by negation might nonetheless pass for affirmation. The following example is the accurate quote of a statement by the Israeli PM, Ehud Olmert, speaking at the National Security College in Tel Aviv:

- (4) I could have said it but I **don’t intend to say** that if the campaign were over today, it could be stated with certainty that the face of the Middle East has changed.” (August 1, 2006, Channel 2 [in Hebrew, my translation, RG])

However, the reports and quotes of this speech omitted the negative preface while replacing it with affirmative mitigation modality (on negation as mitigation, see Giora, Balaban et al. 2005; Giora, Fein et al. 2005):

- (5) “Even today, it may be said that the face of the Middle East has changed following the great achievement of the State of Israel, of the army of Israel, and of the people of Israel,” Olmert said, speaking without notes. (Benn and Rosner 2006; see also Benn 2006)

Even when a negated concept has an available antonym (guilty/innocent), it is not always the case that when using negation, speakers intend the addressees to access that opposite. For instance when a functionary was happy to break the news to the second Israeli Prime Minister, Levy Eshkol, informing him that once again he was acquitted of charges against him, Eshkol muttered: “Interesting. I was never found innocent” (Haglili 2004). Was Eshkol trying to implicate that he was always found guilty? Not at all. What he was trying to get across was the message that he had never been charged or tried.

That speakers are not always aiming to get across an alternative opposite is also clear from the following example, which reports an IDF questionnaire, to be presented to high school students (aged 15–18), under the (Hebrew) title “The IDF to look at why the kid does **not** want to be a **combat soldier**”. Apparently, according to this title, the IDF is not interested in why kids want or don’t want to serve in different units other than a combat unit. In the language of the military this translates into “Now we want to ... act where the problems are” (Greenberg 2006). And the problem is why ‘not a combat unit’.

These examples thus demonstrate that, in the minds of speakers and hearers, information within the scope of negation is not unconditionally eliminated from the mental representation. Instead, it often remains accessible (albeit at times mitigated).

Still, one could wonder whether the accessibility of such information might, nonetheless, be short-lived. The following examples argue to the contrary. For instance, a few days after Israeli Northern Command Major General, Udi Adam, said that “human life is important, but we are at war, and it costs human lives. We **won’t count the dead at present**, only at the end” (Harel 2006), Israeli women, in an anti-war rally, chanted (in Hebrew):

(6) “We **are** counting the dead ...”

‘Counting the dead at present’, although presented via negation, was retained in the minds of Israelis for longer than a few days.

Similarly, in the case of Tali Fahima, a statement uttered via negation was remembered for longer than a year. Tali Fahima – an Israeli Jewish Mizrahi woman – was charged with assisting the enemy for going to the occupied territories to see first-hand the facts on the ground. On the first day at court, the prosecution stated that “it will **not pursue the death penalty** even though by law the charge of assisting an enemy at a time of war can draw such a sentence” (Harel 2005). A year later, when Fahima was acquitted of these charges, Jacob Katriel (December 31, 2005, personal e-mail communication) referred to it in the following way:

(7) Please remember that on the first day in Court the possibility of the death sentence was discussed!

This piece of information, then, resisted negation and was retained in memory as an affirmative possibility even as long as a year following its mention (for similar errors following negation see Fillenbaum 1966).

To test the view that negation is not necessarily a suppression operator and that often it maintains rather than deactivates information within its scope, I will first consider instances of natural conversations and written texts and offline studies that attest to the accessibility of negated information (sections 2–4). Later, in section 5, I will present converging evidence from online empirical studies.

2. The accessibility of negated concepts

2.1. Can negated concepts be marked as highly accessible?

If information within the scope of negation is not obligatorily deactivated then it should, at times, be retrievable by means of high accessibility referring expressions. Use of high accessibility referring expressions indicates that the speaker assumes that the concepts referred to are highly accessible to the addressee. Markers such as zeros, ellipses, deletion, or elision (indicated here by [] for convenience) and pronouns attest that the speaker considers the information referred to as highly accessible to the addressee (Ariel 1990).

The examples below exhibit use of such high accessibility markers to refer to information within the scope of negation. For instance, in the statement issued by the British architects (planning to impose a boycott on construction companies involved in building the separation fence and the settlements in the occupied territories in the West Bank and Jerusalem), *we are opposed* is elided in the second clause (having been introduced via negation in the first). Such deletion testifies to the assumed accessibility of this information:

- (8) We are **not** opposed to the existence of Israel, but [] to its actions.
(Zandberg 2006)

Similarly, Harold Pinter's (2005) Nobel speech, in which deletion is used to refer to information (*hard distinctions*) presented previously via negation, constitutes another example. Interestingly, this negated information is treated as accessible even across paragraph boundaries,

being marked by a pronoun (*these*) – a high accessibility marker. In addition, information following negation (*stand by them*) is so accessible that it can be elided without failing to refer:

- (9) There are **no** hard distinctions between what is real and what is unreal, nor [] between what is true and what is false. A thing is not necessarily either true or false; it can be both true and false.

I believe that *these* assertions still make sense and do still apply to the exploration of reality through art. So as a writer I stand by them but as a citizen I **cannot** []. As a citizen I must ask: What is true? What is false?

Speakers, then, treat information within the scope of negation as highly accessible to the addressee and indicate this by employing high accessibility markers.

2.2. Is ‘X is not X’ comparable to ‘X is X’?

If information within the scope of negation need not be sieved out as indicated by the examples above, then in natural language, q and $\sim q$ need not always be mutually exclusive as they are in logic. Instead, natural language should be able to accommodate such apparently conflicting thoughts. As a result, negated and affirmative tautologies, for example, should be interpretable along the same lines (see also Horn 2001: 562 fn. 9).

The following, by Hilda Domin (cited by Almog 2006), is an example that juxtaposes ‘ $q = q$ ’ and ‘ $q = \sim q$ ’, thus comparing an affirmative and a negated tautology:

- (10) A rose is a rose
But a home
Is **not** a home

A close look at these tautologies suggests that both indeed make sense in a similar way. The affirmative “A rose is a rose” alludes to Gertrude Stein’s *Rose is a rose is a rose*, which is often interpreted metaphorically as “things are what they are”. “In Stein’s view, the sentence expresses the fact that simply using the name of a thing already invokes the imagery and

emotions associated with it” (http://en.wikipedia.org/wiki/Rose_is_a_rose_is_a_rose_is_a_rose). Thus, unlike a logical tautology, tautology in natural language is informative in spite of its apparent redundancy, because it is often used to mean X is a Y where X is a prototypical member of the category Y which is named after X (Glucksberg and Keysar 1990). In a similar manner, the negated tautology (i.e., logical contradiction) suggests that (for a German Jew who had to flee her home) a (literal) home is not a (metaphorical) home in that it does not provide for the sense of security associated with the notion of home. To make sense of this negated tautology, we need to retain the negated category in the same way we retain the affirmative one.

Along the same lines, the Hebrew *ze lo ze* (literally – ‘it not it’ – which translates into ‘this is not it’) is informative in spite of the use of the same referring expression (*ze*) both in the topic and in the predicate positions. In the predicate position, *ze* is associated with what should have been included in *ze* in the topic position. Here, then, *ze* in predicate position could mean ‘la promesse de bonheur’. This nonliteral interpretation is close to that invoked by *it’s it*, which, in California, is also a candy’s name (alluding to its promise of happiness).

Faulkner’s (1951) “The past is never dead. It’s not even past” is yet another instance of a negated tautology that comes across as informative, despite the apparent contradiction. The focus marker *even* makes it even clearer that the negative constituent ‘not past’ highlights an abstract, nonliteral feature that should be included in the concept of *past*.

The following is yet another example, which requires the retention of two notions of happiness:

- (11) my happiness bears no relation to happiness
(Muhammad Ali 2000: 50)

In this connection, consider an intriguing example part of a Quaker State commercial (cited and analyzed by Horn 2001: 562 fn.):

- (12) A: *What brand of motor oil do you use?*
B: [Starting car engine.] *Motor oil is motor oil.* (Implicature: There is no difference between various motor oils.) [Smoke belches out of B’s exhausts.]
Voice-over: *Motor oil is definitely **not** motor oil.* (Implicature: There is a difference between various motor oils.)

Note that the metalinguistic negation here (which cancels the implicature from B's words) does not suppress the concept of motor oil.

Negation then does not necessarily do away with the negated concept. Rather, negation often serves to highlight some specific features of it, which allows negated tautologies to be as meaningful and as appropriate as affirmative ones.

2.3. Is 'X is not Y' comparable to 'X is Y'?

We are not Nazis!

Shalom Chetrit⁶ (2006)

Write it, write it down, black on white,
To all the Arabs, and the Arab-lovers,
And the bleeding heart traitors,
Let's make one thing clear, first of all,
Before you open your mouths
With comparisons and self-loathing,

We are not Nazis!

And there is only one Holocaust,
There never was and never will be another.
There is no dispute! Period.

What's that?

What do you want from me?

What is this picture?

You want me to cry?

Holocaust?

Go on,

It's not even a massacre.

One child?!

One child – compared one and a half million children!?

What's wrong with you, are you twisted?

Or are you trying to make me laugh,

So you can say "what an evil man,"

But I'm not crazy, I have a heart,

I am not laughing, nor crying,

But I am mad!

You, and everyone who is behind this,

Are you writing? Write this:

It is a vicious attempt to tar the People of Israel with a broad brush,

But it won't help you!
We're not Nazis!
 We are the victims,
 Any child can see that,
 Even today,
 And write this down again:
 There was only one Holocaust,
 There never was and never will be another.

It really breaks your heart, But I don't lose my head like you do.
 More pictures of children? All right,
 How many more children? Two more? Three? Four?
 Fifty? Take a hundred children, just for the arithmetic,
 To shut you up once and for all,
 What are a hundred – compared to a million? And I'm rounding it up, for
 you.
 One hundred don't make you a Nazi; neither do one thousand,
 And all in self defense – we're not murderers, I want to make that clear!
 Don't turn it upside down
 With all kinds of comparisons –
 We're not killing anybody,
 We're fighting for our lives.
 Write, how come you're smiling, write this:
 You can't say it,
We're not Nazis,
 And there is only one Holocaust,
 There never was and never will be another,
 Never Again! Never Again!
 We won't let you!
 Period....

If negation need not sieve out information within its scope, then, in natural language, *X is not Y* should be comparable to *X is Y*. Both should come across as appropriate comparisons. Consider, for example, a natural (chatroom) conversation (originally in Hebrew) in which A introduces a negative simile (*Unlike Modi Bar-On... Nadav...*) which B then rejects by explicitly referring to this as a “comparison”. Such an explicit reference means that B perceives this statement as a comparison (which he considers “spurious”):

- (13) A: **Unlike** Modi Bar-On ... Nadav responded/tried to respond to at least 95% of the questions...
- B: I don't underestimate Modi, but he comes across as an ordinary person, one of the gang sort of and not a respectable interpreter like his broadcasting colleagues, the **comparison** is spurious ... (Yair 2004)

Similarly, in the following example, the implicit negative comparison (*No buzzards were gliding overhead, but several helicopters...*) is later repeated in an affirmative form (*the helicopters kept circling; high-tech buzzards*) attesting to the equivalent status of negative and affirmative comparisons:

- (14) **No buzzards** were gliding overhead, **but several helicopters** circled, under black sky tinged blue. On the shore of a stunning bay at a placid moment, the state prepared to kill.

Outside the gates of San Quentin, people gathered to protest the impending execution of Stanley Tookie Williams... Overhead, the **helicopters** kept circling; high-tech **buzzards**. (Solomon 2005)

To validate this empirically, we presented subjects with similar strings to (13), which, in B's response, make explicit that A's utterance, whether affirmative or negative, is a comparison:

- (15) A: Bush is/isn't Hitler! /Bush is like/is different from Hitler!
B: How can you compare?

Indeed, when participants were asked to rate the appropriateness/coherence of B's utterance in relation to either the negative or the affirmative version of A's utterance, ratings following affirmative (5.6) and negative (5.3) comparisons were perceived as similarly adequate – similarly (significantly) different from the mean (4) rating on a 7 point scale (Giora, Zimmerman, and Fein 2006).

Negative comparisons, then, come across as comparisons. This is consistent with the view that negation does not necessarily suppress negated thoughts but often retains them.

2.4. Is 'X is not Y' as sensitive to prototypicality as 'X is Y'?

If negation need not sieve out information within its scope, then, in natural language, *X is not Y* should be comparable to *X is Y*. Both should come across as relatively appropriate, depending on the degree of prototypicality of the comparison's shared features (on affirmative comparisons being sensitive to degrees of prototypicality, see Rosch 1973; Armstrong, Gleitman, and Gleitman 1983). Thus (16a–c), which make reference to prototypical features of the predicate entity (*yellow stars, tactics of fascists, Nazi, Holocaust, Auschwitz*) should be perceived as more appropriate than (16d), in which the shared feature is less prototypical (*orator*) and therefore might be viewed as ironic or more generally as humorous:

- (16) a. I hate to make the Nazi comparison because it's so tired, and **Bush isn't Hitler**. But forcing people to wear yellow stars was shocking at first. (February 08, 2005, <http://www.pekingduck.org/archives/002237.php>)
- b. I am always very cautious with the Nazi analogy, which is why I preface it – **Bush isn't a Nazi**. But there are **thuggish and repressive aspects** to his rule that merit at least some comparison with the tactics of fascists, from Peron to Mussolini to Hitler (and to other pigs like Stalin and Castro). (February 08, 2005, <http://www.pekingduck.org/archives/002237.php>)
- c. **President Bush isn't Hitler**. The United States of America isn't **Nazi Germany**. The War Against the Terror Masters isn't the **Holocaust**. Guantanamo isn't **Auschwitz**. (Anderson 2005)
- d. It's going a bit far to compare the Bush of 2003 to the Hitler of 1933. Bush simply is not the orator that Hitler was. (Lindorff 2003)

The following ironic excerpt by Ted Rall (2005), a cartoonist and writer, exemplifies rather forcefully the way a negative comparison (*you're not necessarily a Nazi*) is used to introduce a list of features included in the negated predicate entity (*necessarily a Nazi*) so that it reads like an affirmative comparison that does not invite suppression. Note that Rall himself considers this negative statement an affirmative comparison. When he is after differences he is explicit about it (*Of course, there are*

differences) and picks up a marginal feature as a common ground, which demonstrates the extent to which a non-prototypical feature (*legally elected*) sounds humorous:

- (17) Lately we're being told that it's either (a) inappropriate or (b) untrue to refer to Bush's illegitimate junta as Nazi, neo-Nazi or neofascist. Because, you know, **you're not necessarily a Nazi** just because you seize power like one, take advantage of a national Reichstag Fire-like tragedy like one, build concentration and death camps like one, start unprovoked wars like one, Red-bait your liberal opponents like one or create a national security apparatus that behaves like something a Nazi would create and even has a Nazi-sounding name. All of those people who see a little Adolf in the not-so-bright eyes of America's homeland-grown despot are just imagining things.

Me, I'm catching it for this week's cartoon for daring to suggest that, well – you know.

Of course, there are differences. Hitler, for example, was legally elected. And he had a plan – not one that I like, but a plan – for the period after the war.

I'll be happy to stop comparing Bush to Hitler when he stops acting like him.

To test the hypothesis that negative comparisons are sensitive to degrees of prototypicality, which would attest to the accessibility of information within the scope of negation (for a similar study, see also Giora, Balaban et al. 2005), we compared negative comparisons based on a prototypical common ground with negative comparisons based on a less prototypical common ground (degrees of prototypicality were established independently). We predicted that the former will be rated as more appropriate than the latter. To test this prediction, we created a list of negative comparisons consisting of four types: One (18a below), featuring a prototypical property of the predicate category, another (18b below), featuring a less prototypical property, and two controls (18c and 18d below), including non category members. We expected comparisons that negate a prototypical feature of the predicate entity to be rated as more appropriate than those that feature a marginal one. We further predicted that the controls would be similarly inappropriate and significantly different from the comparisons based on more and less prototypical features:

- (18) a. George Bush is not Adolf Hitler. Bush did not exterminate Jews.
 b. George Bush is not Adolf Hitler. Bush is not a great orator.
 c. George Bush is not a Dalmatian. Bush did not exterminate Jews.
 d. George Bush is not a Dalmatian. Bush is not a great orator.

Results indeed show that negative comparisons focusing on a prototypical feature of the predicate entity were rated as significantly more appropriate (5.76) than those focusing on a less prototypical feature of the entity (4.43) and that both were significantly more appropriate than their controls (1.60, 1.52), which did not vary in appropriateness (Giora, Zimmerman, and Fein 2006). Such results support the view that, like affirmative statements, negative comparisons are sensitive to degrees of prototypicality. This sensitivity can only be explained by the accessibility of negated concepts.

3. Resonance and the accessibility of negated concepts

Why did Hamlet say “to be or not to be” instead of “to be or die”? Is it because “to die” is not exactly the opposite of “to be” and hence less available (although “die” features quite dominantly later on in that soliloquy)? Not necessarily. Other instances show that negated concepts often resonate with other concepts mentioned in the discourse even though they could easily be replaced by an alternative antonym. This is true even of dichotomous concepts such as ‘alive’/‘dead’, ‘right’/‘wrong’, whose alternatives are assumed to be highly accessible and often replaceable (Mayo, Schul, and Burnstein 2004). In what follows, I argue that negated concepts abide by “dialogic resonance” (Du Bois 1998, 2001) and resonate with concepts present in the discourse context just as nonnegated ones do. Dialogic resonance pertains to “the activation of affinities across utterances” (Du Bois 2001). Such activation of affinities induced by negated constituents is allowed by the accessibility of information within the scope of negation, which renders negated and nonnegated concepts alike.

Resonance can obtain between a given utterance and a previous one, to be termed here ‘backward resonance’ (3.1), as well as between a given utterance and a future one, to be termed here ‘forward resonance’ (3.2). In

what follows instances of forward and backward resonance provide further evidence for the accessibility of concepts within the scope of negation.

3.1. Backward resonance

If concepts within the scope of negation resonate with information mentioned previously in the discourse, this suggests that speakers assume their accessibility and hence their affinity with previously mentioned information. The following examples indeed demonstrate that the choice of a given concept marked by negation (*not **alive**, not **dead**, not **right**, not **wrong**, not **white**, not **report**, **illogical***) is sensitive to the occurrence of that concept in prior context (*alive, dead, right, wrong, white, report, logics*) even though its dichotomous antonym ('dead', 'alive', 'wrong', 'right', 'redbone', 'absentee', 'fallacious') is available:

- (19) "In my mind there was always a question: Is he **alive**? Is he **not alive**?" she recalled. (Burns 2005)
- (20) Is she **dead**? Is she **not dead**? (Weich 2003)
- (21) ... this does not mean I am looking to convince myself it is **right**. It is **not right** all of the time and ... (Pixie 2002)
- (22) But the moment you realize that something is not right, then even if the whole world feels it is **right**, it is **not right** for you. (Osho 1999)
- (23) ... even if the whole world says it is **wrong**, it is **not wrong**. (<http://www.oshoworld.com/onlinebooks/BookXMLMain.asp?BookName=discourse+series/the%20zen%20manifesto.txt>)

- (24) Name: oldschoolbrother
 Comment: ... As far as the skin color thing, my kids are very light skinned, and when they were babies, I would bring the baby pictures in and get asked (on the sly) if my wife was **white**. Now that they are older, sometimes some person will ask them the same question. And no she is **not white**, just a redbone.⁷ (Comment 2006)
- (25) Shabbath, a Sderot's resident, hasn't decided yet whether he will **report** to his unit and make a statement there about his refusal [to serve in the occupied territories] or whether he **won't report** at all – and be considered absentee. (Galili 2006)
- (26) To destroy and to smash. To tolerate blood, especially of others'. To forget that we bombed civilian facilities. Eight **logics** of an **illogical** war (Landau, July 2006)

Such examples attest to the role of negated concepts in maintaining backward affinities. Backward resonance of this kind can be explained only by the accessibility of concepts within the scope of negation, which allows the activation of these affinities.

3.2. Forward resonance

Forward resonance occurs when a given constituent is setting the scene for the next one. Following the resonance principle (Du Bois 1998, 2001), the speaker's choice of a given constituent may be determined by the next constituent she is planning to use, with which the current constituent will be resonating. The following examples thus demonstrate how negated constituents can prime future constituents. In these examples, negated concepts (*not fast, not soon, not late, not good, not bad, not allowed, not forbidden*), which could be replaced by an available antonym ('slow', 'late', 'early', 'bad', 'good', 'forbidden', 'allowed'), are preferred over that opposite alternative, because they allow for the activation of affinities across a given and a future constituent (*faster, soon, late, good, bad, allowed, forbidden*). It is the negated concept, then, rather than its

available opposite, that is selected so as to maintain dialogic resonance (Du Bois 1998, 2001). This selection could not be allowed were it not for the accessibility of information within the scope of negation:

- (27) It also reduced the exposure, and film stock **was not fast**. But Edison films were photographed much **faster** than the films of most other companies. (Brownlow 1980)
- (28) I think DVD's days are numbered, perhaps **not soon but soon enough**. (Jayson 2006)
- (29) The curtain descended on the stage, the show came to an end and Jack looked at his watch. Ten o'clock. **Not late, but late** enough to go to bed. (Prodigal Son 2006)
- (30) Ewww, that's **not good** (but **good** to know). (Holmer 2003)
- (31) There are **no** obesity-causing **bad** foods, only **bad** eaters, according to the celebrated host of the Food Network's "*Good Eats*" and "*Iron Chef America*" Alton Brown. (Staff reporter October 2006)
- (32) 'Politics is **not bad**, only some politicians are' [**bad**]. (Staff reporter July 2006)
- (33) "Slaves here" is **not allowed**, but "Free the slaves" is [**allowed**] (The AOL Sucks Homepage)
- (34) For to eat is **not forbidden**, but to swear is **forbidden**. (<http://christdot.org/modules.php?name=News&file=article&sid=7108>)
- (35) Riches are **not forbidden**, **but** the pride of them is [**forbidden**]. (John Chrysostom <http://www.brainyquote.com/quotes/quotes/j/johnchryso181827.html>)

Forward resonance also occurs between a given negated constituent and the next negated constituents with which it resonates. In the following interview, Tanya Reinhart says:

- (36) The citizens do **not** have a way to **influence** the policy, but the truth is that the government itself does **not influence** [it either]. The dominant factor in the Israeli society is the military. (Elbaz 2006)

Not that less resonant discourses are not produced by speakers. They are. When, during The Second Lebanon War, the Israeli Prime Minister, Ehud Olmert, opened his address to the nation by saying “Israel **is continuing** to fight”, he was rejecting the option of a ceasefire, considered at the time, by selecting an opposite alternative to ‘ceasefire’. Had he opened by saying “There will be **no cease-fire**”, this statement would have been a lot more resonant. The less resonant choice, however, was compensated for by the headline reporting this speech, which resonated with the ongoing discussion over a ceasefire: “Olmert: There will be **no cease-fire** in coming days” which, in fact, occurred far later in his speech (Schiff, Harel, and Benn 2006).

It is important to note, though, that dialogic resonance, whether backward or forward, should not be confounded with coherence (which, for one, requires that the newly added sentence will discuss the same discourse topic or be signaled as digressing from it [Giora, 1985]). It is not coherence that is hampered when an alternative antonym is used, but resonance. The following contrived examples, then, just like Olmert’s, are not less coherent, only less resonant:

- (37) It also reduced the exposure, and film stock was **slow**. But Edison films were photographed much **faster** than the films of most other companies.
- (38) It will be **late** but as **soon** as possible.
- (39) I think DVD’s days are numbered, perhaps **later** but **soon enough**.

- (40) The curtain descended on the stage, the show came to an end and Jack looked at his watch. Ten o'clock. **Early**, but **late** enough to go to bed.
- (41) Ewww, that's **bad** (but **good** to know).
- (42) All foods are good, but there are bad eaters, according to the celebrated host of the Food Network's "Good Eats" and "Iron Chef America" Alton Brown.
- (43) 'Politics is good, only some politicians are' [bad].
- (44) "Slaves here" is forbidden, but "Free the slaves" is [allowed].
- (45) ... for to eat is allowed, but to swear is forbidden.
- (46) Riches are allowed, but the pride of them is [forbidden].

For synoptic illustrations of both backward and forward resonance, consider the following excerpts (47–48). The first is taken from an op-ed criticizing the Israeli policies in the occupied territory (Landau, January 2006). In this example, the instances of backward and forward resonance (**not a partner-partner; partner-no partner**) could not have been made possible were concepts within the scope of negation not accessible to comprehenders:

- (47) Hamas is **not a partner** for peace. Namely, Hamas is the only **partner** for peace, ergo – **no partner**. Ever since the crushing of the Palestinian Authority – chapeau to IDF and the Fattah crooks – Hamas has become the major popular movement amongst the Palestinians. Starting last week, it is also the political representative of the Palestinian majority. In other words – the only **partner** for peace. Which is precisely why Israel insists that it is **not a partner**. Indeed, every **partner** with the potential of becoming a **partner** was ruled out as a **partner** precisely because Israeli governments, have **never**, in fact, **been partners** for peace. And yet they constantly seek after a **new partner**: for occupation, for settlement blocks, for roadblocks.

For another synoptic illustration, consider Gaarder (2006), who marks The Second Lebanon War as a turning point. In this example, the accessibility of concepts within the scope of negation (*recognize*) allows to retain backward and forward resonance which, in turn, allows for an implicit comparison between the state of Israel and other ruthless regimes such as South African apartheid, Afghan Taliban regime, Saddam Hussein's and the Serbs' ethnic cleansing:

- (48) There is no turning back. It is time to learn a new lesson: We do **no** longer **recognize** the state of Israel. We could **not recognize** the South African apartheid regime, **nor** did we **recognize** the Afghan Taliban regime. Then there were many who did **not recognize** Saddam Hussein's Iraq or the Serbs' ethnic cleansing. We must now get used to the idea: The state of Israel in its current form is history.

In sum, the activation of backward and forward affinities allowed by negated concepts can be made possible only if one retains information within the scope of negation. Evidence of both backward and forward resonance thus supports the view that concepts within the scope of negation can be accessible.

4. Manipulating the accessibility of negated information

The received view of negation takes it to assert the negated statement while rejecting as false an assumption believed to be true. Thus, while the affirmative (*The police chief here is a woman*) "asserts a simple fact" (about the police chief: that she is a woman), the negative (*The police chief here isn't a man*) "adds an assumption listeners may well believe" (that police chiefs are males), and of which they are being disabused (Clark and Clark 1977: 241; Givón 1978, 1993, 2002; Verhagen 2005). A closer look, however, reveals that, at least in some cases, in order to be informative enough, the affirmative (*The police chief here is a woman*) must also refer to an additional belief (that police chiefs are males), which it implicitly rejects (as discussed in Horn 2001: 199).

To reject assumptions, then, one need not always use negation. However, one does need to keep in mind what is asserted in order to access that which is rejected. This is true for both affirmative and negative

sentences. It is the accessibility of information within the scope of negation that led researchers to conclude that only negative sentences introduce the assumption they deny in their assertion. Indeed, speakers may take advantage of this fact about negation and introduce false beliefs as assumptions taken for granted, or messages they want to get across as unasserted. Such negated sentences do, of course, present (semantically) true statements.

Consider, for instance, a report of the arrest of 12 (out of 25) Israeli left-wing activists, protesting the killing of civilians in Lebanon, in front of an Israeli Air Force base. According to this report, “The protest was held without authorization” (Waked 2006). While this statement asserts something true, it also takes for granted the assumption that demonstrations, as a rule, require a permit (which the demonstrators in question neglected to obtain). Assuming it is informative, readers of this statement must, then, conclude that the demonstration in question was unlawful (as a conversational implicature). Given, however, that in Israel any (peaceful) gathering involving up to 50 participants or even more (using no megaphones, etc.) requires no permit, the implicature that the demonstration was illegal, although derived appropriately (and later even stated), is misleading, since this small gathering required no permit (and indeed the arrests followed illegal activities such as disrupting traffic etc., which are illegal regardless of whether one holds a protest or not). Thus, negative statements, although true, might nonetheless introduce false beliefs as assumptions to the discourse (as might affirmatives). To derive this false inference, readers must retain the information within the scope of negation and access an assumption against which to weigh this contribution. On the basis of all the above, comprehenders might have even deduced that the arrest of the protestors was justified, given that they were breaching the law.

Similarly, talking in an anti-war rally in Tel Aviv, Yael Dayan, a former Knesset member, declared: “I am not against the residents of the north [of Israel]” (August 5, 2006). For such a statement to be relevant, the audiences, or at least some of the addressees, must be seen as being against the residents of the north. Having derived this false implicature, the audiences, defying the manipulative ‘accusation’, indeed muttered: ‘But who is [against the residents of the north]?’ Relevant to our discussion is the inferability of this false assumption, which relies on the accessibility of information within the scope of negation with which the audiences disagreed.

Note, again, that had Dayan said: ‘I am in favor of the residents of the north’, people might have wondered too (and muttered: ‘But who isn’t’), given that it’s hard to imagine any Israeli who is *not* feeling sympathy for them.

To lead comprehenders down this kind of path, then, speakers must assume that information within the scope of negation is retainable. (That one can generate false implicatures, regardless of negativity, see Ariel 1985, in press; on how the accessibility of negated information is manipulatively used in political speeches, see Giora 1994: 110–115).

Or consider a way to get across a message via negation, which allows the addressee to generate the implicature without necessarily conceding that it is in fact binding. Thus, in *The Firm* (Grisham 1991, see below), the negative statement “working is not forbidden”, referring to wives’ working, must assume that wives, as a rule, are forbidden to work. Note that this must also be true of the affirmative alternative ‘working for wives is allowed’, which must assume that wives, as a rule, are forbidden to work. In the negative statement, however, wives are implicitly encouraged not to work (as is clear from the shocked addressee, a newcomer wife whose husband has just joined the firm, who repeats it unbelievably – “forbidden by whom?”). In the affirmative alternative, wives are encouraged to work, as is also evident from a similar affirmative “Babies are encouraged” used later on. Note, however, that while the negative is a manipulative use of negation, which allows one to generate an implicature and therefore grant it, in the affirmative the message is straightforward:

- (49) Abby smiled and shook her head as if this impressed her a great deal. “Do you work?”
 “No. Most of us don’t work. The money is there, so we’re not forced to, and we get little help with the kids from our husbands. Of course, working is **not forbidden**.”
 “Forbidden by whom?”
 “The firm.”
 “I would hope not.” Abby repeated the word “forbidden” to herself, but let it pass.
 Kay sipped her coffee and watched the ducks. A small boy wandered away from his mother and stood near the fountain. “Do you plan to start a family?” Kay asked.
 “Maybe in a couple of years.”
 “Babies are **encouraged**.”
 “By whom?”

“The firm.”

“Why should the firm care if we have children?”

“Again, stable families.” (Grisham 1991: 23)

Clearly, what makes possible such manipulative uses is the accessibility of negated concepts.

5. On the accessibility of negated information – evidence from online experiments

So far the evidence coming from language uses supports the view that negated information need not be suppressed unconditionally. Is there also supportive evidence coming from studies of online processing of negated constituents that might account for the accessibility of negated concepts demonstrated above? Although outside a specific context, negation often affects suppression or a focus shift from the negated concept toward an alternative opposite (see section 1), there are findings showing that, when embedded in a coherent environment, negation need not obligatorily affect elimination of the concepts within its scope. As shown by recent studies, when comprehenders have a chance to consider global discourse requirements, they retain negated information when this is deemed instrumental (Giora 2006).

For instance, Giora et al. (in press) showed that the attempt to maintain backward and forward coherence resulted in comprehenders retaining rather than suppressing information within the scope of negation (compared to incoherent environments or unrelated concepts). Thus, in the presence of a relevant prior context, negated targets were shown to be available after a rather long delay, long enough for suppression to be operative were it invited. Specifically, following Hebrew statements such as *All my girlfriends indeed have good taste but I have to admit that the dress Sarit is wearing is **not pretty***, the concepts related to the affirmative meaning (‘nice’) were accessible as long as 750 msec following their offset. They were retained, we contend, because they were mappable on a substructure recently processed (Gernsbacher 1990). Negated targets began to lose accessibility only later on, between 750–1,000 msec following offset of the negated concept (*not pretty*), probably when backward coherence has been established.

Similarly, in the presence of a relevant late context, negated targets were also shown to be available after a rather long delay. Thus, when English statements such as *The train to Boston was **no rocket*** were followed by a late coherent context such as *The trip to the city was **fast** though*, negation (**no rocket**) did not induce suppression of the concepts within its scope (**rocket**). Instead, these concepts were retained as long as (and even longer than) 1,000 msec and primed the target (*fast*) in the late context. Recall, though, that, when presented in isolation, such statements exhibited reduced accessibility of the negated concepts (*rocket*), which, therefore, did not prime a related target ('fast') after a delay of 1,000 msec (Hasson and Glucksberg 2006). In contrast, Giora et al.'s (in press) findings demonstrate that, where concepts might be instrumental in maintaining forward coherence so that they can be mapped on and get integrated with the ongoing discourse representation, they are retained rather than discarded from the mental representation.

Such results support the view that, when the affirmative meaning of the negated concept may be relevant to and mappable on either prior or late context, it is retained as long as necessary. In all, such findings support the view that concepts within the scope of negation are not discarded unconditionally. Rather, they are sensitive to global discourse considerations, which regulate their suppression and maintenance.

That negation effects are sensitive to global context considerations has also been demonstrated by Kaup and Zwaan (2003). Kaup and Zwaan showed that, rather than being primarily affected by negation, a concept's accessibility was affected primarily by its presence in or absence from the situation described. Thus, while (English) concepts (*blue*) absent from the situation (*she only wished that the bike had a blue frame*) lost accessibility, concepts present in the situation gained in accessibility (*she only wished that the bike didn't have a blue frame*), regardless of negation. Specifically, 1,500 msec after participants read target sentences, they were faster in responding to a color probe (blue) mentioned in the target and present in the situation than to a color probe mentioned in the target but not present in the situation. This was true regardless of whether the concept was negated or not. Such findings attest to the accessibility of concepts present in the situation model, regardless of negation.

It is interesting to note that when brain waves were recorded from the scalp (Lüdtke et al. 2005), results showed no suppressive effects of negation even when probes following negated sentences (presented in isolation) did not reflect the factual state of affairs. Thus, at a long delay of

1,500 msec, brain responses to pictorial probes ('ghost') following negative and affirmative (German) sentences (*In front of the tower there was/was no ghost*) were the same, suggesting that even when the negated concept was absent from the situation described it was not suppressed. Specifically, following both types of sentences, related probes ('ghost') induced only small amplitudes of N400 brain waves,⁸ suggesting that negated concepts were not suppressed and hence no incompatibility was sensed. In fact, these results indicate that negated concepts were as accessible as nonnegated ones.

More recent studies using Visual World Paradigm – a cross modal paradigm which monitors eye movement while participants, who are exposed to spoken sentences, are also presented related visual stimuli – also attests to the accessibility of negated concepts. In Shuval (2006), native speakers of French were presented pictorial primes, which included four objects and a human protagonist (as shown in Figure 1):

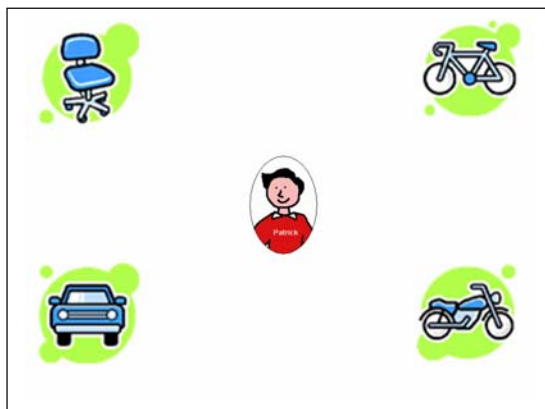


Figure 1.

Having been presented these primes, participants listened to one of the following targets (originally in French):

- (50a) Early disambiguation/N1:
You should buy a car_{N1} and not buy a motorcycle_{N2} this year, said Patrick. *Drive it* during the vacation.

- (50b) Early disambiguation/N2:
You should buy a car_{N1} and not buy a motorcycle_{N2} this year, said Patrick. *Rent it* during the vacation.
- (50c) Late disambiguation/N1:
You should buy a car_{N1} and not buy a motorcycle_{N2} this year, said Patrick. *It* could be *driven* during the vacation.
- (50d) Late disambiguation/N2:
You should buy a car_{N1} and not buy a motorcycle_{N2} this year, said Patrick. *It* could be *rented* during the vacation.

In these sentences, the pronoun (*it*) is potentially ambiguous between two previously mentioned referents (car; motorcycle). In (50a, 50b), *it* is disambiguated by the verb that precedes it; in (50c, 50d), it is disambiguated by the verb that follows it.

Of particular interest are the late disambiguation conditions (50c, 50d), in which the pronoun is kept ambiguous for a while. In these conditions, the negated objects (motorcycle) were fixated on to a greater extent than the controls – the close associate (bicycle) and unrelated (chair) objects. At times, these levels of fixations reached the same levels induced by the non-negated objects (car). In fact, the fixation pattern, recorded from the onset of the pronoun, exhibited alterations between the negated and non-negated objects, suggesting that comprehenders were wavering between the two. Such patterns demonstrate that the negated object was not suppressed but rather retained as a candidate antecedent of the pronoun (even if less favorable).

These results, then, attest to the relative accessibility of negated information. They show that negated concepts are accessible to comprehenders who therefore focus on them even when referred to by a least informative, high accessibility expression. This is indicated by their gaze duration, which testifies to the relevance of these concepts to the interpretation of the sentences in question (see also section 2.1).

In sum, results obtained by various online methodologies provide evidence supporting the view that information within the scope of negation is not obligatorily discarded. Rather, when motivated, such information is retained and partakes in the interpretation process. Thus, when relevant to contextual information, concepts within the scope of negation remain accessible.

6. Concluding remarks

In this chapter I question the assumption prevailing in psycholinguistics that negation, as a rule, reduces the accessibility of the negated information. I suggest instead that negation is sensitive to discourse considerations and will not deactivate concepts deemed necessary for discourse goals such as resonance maintenance, coherence maintenance, comparison making, tautologies' meaningfulness, and the like. In Giora (2006) I outline the conditions under which negation might indeed involve suppression, but again, like retention of information, I show that suppression following negation is just as sensitive to discourse considerations as affirmation and will not operate unconditionally.

Indeed, evidence accumulated in various laboratories shows that once context is allowed to play a role in processing, negated information is retainable (section 5). Its retainability, I argue, accounts for the vast array of natural examples presented here which argue that negation cannot obligatorily reduce the accessibility of negated thoughts. Rather, to make sense, the various natural examples discussed here must assume the accessibility of negated information (sections 1–4). Would the feminist joke 'A woman without a man is like a fish without a bicycle' be a joke were the concepts within the scope of negation deactivated?

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Notes

1. <http://vivalaevolucion.blogs.ie/2006/07/07/not-alive-but-evolving-two-about-viruses/>
2. <http://209.85.135.104/search?q=cache:pqYo9p5r0ZEJ:cgi.bytebin.net/living-machine/blog/2006/07/27/how-do-we-know-something-is-really-%E2%80%998alive%E2%80%99/%22not+alive+but+it+was%22&hl=en&ct=clnk&cd=1>

3. http://www.foe.co.uk/resource/briefings/wto_july_deal.pdf
4. All emphases in this article are added for convenience.
5. “‘No seems not to exist as far as dreams are concerned. Anything in a dream can mean its contrary’ (Freud 1910: 155)... ‘In our interpretation we take the liberty of disregarding the negation and picking out the subject-matter alone of the association’ (Freud 1925: 235).” (Horn 2001: 93).
6. Sami Shalom Chetrit, an Israeli Mizrahi activist, intended this poem, only part of which is cited here, to ironically protest the Israeli reoccupation of Lebanon.
7. Of Native American and African descent.
8. N400 brain waves are associated with difficulty to integrate an incompatible concept with contextual information.

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