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Rachel Giora, Shir Givoni & Ofer Fein

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Defaultness Reigns: The Case of Sarcasm

Rachel Giora and Shir Givoni
Tel Aviv University

Ofer Fein
The Academic College of Tel Aviv-Yaffo

Findings from two experiments (run in Hebrew) argue in favor of the superiority of default, preferred interpretations over non-default less favored counterparts, outshining degree of (a) non-salience, (b) non-literalness, (c) contextual strength, and (d) negation. They show that, outside of a specific context, the default interpretation of specific negative constructions (*He is not the most organized student*) is a non-salient interpretation (here sarcastic)[1]; their non-default interpretation is a salience-based alternative (here literal). In contrast, the default interpretation of the affirmative counterparts (*He is the most organized student*) is a salience-based interpretation (here literal); their non-default interpretation is a non-salient alternative (here sarcastic; Experiment 1). When in equally strongly supportive contexts, default yet non-salient **negative sarcasm** is processed faster than (1) non-default, non-salient yet affirmative sarcasm and (2) faster than non-default yet salience-based negative literalness. Complementarily, default, salience-based **affirmative literalness** is derived faster than (1) non-default non-salient affirmative sarcasm, and (2) faster than non-default albeit salience-based negative literalness (Experiment 2). This unparalleled quadrilateral pattern of comparisons speaks to the superiority of defaultness.

DEFAULTNESS

The notion of defaultness assumed here relates to *interpretations* of linguistic (and nonlinguistic) stimuli. Unlike coded *meanings*, interpretations are, by definition, *constructed* rather than accessed directly from the mental lexicon. However, to be considered a *default*, an interpretation must be *construed* unconditionally—initially and directly—regardless of explicit cueing, including explicit contextual information to the contrary.[2]

The interpretation of any linguistic stimulus, whether a word, a collocation, an utterance, or a construction (à la Goldberg, 1995), may potentially count as a default—as an unconditional

[1]Sarcasm pertains here to verbal irony.

[2]For a review of the debates over default utterance interpretations, see, e.g., Jaszczolt (2009). On a different, context-dependent notion of defaultness, developed within the framework of *Salience-Based Contextualism*, see, e.g., Jaszczolt (2005, 2011, 2015).

Address correspondence to Rachel Giora, Department of Linguistics, Tel Aviv University, Tel Aviv 69978, Israel. E-mail: rachel.giora@gmail.com

response to a stimulus. Defining defaultness in terms of an automatic response to a stimulus predicts the superiority of default over non-default counterparts, irrespective of degree of non-salience, figurativeness, context strength, or, as shown here for the first time, negation. To test this prediction, we focus here on negative constructions (*He is not the most organized student*) and their affirmative versions (*He is the most organized student*). We study their default and non-default interpretations as delineated by the graded salience hypothesis (Giora, 1997, 1999, 2003) and the view of default non-literal interpretations (Giora, Drucker, Fein, & Mendelson, 2015; Giora, Fein, Metuki, & Stern, 2010; Giora et al., 2013).

Admittedly, when studied independently and weighed against each other, the graded salience hypothesis and the view of default non-literal interpretations cannot be reconciled (see below). However, the defaultness hypothesis proposed here (see below), being an umbrella theory that encompasses both, allows for the reconciliation of their inconsistencies. This is one significant contribution of the defaultness hypothesis to the field of psycholinguistics. It posits the sensitivity of our processing mechanisms to degree of defaultness, surpassing other factors assumed to affect processing, such as degree of non-salience (Giora, 2003), negation (Clark & Clark, 1977; Horn, 1989), non-literalness (Grice, 1975), or context strength (Gibbs, 1994, 2002).

DEFAULTNESS—THE GRADED SALIENCE HYPOTHESIS

How is defaultness treated by the graded salience hypothesis (Giora, 1997, 1999, 2003)? The graded salience hypothesis distinguishes between *default meanings* and *default interpretations* (Fein, Yeari, & Giora, 2015; Giora et al., 2007b).[3] Although outside the scope of this study, default *meanings* play a role in construing default *interpretations*, which is what this study is focused on. Therefore, they are briefly discussed here too.

Default *meanings* are salient meanings—meanings listed in the mental lexicon, ranking high on prominence due to cognitive factors (such as prototypicality, stereotypicality, individual relevance, etc.) or degree of exposure (including, for example, experiential familiarity, conventionality, or frequency of a stimulus). Salient meanings will spring to mind on encounter of a stimulus, regardless of degree of figurativeness or contextual information (Giora, 1997, 1999, 2003). For instance, a linguistic stimulus such as *sharp* may have more than one salient meaning; it may, for example, relate metaphorically to a person who is "smart" or "incisive," or, literally, to an object (a knife, a razor) that can "cut." Upon encountering *sharp*, these salient meanings will spring to mind instantly, regardless of degree of (non)literalness or contextual information to the contrary.

According to the graded salience hypothesis, default *interpretations* are based on the coded, salient *meanings* of their stimulus components. Being salience-based, their activation is unconditional (Fein et al., 2015; Giora et al., 2007b). However, given that interpretations are construed rather than accessed, salience-based interpretations will be less accessible than salient meanings. For instance, the familiar idiom *The apple doesn't fall far from the tree* is listed as a single unit in the mental lexicon (whose default, salient *meaning* pertains to the resemblance between a child

[3]Although assumed as default, such meanings and interpretations are labeled here as "default" for the first time.

and a parent). As such, it will be accessed automatically, faster than its default salience-based *interpretation*, derived compositionally (pertaining to a literal "apple").

Notwithstanding, given their defaultness, salience-based interpretations will be activated more rapidly than *non-default* counterparts, irrespective of contextual information or degree of figurativeness. Indeed, according to the graded salience hypothesis, *non-default interpretations* are *non-salient interpretations*; they are neither coded in the mental lexicon nor (fully) based on the coded meanings of the stimulus components. Instead, they are learned or construed, mostly on the basis of contextual information or explicit cueing. Thus, the salience-based interpretation of *He is the sharpest person I have known* is "he is very clever," involving the salient, metaphorical meaning of *sharp*. However, in a context where this utterance refers to an unintelligent person, the coded meaning of *sharp*, activated initially, will have to be reinterpreted to adjust to contextual information. The result would be a non-default, non-salient, sarcastic interpretation—"he is stupid." Being non-default, conditional on contextual information, this interpretation will further involve its default, salience-based counterpart, which might slow it down (Colston & Gibbs, 2002; Fein et al., 2015; Giora & Fein, 1999; Giora et al., 2007b).[4]

To illustrate the options of conveying a default (salience-based) and a non-default (non-salient/context-based) interpretation of the items tested here, consider the following natural (English) examples (1–2; targets in bold, interpretations in italics). These examples instantiate the **default** (1) and **non-default** (2) interpretations of an affirmative utterance. Specifically, in (1), the **default** interpretation (*he always thinks outside of the box. Very creative*) of the target (**he is the smartest man I have ever been around**) is literal; in (2), the target utterance (**he's the smartest president ever**) conveys a **non-default** sarcastic interpretation (*easy, juvenile, callow*):

(1) Drevno talked about what it's like working with Harbaugh and offered *high praise* for the new head coach. "[. . .] He's competitive and *he always thinks outside of the box. Very creative*. **He is the smartest man I have ever been around**. *He's unique in a great way. I've never been around a guy like this.*" (Henschke, 2015)

(2) **He's the smartest president ever**, so give him *easy* words. "[. . .] it seems we have an explanation for the 'Polish death camps'[5] *kerfuffle that roiled relations between our two countries a while back*. [. . .]. If the words '*juvenile*' and '*callow*' come to mind when you think of this administration, you're not far off." (Phineas, 2014)

PREDICTIONS

Given their defaultness, salience-based interpretations ("he is very smart/creative"), derived compositionally (when, e.g., *He is the smartest man I have ever been around* is encountered),

(a) will be preferred over non-default, e.g., non-salient counterparts ("he is stupid/callow") when presented in isolation (see Example 1 above and Experiment 1 below), and

[4]Note that, according to the suppression/retention hypothesis, extended by the graded salience hypothesis (Giora, 2003), contextually incompatible meanings and interpretations need not be suppressed automatically. Rather, suppression and retention of incompatible meanings and interpretations are functional—sensitive to discourse goals (Fein et al., 2015; Giora, 2003; Giora et al., 2007b; Giora, Fein, Aschkenazi, & Alkabets-Zlozover, 2007a).

[5]http://www.nytimes.com/2012/05/31/world/europe/poland-bristles-as-obama-says-polish-death-camps.html?_r=1

(b) will be processed faster in contexts strongly supportive of their default, salience-based reading than of their non-default non-salient alternatives (as shown by Fein et al., 2015; Giora et al., 2007b; see also Experiment 2 below).
(c) as a result, stimuli in natural discourse,
  (1) will convey their salience-based interpretation more often than their non-default interpretations and
  (2) their environment will resonate (à la Du Bois, 2014) with this interpretation, regardless of contextual information to the contrary (as shown by Giora, 2003; Giora & Gur, 2003; Giora, Raphaely, Fein, & Livnat, 2014b).[6]

DEFAULTNESS—THE VIEW OF DEFAULT NON-LITERAL INTERPRETATIONS

How is defaultness treated by the view of default non-literal interpretations? Diverging from the graded salience hypothesis, the view of default non-literal interpretations (Giora et al., 2010, 2013, 2015) proposes that some *non-salient* non-literal interpretations will be derived *by default*. Indeed, previous research provides support for the view of default non-literal interpretations. It shows that, when outside of context, the preferred interpretation of some negative constructions (*You are not my social worker; Alertness is not her forte/most pronounced characteristic; Ambitious she is not*) is non-literal (i.e., metaphorical, sarcastic); the preferred interpretation of their affirmative counterparts (tested offline) is literal. As a result, when in equally strongly supportive contexts, the negative targets are processed faster when biased toward their preferred non-literal (metaphorical or sarcastic) interpretation than toward their non-preferred literal alternative (Giora et al., 2010, 2013, 2015). Some negative constructions, then, convey a non-literal interpretation by default, which slows down their non-default (e.g., literal) alternatives when invited.

What Does it Take to Qualify for a Default Non-literal Interpretation?

To be considered *non-literal* by *default*, an interpretation must be construed under conditions that guarantee that stimuli are potentially ambiguous between non-literal and literal interpretations *a priori*, so that a preference, i.e., the option to opt for a default preferred interpretation, is allowed. The conditions listed below are therefore geared toward excluding cues, whether stimulus internal (A–B) or external (C), known to prompt non-literalness or inhibit literalness (Giora et al., 2010, 2013, 2015):

CONDITIONS FOR DEFAULT NON-LITERAL INTERPRETATIONS

To be considered *non-literal* by default,

(a) Constituents (words, phrases, constructions, utterances) have to be unfamiliar, so that salient (coded) non-literal meanings of expressions and collocations would be avoided.

[6]Prediction C is not tested here.

Items should therefore exclude familiar idioms (*There's no smoke without fire; Read my lips*), metaphors (*a piece of cake)*, sarcasms (*Tell me about it*), mottos, slogans, or any conventional formulaic expression (*hang in there*; see Gibbs, 1980, 1981, 1994; Giora, 2003), prefabs (*I guess*; see Erman & Warren, 2000), or conventionalized, ritualistic, situation-bound utterances, such that occur in standardized communicative situations (e.g., *Cheers*, see Kecskés, 1999, 2000). If negative utterances are considered, they should not be negative polarity items (NPIs; e.g., *no prob, no show*), but should have an *acceptable* affirmative *counterpart*, so that conventionality is avoided. (On NPIs exhibiting asymmetric behavior in minimal pairs of negative and affirmative sentences whereby, as a result of conventionalization, affirmatives are almost nonexistent; see, e.g., Horn, 1989, p. 49; Israel, 2006, 2011).

(b) Semantic anomaly (known to trigger metaphoricalness; see, e.g., Beardsley, 1958), such as *blue Monday*, or any kind of internal incongruency, any opposition between the components of a phrase or proposition (known to trigger a sarcastic reading; see Barbe, 1993) such as *he has made such a good job of discrediting himself* (see Partington, 2011) should not be involved, so that both literal and non-literal interpretations are permissible. As a result, "epitomizations"—negative object-subject-verb constructions ("X s/he is not")—in which the fronted constituent is a proper noun (*Elvis Presley he is not*)—must be excluded. Such constructions are primarily metaphorical, even in their affirmative version. (On "epitomization," see Birner & Ward, 1998; Ward, 1984; Ward & Birner, 2006; on the pragmatic functions of such constructions, see Prince, 1981).

(c) Explicit and informative contextual information must be excluded, so that pragmatic incongruity—any overt breach of pragmatic maxims or contextual misfit on the one hand[7] (see Grice, 1975)—and supportive, biasing information on the other (e.g., Campbell & Katz, 2012; Gibbs, 1981, 1986a, 1986b, 1994, 2002; Katz, Blasko, & Kazmerski, 2004), may not invite or disinvite a non-literal (or literal) interpretation. Contextual or pragmatic cues such as explicit discourse markers (*literally speaking, metaphorically speaking, sarcastically speaking;* see, e.g., Katz & Ferretti, 2003; Kovaz, Kreuz, & Riordan, 2013), explicit interjections, such as *gee* or *gosh*, shown to cue sarcastic interpretation (e.g., Kovaz et al., 2013; Kreuz & Caucci, 2007; Utsumi, 2000), and marked intonation or prosodic cues, whether non-literal, such as sarcastic, effective even outside of a specific context (Bryant & Fox Tree, 2002; Rockwell, 2000, 2007; Voyer & Techentin, 2010), or corrective, such as assigned to metalinguistic negation (Carston, 1996; Chapman, 1993, 1996; Horn, 1985, 1989, p. 375), or nonverbal (such as gestures or facial expressions, e.g., Caucci & Kreuz, 2012) should be avoided, so that non-literalness would neither be invited nor disinvited.

To illustrate the potential ambiguity between the default and non-default interpretations of the items tested here, consider the following natural (English) examples (3–4; targets in bold, interpretations in italics). These two examples instantiate a **default sarcastic** interpretation (3) and a **non-default literal** interpretation (4) of a negative construction (*he is not the smartest*).

[7]Earlier, in Giora, Fein, Ganzi, Alkeslassy Levi, and Sabah (2005b), we suggested, among other optional accounts, that the construction under scrutiny here might involve a breach of a pragmatic maxim, but this is not assumed here. Instead, defaultness is proposed.

Specifically, in (3), the **default** interpretation of the negative target is sarcastic, indicating the opposite (*fool*) of the negated concept (*smart*); in (4) the **non-default** interpretation of the same negative target is literal, suggesting that, while the person in question is "extremely smart," others are "smarter" than him:

(3) I suppose that you have studied your man and his movements and you know that **he is not the smartest guy in town**.
If a man has to always excuse himself to talk to someone who calls his number all the time, he should know that whenever he does that, he arouses suspicions.
How could a man say he has gone to work overtime and does not come home with a little more money? A man who claims these things believes that his woman is a fool but the truth is, *he has made himself into the fool*. (Pastor, 2015)

(4) For the diehard Buffett worshipers, it must be hard to face the possibility that while Buffett is *extremely smart*, maybe he is not the smartest. Maybe people like Soros *are smarter*. Maybe lots of people *are smarter* than Buffett when it comes to investing. (Tom, 2010)

In sum, to qualify as conveying default non-literal interpretations, then, stimuli should prove to be novel, as should their counterparts (Condition A), and potentially ambiguous between literal and non-literal interpretations (Condition B), when presented in isolation or in a neutral non-spoken discourse (Condition C).

PREDICTIONS

According to the view of default non-literal interpretations, some negative constructions, modifying high positive concepts, such as "X is not particularly/the best/most Y" (*She is not particularly thorough; He is not the most thorough researcher*; see Experiments 1 and 2 below), "X s/he is not" (*Thorough s/he is not*; see Giora et al., 2013), "X is not his/her forte" (*Thoroughness is not her forte*; see Giora et al., 2015), "X is not his/her prominent strength" (*Thoroughness is not her prominent strength*; see Giora et al., 2015), "X is not known for her/his Y" (*He is not known for his thoroughness;* Giora & Cholev, In prep.), "Do you really think you are X?" (*Do you really think you are thorough?*; Giora, & Jaffe, In prep.; Paolazzi, 2013; Zuanazzi, 2013), or "X? I don't think so" (*Thorough? I don't think so*), conforming to the conditions for default non-literal interpretations specified above (Conditions A–C),

(a) will be interpreted sarcastically and rated as more sarcastic than their affirmative counterparts (to be rated as literal) when presented in isolation, regardless of structural markedness (when relevant), as shown by Giora et al. (2013, 2015; see also Experiment 1 below); and
(b) will, therefore, be processed sarcastically unconditionally, initially and directly, irrespective of contextual information to the contrary or its absence thereof. As a result, they will be processed faster in contexts biasing them toward their default non-salient sarcastic interpretation than toward their non-default (yet equally strongly biased) salience-based (literal) alternative (as shown by Giora et al., 2013, 2015; see also Experiment 2 below);
(c) as a result, when in natural discourse,

(i) they will be interpreted sarcastically, conveying their default non-salient rather than their non-default, salience-based interpretation (as shown by Giora, Drucker, & Fein, 2014a); and
(ii) hence, more often than not, when echoed by their neighboring utterances, they will resonate (à la Du Bois, 2014) with their default yet non-salient (sarcastic) interpretation rather than their non-default, salience-based (e.g., literal) interpretation (as shown by Giora et al., 2013, 2014a).[8]

In sum, taken together, the graded salience hypothesis (discussed above) and the view of default non-literal interpretations (discussed here) single out two default interpretations (negative sarcasm and affirmative literalness) and two nondefault interpretations (negative literalness and affirmative sarcasm). According to the defaultness hypothesis (introduced below), these default interpretations will enjoy priority over their non-default counterparts, regardless of whether they are negative or affirmative, non-salient or salience-based, literal or non-literal, supported or unsupported by contextual information.

THE DEFAULTNESS HYPOTHESIS

The defaultness hypothesis is a new theory. Its novelty lies in that it encompasses both the graded salience hypothesis and the view of default non-literal interpretations, while further introducing a novel prediction, which anticipates the superiority of default negative sarcasm over non-default affirmative sarcasm (see Prediction 2 below). Overall, it posits the superiority of default interpretations over non-default counterparts, irrespective of degree of negation, non-salience, non-literalness, or context strength.

Predictions

Negatives

Negative constructions, shown to be interpreted sarcastically and rated as sarcastic by default (Experiment 1),

(1) will be processed faster in contexts strongly biasing them toward their default, non-salient, sarcastic interpretation (see Example 5 below) than toward their non-default, salience-based, yet equally strongly biased literal interpretation (see Example 6 and Experiment 2 below; see also Giora et al., 2013, 2015) and
(2) faster yet than their (shorter) affirmative counterparts, embedded in equally strong contexts, biasing them toward their non-default, non-salient, sarcastic interpretation (see Example 7 and Experiment 2 below).

Note that predicting the temporal priority of negative interpretations over affirmative counterparts (2 above) is unparalleled; it has not been proposed nor tested before. Furthermore, it contrasts with predictions following from negation theories (e.g., Clark & Clark, 1977; Horn,

[8]Prediction C is not tested here.

1989). Likewise, predicting the temporal priority of default non-salient (sarcastic) interpretations of negative items over their non-default yet salience-based (literal) counterparts (1 above) contrasts with predictions following from the graded salience hypothesis (Fein et al., 2015; Giora, 2003; Giora et al., 2007b). Still, it follows from the view of default non-literal interpretations, as shown by Giora et al. (2013, 2015). Taken together, however, both comparisons are allowed here precisely because, unlike earlier theories, the defaultness hypothesis predicts the superiority of default over non-default interpretations, irrespective of degree of negation as well as degree of non-salience, non-literalness, or context strength.

Affirmatives

Along the same lines, affirmative equivalents, shown to be interpreted literally and rated as literal by default (Experiment 1),

(3) will be processed faster in contexts strongly biasing them toward their default, salience-based, literal interpretation (see Example 8 below) than toward their non-default, non-salient, yet equally strongly biased sarcastic interpretation (see Example 7 below and Experiment 2 below; see also Fein et al., 2015; Giora et al., 2007b), and
(4) faster than non-default yet salience-based, literal interpretation of negative counterparts (see Example 6 below and Experiment 2 below).

Note that predicting the temporal priority of affirmative interpretations over negative counterparts (4 above) also agrees with predictions following from negation theories (e.g., Clark & Clark, 1977; Horn, 1989); additionally, predicting the temporal priority of salience-based interpretations over non-salient (sarcastic) alternatives further agrees with predictions following from the graded salience hypothesis (see, e.g., Fein et al., 2015; Giora et al., 2007b).

Regardless, only the defaultness hypothesis, proposed here, motivates Prediction 2 and, at the same time, gives rise to all the four Predictions taken together.

Experiments 1–2 are, thus, designed to establish degree of defaultness (Experiment 1) and test the predicted superiority of default over non-default interpretations (Experiment 2) as specified in Predictions 1–4 above.

EXPERIMENT 1

To establish degree of defaultness, Experiment 1 tests Prediction A of both the view of default non-literal interpretations and the graded salience hypothesis. According to the view of default non-literal interpretations, when presented in isolation (Condition C), novel negative items (Condition A) of the form "X is not the most Y" (*He is not the most organized student*), potentially ambiguous between a non-salient sarcastic interpretation and a salience-based literal alternative (Condition B), will be interpreted sarcastically (Experiment 1.1); their similarly novel affirmative counterparts (*He is the most organized student*), however, will be interpreted literally (Experiment 1.2). To confirm that the interpretations of the negative items are consciously perceived as sarcastic, whereas the interpretations of their affirmative counterparts are consciously perceived as non-sarcastic (i.e., literal), sarcasm ratings will be collected (Experiment 1.3).

According to the graded salience hypothesis, however, when outside of a specific context, both affirmative and negative stimuli, not lexically coded as a single unit (e.g., idioms), will convey their salience-based (here literal) interpretation (Experiments 1.1 and 1.2) and will be consciously perceived as conveying their salience-based (here literal) interpretation (Experiment 1.3).

Experiment 1.1

Method

Participants. Twenty students of Tel Aviv University (six women, 14 men), mean age 24.95 ($SD = 3.86$) volunteered to participate in the experiment. They were all native speakers of Hebrew.

Stimuli. Stimuli, pseudo-randomly ordered, controlled for novelty (Condition A; see Pretest, below), were all presented in isolation (Condition C). They included 12 negative utterances of the form "X is not the most Y" (*He is not the most organized student*), involving no semantic anomaly or any internal incongruity (Condition B; for English translations of the targets, see Appendix A; for transliterations, highlighting the structural difference in head-modifier order between Hebrew and English, resulting in different word order, see Appendix C). In addition, there were 33 filler items, varying in terms of degree of literalness, affirmation, type of construction, and novelty. All items were followed by a 7-point scale, which, for the experimental items, instantiated a non-salient, sarcastic interpretation ("He is quite messy") and a salience-based, literal interpretation ("He is quite orderly but less so than others") presented at the scale's ends. Presentation of interpretations was counter-balanced across items.[9] The proposed interpretations of the experimental items were based on natural instances (of similar utterances) in corpora.

Pretest. To establish the novelty of the negative items and their affirmative counterparts (Condition A), familiarity ratings were collected from 20 native speakers of Hebrew, students of Tel Aviv University (10 women, 10 men), mean age 26.7 ($SD = 7.35$). The negative utterances (*He is not the most organized student*) and their affirmative counterparts (*He is the most organized student*) were presented in isolation. Two booklets were prepared so that each participant would see only one version of each target. In addition, there were 33 filler items, varying in degree of novelty, literalness, affirmation, and type of construction. Participants were asked to rate how often they have encountered each item on a 7-point familiarity scale (where "all the time" was displayed at one end and "never" at the other end).[10]

Results showed that both the negative items ($M = 2.82$, $SD = 1.13$) and their affirmative counterparts ($M = 2.78$, $SD = 1.09$) were similarly novel, $t1(19) = 0.25$, $p = .80$, two-tail; $t2(11) = 1.00$, $p = .34$, two-tail, both scoring significantly lower than 3.5 on a 7-point familiarity

[9]No matter at which end the sarcastic interpretation was displayed, whether on the right or on the left, for the purposes of our calculations, this end was treated as 7. The opposite was true of the literal interpretation: Regardless of whether it appeared at the right or at the left end of the scale, it was treated as 1.

[10]In Hebrew, the primary (salient) meaning of the collocation "all the time" is "very often."

scale, $t1(19) = 2.97$, $p < .005$; $t2(11) = 3.52$, $p < .005$; $t1(19) = 2.71$, $p < .01$; $t2(11) = 3.52$, $p < .005$. The established equivalence of the novelty of the negative items and their affirmative counterparts ascertained they conformed to Condition A for default non-literal interpretations.

Procedure. Participants were asked to indicate the proximity of the interpretation of the (pseudo-randomly ordered) items to any of those instantiations at the scale's ends (or otherwise propose an alternative interpretation).

Results and Discussion

Results showed that, outside of a specific context, the interpretation of the novel negative items was sarcastic, scoring high on sarcasm ($M = 5.55$, $SD = 0.65$), significantly higher than 5 on a 7-point sarcasm scale, $t1(19) = 3.79$, $p < .001$, $t2(11) = 5.95$, $p < .0001$. The unconditional, default, or preferred interpretation of these negative constructions, then, is sarcastic; their non-default non-preferred interpretation is literal.

Experiment 1.2

Method

Participants. Twenty students of Tel Aviv University (9 women, 11 men), mean age 26.7 ($SD = 4.19$) volunteered to participate in the experiment. They were all native speakers of Hebrew.

Stimuli. Stimuli were pseudo-randomly ordered. They included the 12 novel affirmative versions of the items (Condition A) in Experiment 1.1 (*He is the most organized student*), involving no semantic anomaly or any internal incongruity (see Appendix A). In addition, there were 33 filler items, varying in terms of degree of literalness, affirmation, type of construction, and novelty. They were all presented in isolation (Condition C) and were followed by a 7-point scale, which, for the experimental items, instantiated a non-salient, sarcastic interpretation ("He is messy") and a salience-based, literal interpretation ("He is very orderly") at the scale's ends. Presentation of interpretations was counter-balanced across items (see footnote 9 above).

Procedure. Procedure was the same as in Experiment 1.1.

Results and Discussion

Results showed that, outside of a specific context, the interpretation of the novel affirmative items was literal, scoring low on sarcasm ($M = 1.72$, $SD = 0.34$), significantly lower than 3 on a 7-point sarcasm scale, $t1(19) = 5.87$, $p < .0001$; $t2(11) = 12.91$, $p < .0001$. The unconditional, default, or preferred interpretation of these affirmative items, then, is literal; their non-default non-preferred interpretation is sarcastic.

To ascertain that the interpretations of the negative items are consciously perceived as sarcastic, whereas their affirmative counterparts are consciously perceived as non-sarcastic, Experiment 1.3 was run, where a rating scale made the notion of sarcasm explicit.

Experiment 1.3

Method

Participants. Forty students of Tel Aviv University (16 women, 24 men; mean age 26.45, $SD = 6.8$) volunteered to participate in the experiment. They were all native speakers of Hebrew.

Stimuli. Stimuli, pseudo-randomly ordered, were those used in Experiments 1.1 and 1.2, involving the 12 negative constructions and their 12 affirmative counterparts (see Appendix A). They were presented in isolation, followed by a 7-point sarcasm scale (where 1 = non-sarcastic, and 7 = sarcastic; no instantiations of interpretations were provided and no numbering was indicated). Two booklets were prepared so that each participant would see only one version of each item. In addition, there were 34 filler items varying in terms of degree of literalness, affirmation, type of construction, and novelty.

Procedure. Participants were asked to explicitly rate degree of sarcasm of each of the items.

Results and Discussion

Results showed that, when outside of a specific context, the novel negative constructions were rated as significantly more sarcastic ($M = 4.98$, $SD = 1.23$) than their novel affirmative counterparts, which were rated as low on sarcasm, (i.e., high on literalness), ($M = 2.68$, $SD = 1.04$), $t1(39) = 11.04$, $p < .0001$; $t2(11) = 10.06$, $p < .0001$. Such results confirm that the default, preferred interpretation of the negative constructions is non-salient, here sarcastic (as predicted by the view of default non-literal interpretations; see also Giora et al., 2015, but not by the graded salience hypothesis); the default, preferred interpretation of their affirmative counterparts is salience-based, here literal (as predicted by the graded salience hypothesis). Complementarily, the non-default, non-preferred interpretation of the negative constructions is salience-based, here literal (as predicted by the view of default non-literal interpretations but not by the graded salience hypothesis, according to which salience-based interpretations are default); the non-default interpretation of their affirmative counterparts is non-salient, here sarcastic (as predicted by both, the view of default non-literal interpretations and the graded salience hypothesis).

In all, testing the predictions of the view of default non-literal interpretations and the graded salience hypothesis allowed us to single out two default, preferred interpretations and two non-default, non-preferred alternatives. The default interpretations are the **sarcastic** interpretations of the negative constructions (*He is not the most organized student*) and the **literal** interpretations of their affirmative counterparts (*He is the most organized student*). By contrast, the non-default interpretations are the **literal** interpretations of the negative constructions (*He is not the most organized student*) and the **sarcastic** interpretations their affirmative counterparts (*He is the most organized student*).

Having established degree of defaultness, Experiment 2 tests the defaultness hypothesis. It aims to demonstrate the superiority of default interpretations over non-default counterparts, outshining degree of salience (non-salient vs. salience-based), degree of non-literalness (non-literal vs. literal), degree of contextual support (weak vs. strong), and degree of negation (negation vs. affirmation).

EXPERIMENT 2

To test the predictions of the defaultness hypothesis, the two default and two non-default interpretations, identified in Experiment 1, will be weighed against each other. Specifically, the negative stimuli, whose default interpretation is non-salient sarcasm, will be compared with (1) their non-default salience-based negative literalness and with (2) their non-default non-salience affirmative sarcasm. The affirmative counterparts, whose default interpretation is salience-based literalness, will be compared with (3) their non-default non-salience affirmative sarcasm and with (4) their non-default salience-based negative literalness. To guarantee that the predicted differences between default and non-default interpretations, if found, will not be attributable to context effects, equal strength of contextual bias will also be established (see pretest below).

Method

Participants

Forty-eight students of Tel Aviv University (31 women, 17 men; mean age 26.16, $SD = 4.81$), all native speakers of Hebrew, were paid ∼8 U.S. dollars each to participate in an experiment (which took up to half an hour).

Stimuli

Stimuli were those tested in Experiment 1. They included 12 negative items and 12 affirmative counterparts, pseudo-randomly ordered, in addition to 26 filler items, varying in terms of degree of literalness, affirmation, type of construction, and novelty. The 24 experimental items were embedded in sarcastically (Examples 5 and 7 below) and literally (Examples 6 and 8 below) biasing contexts (boldface added), followed by a two-word spillover segment (italics added). The texts were all similar in length (in terms of number of lines displayed on the screen, which amounted to 12). In all of them, the 10th line displayed the full target sentence, followed by the two-word spillover segment, occupying the 11th line (for English translations of some of the items, see Appendix B). The texts were followed by a yes-or-no comprehension question, which could relate to any part of the text, except for the target utterance. Four versions of electronic booklets were prepared so that each participant would see only one version of a target:

(5) During the communication department faculty meeting, the professors are discussing their students' progress. One of the students has been doing very poorly. Professor A: "Yesterday he handed in an exercise, and, once again, I couldn't make any sense of the confused ideas presented in it. The answers were clumsy, unfocused, and the whole paper

was hard to follow." Professor B nods in agreement and adds: "Unfortunately, the problem isn't only with his assignments. He is also always late for class, and when it was his turn to present a paper in class he got confused and prepared the wrong article! I was shocked. What can I say, **he is not the most organized student.** *I'm surprised* he didn't learn a lesson from his freshman year experience."

(6) The professors are talking about Omer, one of the department's most excellent students. Professor A: "He is a very efficient guy. He always comes to class on time with all of his papers taken care of and all his answers are eloquent, exhibiting clearly structured argumentation. I think that explains his success." Professor B: "Yes, it's true. Omer is simply very consistent and almost never digresses from the heart of the matter. But there are two other students whose argumentation and focus are even better than his, so I'd just say that in comparison to those two, **he is not the most organized student.** *I'm surprised* he asked to sit the exam again."

(7) During the Communication Department faculty meeting, the professors are discussing their students' progress. One of the students has been doing very poorly. Professor A: "Yesterday he handed in an exercise, and, once again, I couldn't make any sense of the confused ideas presented in it. The answers were clumsy, unfocused, and the whole thing was hard to follow." Professor B nods in agreement and adds: "Unfortunately, the problem isn't only with his assignments. He is also always late for class, and when it was his turn to present a paper in class he got confused and prepared the wrong article! Professor C (chuckles): "In short, it sounds like he really has everything under control." Professor A: "What can I say, **he is the most organized student.** *I'm surprised* he didn't learn a lesson from his freshman year experience."

(8) During the communication department faculty meeting, the professors are discussing their students' progress. One of the students has been doing very well. Professor A: "He is the most committed student in the class. Always on time, always updated on everything. Professor B: "I also enjoy his answers in class. He always insists on a clear argumentation structure and is very eloquent. In his last exam, not only was each answer to the point but also very clear. In my opinion, **he is the most organized student.** *I'm surprised* he asked to sit the exam again."

Pretest

To control for the similar strength of bias, supporting the intended interpretation of the target utterances, 40 Hebrew speakers, students of Tel Aviv University (17 women, 23 men; mean age 29.22, $SD = 4.31$), volunteered to participate in the experiment. Four different booklets were used so that each participant would see only one version of a target. Items were followed by the same 7-point scales used in Experiment 1, whose ends instantiated either a literal (= 1) or a sarcastic (= 7) interpretation of each target. Presentation of interpretations was counter-balanced across items (see footnote 9 above). Participants were asked to indicate the proximity of the interpretation of the target to any of those instantiations at the scale's ends. The scores of items presented in literally biasing contexts were reversed, so that high scores always indicate proximity to the contextual bias.

Results showed that the contexts were all equally highly constraining. **Negative** targets scored as high on sarcasm ($M = 6.59$, $SD = 0.72$), when embedded in sarcastically biasing contexts,

as they did on literalness ($M = 6.59$, $SD = 0.66$), when embedded in literally biasing contexts, $t1(39) = 0.00$, $p = 1.0$, two-tail; $t2(11) = 0.01$, $p = .99$, two-tail; and as high on sarcasm as did their affirmative counterparts, when embedded in sarcastically biasing contexts ($M = 6.66$, $SD = 0.66$), $t1(39) = 0.62$, $p = .54$, two-tail; $t2(11) = 0.68$, $p = .53$, two-tail. **Affirmative** targets scored as high on literalness ($M = 6.76$, $SD = 0.51$), when embedded in literally biasing contexts, as they did on sarcasm ($M = 6.66$, $SD = 0.66$), when embedded in sarcastically biasing contexts $t1(39) = 0.96$, $p = .34$, two-tail; $t2(11) = 1.59$, $p = .14$, two-tail; and as high on literalness as did their negative counterparts on literalness, when embedded in literally biasing contexts ($M = 6.59$, $SD = 0.66$), $t1(39) = 1.40$, $p = .16$, two-tail; $t2(11) = 2.09$, $p = .06$, two-tail, each scoring significantly higher than 6 on a 7-point scale, all ts > 5, all ps $< .005$.

Given that contexts were all equally highly constraining (scoring 6.59–6.76 on a 7-point scale), any differences in processing between the targets, if found, would not be accountable by context effects.

Procedure

Participants were seated in front of a computer screen. They self-paced their reading of the contexts, which were displayed segment by segment (making up a part of a sentence or a full sentence). They advanced the texts by pressing the spacebar. Segments, displayed from right to left,[11] accumulated on the screen to form a full text. Reading times of the target utterances and the spillover segments were recorded by the computer. After reading the whole text, participants responded to a yes-or-no comprehension question.

Results and Discussion

Nineteen data points were discarded from the analysis because of errors in responding to the comprehension questions (3.3%). Outliers were defined as reading times (RTs) above 3 *SD* from the mean of each participant. Eight such outliers were discarded from the analysis of the target sentences (1.4%), and 11 outliers were discarded from the analysis of spillover segments (1.9%). Mean reading times (RTs) served as the basic data for the analyses. Results are presented in Tables 1 and 2 and Figures 1 and 2.

A two-way repeated-measures ANOVA was performed for both participant ($F1$) and item ($F2$) analyses, with context type (literal/sarcastic) and target type (affirmative/negative) as independent variables, and reading times of target sentences as a dependent variable. These 2×2 ANOVAs result in a significant effect of context type, $F1(1,47) = 7.89$, $p < .01$, $F2(1,11) = 7.09$, $p < .05$ and a significant effect of target type, $F1(1,47) = 20.65$, $p < .001$, $F2(1,11) = 22.20$, $p < .005$. However, these effects are misleading due to the significant disordinal interaction, $F1(1,47) = 30.47$, $p < .001$, $F2(1,11) = 19.00$, $p < .005$, outlined in Figure 1.

[11] Hebrew is written from right to left.

TABLE 1
Mean Reading Times (in Seconds) of Target Sentences in All Experimental Conditions—Experiment 2 (*SD* in Parentheses)

	Affirmative	*Negative*	*Mean*
Literal	1.13[ad]	1.82[ab]	1.48
	(0.47)	(0.87)	
Sarcastic	1.35[cd]	1.22[bc]	1.29
	(0.51)	(0.38)	
Mean	1.24	1.52	

Means sharing a letter are significantly different ($p < .05$).

TABLE 2
Mean Reading Times (in Seconds) of Two-Word Spillover Segments in All Experimental Conditions—Experiment 2 (*SD* in Parentheses)

	Affirmative	*Negative*	*Mean*
Literal	0.71[ad]	0.79[ab]	0.75
	(0.27)	(0.25)	
Sarcastic	0.87[cd]	0.73[bc]	0.80
	(0.29)	(0.23)	
Mean	0.79	0.76	

Means sharing a letter are significantly different ($p < .05$).

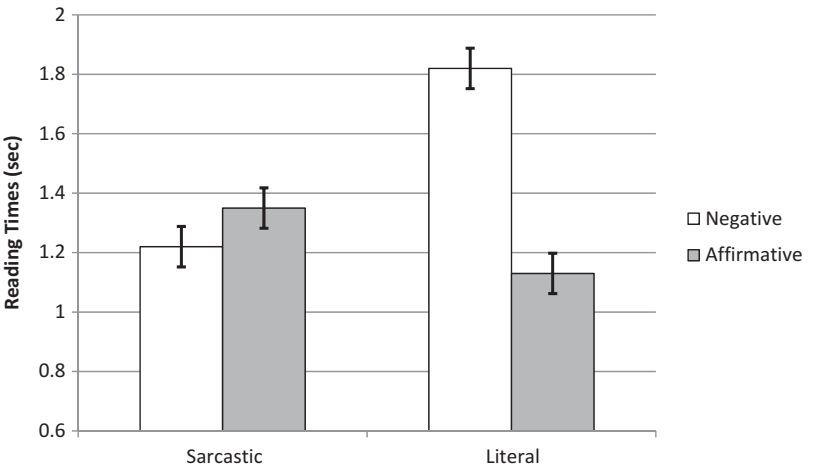

FIGURE 1 Mean reading times (in seconds) of target sentences in all experimental conditions—Experiment 2. Error bars represent standard errors.[12]

[12]Standard errors in all figures were calculated according to Loftus and Masson (1994) recommendations for within-subjects designs.

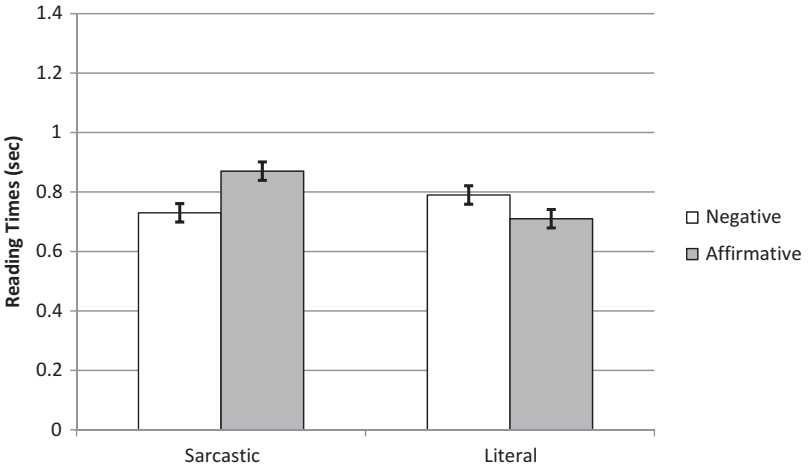

FIGURE 2 Mean reading times (in seconds) of two-word spillover segments in all experimental conditions—Experiment 2. Error bars represent standard errors (see footnote 12 above).

Subsequent analyses indeed show that the interaction effect stems from the fact that the **negative** sarcastic items were *faster* to process than the negative literal counterparts, $t1(47) = 5.40$, $p < .001$, $t2(11) = 4.18$, $p < .001$, whereas the **affirmative** sarcastic items were *slower* to process than the affirmative literal counterparts, $t1(47) = 2.39$, $p < .05$, $t2(11) = 2.35$, $p < .05$. Additionally, the negative *sarcastic* items were *faster* to process than the affirmative sarcastic counterparts, $t1(47) = 1.78$, $p < .05$, $t2(11) = 1.66$, $p = .06$, whereas the negative *literal* items were *slower* to process than the affirmative literal counterparts, $t1(47) = 5.92$, $p < .001$, $t2(11) = 4.92$, $p < .001$.

The same ANOVAs were performed with the dependent variable being the reading time of spillover segments. Those 2 × 2 ANOVAs show neither a significant context type effect, $F1(1,47) = 3.65$, $p = .06$, $F2(1,11) = 1.40$, $p = .26$, nor a significant target type effect, $F1(1,47) = 0.64$, $p = .43$, $F2(1,11) = 1.00$, $p = .34$. However, the interaction effect was significant, as before, $F1(1,47) = 15.84$, $p < .001$, $F2(1,11) = 13.74$, $p < .005$. This disordinal interaction, outlined in Figure 2, stems from the fact that the spillover segments following the **negative** sarcastic items were *faster* to process than the spillover segments following the negative literal items (although only in the item analysis), $t1(47) = 1.18$, $p = .12$, $t2(11) = 1.92$, $p < .05$, whereas the spillover segments following the **affirmative** sarcastic items were *slower* to process than the spillover segments following the affirmative literal items, $t1(47) = 4.58$, $p < .001$, $t2(11) = 2.70$, $p < .05$. Additionally, the spillover segments following the negative *sarcastic* items were faster to process than the spillover segments following the affirmative sarcastic items, $t1(47) = 3.03$, $p < .005$, $t2(11) = 3.14$, $p < .005$, whereas the spillover segments following the negative *literal* items were slower to process than the spillover segments following the affirmative literal items, $t1(47) = 1.72$, $p < .05$, $t2(11) = 2.05$, $p < .05$.

In sum, as predicted by the defaultness hypothesis, it is defaultness that reigns. Indeed,

- **default**, non-salient, negative sarcasm was processed faster than
- **non-default** non-salient, affirmative sarcasm, and faster than
- **non-default** salience-based, negative literalness;

Similarly,

- **default**, salience-based, affirmative literalness was processed faster than
- **non-default** non-salient, affirmative sarcasm, and faster than
- **non-default** salience-based, negative literalness.

Default interpretations (negative sarcasm, affirmative literalness), then, prevail. They supersede their non-default counterparts (affirmative sarcasm, negative literalness), regardless of degree of non-salience, non-literalness, context strength, and, as unprecedentedly shown here, degree of negation. Only the defaultness hypothesis can account for all the results taken together.[13]

GENERAL DISCUSSION

This study focuses on the superiority of default *interpretations*. It is geared toward testing the predictions of the defaultness hypothesis, according to which default interpretations rule. Such interpretations will emerge unconditionally, even when contextually incompatible, regardless of whether they are literal or non-literal, affirmative or negative, salience-based or non-salient. They will, therefore, interfere with their non-default counterparts, which will, consequently, lag behind.

What, then, would count as a default, preferred interpretation? According to the graded salience hypothesis (Giora, 1997, 1999, 2003), default interpretations are *salience-based*; they are derived compositionally, on the basis of the coded, salient meanings of the utterance components, regardless of degree of (non)literalness or contextual information. They will, therefore, get activated unconditionally—faster than non-default, *non-salient* counterparts, irrespective of context strength or its absence thereof. In contrast, according to the view of default non-literal interpretations (Giora et al., 2010, 2013, 2015), some *non-salient*, non-literal interpretations are derived by default, irrespective of contextual support or its absence thereof. They will therefore get activated unconditionally—faster than non-default counterparts, whether *salience-based* or *nonsalient*, affirmative or negative.

Compared to the graded salience hypothesis and the view of default non-literal interpretations, the defaultness hypothesis puts on the table degree of defaultness as an overarching predictor, superseding degree of non-salience, non-literalness, negation, or context strength, all of which pale in the presence of defaultness.

To establish degree of defaultness, items in Experiment 1 were presented in isolation. They included novel negative constructions and their equally novel affirmative counterparts, all free of cues prompting non-literalness, such as semantic anomaly or internal incongruity. Testing their

[13]The factor of degree of aptness of the items in their respective contexts most probably cannot account for this study's findings, regarding processing speeds. Consider Giora, Federman, Kehat, Fein, and Sabah (2005a), where degree of aptness was shown to be sensitive to degree of ironicness, favoring, for example, affirmative sarcasm (rated highest on ironicness) over negative sarcasm (rated lower on ironicness), both sharing the same context. As per our findings, this implies that items high on aptness (affirmative sarcasm) should be faster to process than items lower on aptness (negative sarcasm), which is not what our findings attest to.

interpretations outside of context allowed us to single out two default, preferred interpretations, (1) **non-salient negative sarcasm** (*He is not the most organized student*, meaning "he is quite messy"; see also (5) above) and (2) **salience-based affirmative literalness** (*He is the most organized student*, meaning "he is very orderly"; see also (8) above). While the former's defaultness is accountable by the view of default non-literal interpretations, the latter's defaultness is accountable by the graded salience hypothesis.

Complementarily, results of Experiment 1 further detected two non-default counterparts (1) **salience-based negative literalness** (*He is not the most organized student* meaning "He is quite orderly but less so than other"; see (6) above) and (2) **non-salient affirmative sarcasm** (*He is the most organized student*, meaning "he is messy"; see (7) above). Whereas the former's non-defaultness follows from the view of default non-literal interpretations, the latter's non-defaultness follows from the graded salience hypothesis.

In sum, default, non-salient negative sarcasm has two non-default counterparts: non-salient affirmative sarcasm ("he is quite messy") and salience-based negative literalness ("He is quite orderly but less so than others"). Likewise, default salience-based affirmative literalness has the same two non-default counterparts detected for the default negative sarcasm: non-salient affirmative sarcasm ("he is quite messy") and salience-based negative literalness ("He is quite orderly but less so than others").

Given these default interpretations and their (shared) non-default counterparts, the defaultness hypothesis predicts that the default interpretations will be processed faster than their non-default counterparts, regardless of degree of non-literalness, non-salience, negation, or contextual support.

Experiment 2 was designed to test these predictions. Here items, shown to have default and non-default interpretations, were embedded in equally strong contexts, supportive of either interpretation. Results from reading times of target utterances and spillover sections provided a clear-cut support for the predictions. They attested to the superiority of default over non-default interpretations, irrespective of contextual bias, degree of non-literalness, non-salience, and even negation. Specifically, as predicted, processing default non-salient **negative sarcasm** was faster than processing non-default non-salient affirmative sarcasm, and faster yet than processing non-default salience-based negative literalness. Complementarily, processing default salience-based **affirmative literalness** was faster than processing non-default non-salient affirmative sarcasm and faster yet than processing non-default salience-based negative literalness. (Note, however, that the latter finding is also explainable on the presence of negation, which is expected to render negative utterances more difficult to process than affirmative counterparts, see Clark & Clark, 1977; Horn, 1989).

Importantly, the quadrilateral pattern of the stimuli sets, tested here for the first time, allows for a variety of comparisons, resulting in some unprecedented findings. They show that, as predicted by the defaultness hypothesis, but contra the graded salience hypothesis (Giora, 1997, 1999, 2003) and the view of default non-literal interpretations (Giora et al., 2010, 2013, 2015), some non-salient interpretations, such as negative sarcasm, are faster to process than other non-salient interpretations, such as affirmative sarcasm (see also, Filik, Howman, & Giora, 2015 for evidence from an eye-tracking experiment in English, attesting to the superiority of default negative sarcasm over non-default affirmative sarcasm). Such results are highly innovative, questioning, among other things, the received view of negation (Clark & Clark, 1977; Horn, 1989). In addition, they show that, contra the graded salience hypothesis (Fein et al., 2015; Giora, 1997, 1999,

2003; Giora et al., 2007b), what makes one *non-salient* interpretation (e.g., negative sarcasm) faster to process than an equivalent non-salient counterpart (e.g., affirmative sarcasm) and faster yet than a *salience-based* alternative (e.g., negative literalness) is defaultness, rather than degree of non-salience.

Taken together, however, all the results are accountable only by the defaultness hypothesis. They thus attest to the precedence of

- **default** *non-salient* interpretations over **non-default** *salience-based* interpretations (of negative utterances), the latter interpreted indirectly;
- **default** *sarcastic* interpretations over **non-default** *literal* interpretations (of negative utterances), the latter interpreted indirectly;
- **default** *literalness* over **non-default** *sarcasm* (of affirmative utterances), the latter interpreted indirectly;
- **default** (affirmative) *literalness* over **non-default** (negative) *literalness*, the latter interpreted indirectly; and last but not least, to the precedence of
- **default** *non-salient* (negative) sarcasm over **non-default** *non-salient* (affirmative) sarcasm—the former interpreted directly; or more generally, to that of
- **default** *negatives* over **non-default** *affirmatives* (the latter interpreted indirectly).

It is defaultness per se, then, that reigns.

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Appendix A: Items presented in isolation (Experiment 1)

1. She is/is not the most skilled at staying focused.
2. He is/is not the most punctual person I have come to know.
3. She is/is not the most alert person I've known.
4. He is/is not the most mesmerizing actor.
5. She is/is not an especially thorough woman.
6. She is/is not the most competent in hospitality.
7. He is/is not the most sensual guy.
8. He is/is not the most organized student.
9. She is/is not the kindest neighbor in the building.
10. He is/is not the most restrained person possible.
11. She is/is not the most caring woman I've met.
12. She does/does not really excel in resourcefulness.

Appendix B: Items in contexts (Experiment 2; targets in bold, spillover sections in italics)

1. He is/is not the most restrained person possible

a. Negative sarcasm

During the welcoming toast for the new manager, the workers at Shahar Company were waiting patiently for the speech to end. Everyone was already hungry but they knew it would only last a few minutes longer. Only Eitan got up and began to grab food from the table. He stacked his plate and began gorging himself. Ronit whispered to Hadas: "What an impolite and impatient person. I'm shocked. Can't he hold on for another minute?" Hadas (grimaced): "Yes, he's always like this. **He is not the most restrained person possible**. *I think* he's extremely rude."

b. Negative literalness

During the welcoming toast for the new manager, the workers at Shahar Company were waiting impatiently for the speech to end. Everyone was already hungry and at a certain point they started piling their plates. Only Eitan sat quietly and waited. "Look, he's so polite," said Ronit to her friend, Hadas, "he's so great at self-control." Hadas: "That's right. He almost always keeps his

cool and calm. The only ones in the company who are more composed than he is are Adam and Maor. They're really the only ones in a company of 500. So, only compared to these two, we might say that **he is not the most restrained person possible**. *I think* he's a role model of restraint."

c. Affirmative sarcasm

During the welcoming toast for the new manager, the workers at Shahar Company were waiting patiently for the speech to end. Everyone was already hungry but they knew it would only last a few minutes longer. Only Eitan got up and began to grab food from the table. He stacked his plate and began gorging himself. Ronit whispered to Hadas: "What an impolite and impatient person. I'm shocked. Can't he hold on for another minute?" Hadas: "I thought he was a polite guy." Ronit: "Yeah right. **He is the most restrained person possible.** *I think* he's extremely rude."

d. Affirmative literalness

During the welcoming toast for the new manager, the workers at Shahar Company were waiting impatiently for the speech to end. Everyone was already hungry and at a certain point they started piling their plates. Only Eitan sat quietly and waited. "Look, he's so polite," Ronit said to her friend, Hadas. "Yes, it's very impressive! In the staff meeting we've just had, Shlomo was rude to him, but he didn't respond and kept his cool. He's really cool and a very considerate guy, and overall, **he is the most restrained person possible.** *I think* he's a role model of restraint."

2. She is/is not the kindest neighbor in the building

a. Negative sarcasm

Iris and Gil moved into a new apartment. One evening, while they are discussing their experiences in their new environment, they mention the person living on the first floor. Iris: "We're going to suffer from her. Have you heard how she complained to everyone about us, saying that we made noise? I mean, what did we do? We invited a few friends for dinner and we were relatively quiet. Since then, every time I bump into her, she makes a spectacle of not saying hello, as if I don't exist." Gil: "She can pull faces all day. We don't need any of her favors. Did you see how she shouted at the kids from across! How shall we put it, **she is not the kindest neighbor in the building.** *Some people* in this world are disgusting."

b. Negative literalness

Iris and Gil moved to a new apartment. Iris: "The person living on the first floor is so charming! She noticed yesterday that I was carrying too many groceries and she helped me carry them up to the top floor." Gil: "Indeed, she also helped me get into the flat this morning because I forgot my key. And she always asks about you and how you're doing. Bottom line, she's great." Iris: "But note that she is less welcoming than Rivka, the one who lives across the hall. Rivka is a real sweetheart, she smiles and talks to everyone." Gil: "Right, Rivka is very friendly and she is all smiles, but she doesn't help others as much as the person on the first floor. I prefer the sensitivity of the helpful person, even if, compared to Rivka, **she is not the kindest neighbor in the building.** *Some people* in this world are good."

c. Affirmative sarcasm

Iris and Gil moved into a new apartment. One evening, while they are discussing their experiences in their new environment, they mention the person living on the first floor. Iris: "We're going to suffer from her. Have you heard how she complained to everyone about us, saying that we made noise? I mean, what did we do? We invited a few friends for dinner and we were relatively quiet. Since then, every time I bump into her, she makes a spectacle of not saying hello, as if I don't exist." Gil: "Indeed, she is awful. Strangely enough, the real estate agent said she was a charming woman!" Iris: "Charming alright, **she is the kindest neighbor in the building.** *Some people* in this world are disgusting."

d. Affirmative literalness

Iris and Gil opened a new bakery shop on the entrance floor of a luxury residence. They are talking about the person living on the first floor, who both have had a chance to meet. Iris: "She is really cool. She noticed yesterday that I forgot to lock up the door and she ran all the way up to the car to stop me." Gil: "Yes, she also helped me get in this morning because I forgot my key." Iris: "And she doesn't even get mad or raise her voice at the children running up and down the stairs." Gil: "Indeed, she is very patient and caring. Bottom line, she's a real sweetheart, smiling and talking to everyone. I think **she is the kindest neighbor in the building.** *Some people* in this world are good."

Appendix C: Instances of transliterations of Hebrew to English

(Affirmative counterparts are identical except for the absence of the negation marker)
Note that, unlike in English, in Hebrew, the head of the noun phrase precedes the modifier (as can be seen in Examples 1–2 below, e.g., *student organized* and *woman thorough*). As a result, the negation marker is not immediately followed by the intensifier (e.g., *the most*) as it is in English, but rather by the noun. In addition, the position of the intensifier with respect to the modifier may vary, depending on the intensifier (e.g. *most organized* vs. *thorough especially*), resulting in thwarting addressees' ability to predict incoming information. Verb phrases here exhibit a similar order to that of English (Example 3). In sum, Hebrew word order here is more flexible:

(1)	hu he	lo [neg.]	ha-student [det.]- student	haxi most	me'urgan organized
"He is not the most organized student"					
(2)	hi she	lo [neg.]	baxura woman (young)	yesodit thorough	bimyuxad especially
"She is not an especially thorough woman"					
(3)	hi she	lo [neg.]	mamaš really	mictayenet excel	be-tošiya in-resourcefulness
"She does not really excel in resourcefulness"					