CHAPTER 10

Defaultness shines while affirmation pales

On idioms, sarcasm, and pleasure

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The Defaultness Hypothesis (Giora et al., 2015c) maintains that it is Defaultness that reigns supreme, superseding all factors known to affect processing initially, such as degree of **Non/literalness**, **Non/salience**, **Context strength**, or **Affirmation**. Here we focus on weighing degree of Defaultness against degree of **Affirmation**. We show that, as predicted, processing **default**, salient responses to familiar Negatives is faster than processing **nondefault,** low-salience responses to less-familiar Affirmative counterparts. We further show that, despite benefitting from equally strong contextual support, **default** nonsalient Negative Sarcasm is processed faster than **nondefault** nonsalient Affirmative Sarcasm.[1] Using linguistic and pictorial contexts, we also demonstrate that it is Defaultness that accounts for Nondefaultness' appeal, rendering it optimally innovative and hence pleasing. It is Defaultness, then, that singlehandedly affects both processing speed as well as likability.

Keywords: The Defaultness Hypothesis, Defaultness, Salience, affirmatives, negatives, Affirmative Sarcasm, Negative Sarcasm, processing speed, Pleasure Ratings

1. Introduction

A number of factors have been deemed instrumental in shaping our processing of linguistic and nonlinguistic stimuli. All other things being equal, (a) Affirmation has featured dominantly as a factor affecting our understanding significantly; affirmatives, for one, have been considered easier to comprehend than negatives (e.g., Clark & Clark, 1977; Fillenbaum, 1966; Horn, 1989; Mayo, Schul, & Burnstein,

1. Sarcasm here pertains to verbal irony.

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2004; Wason, 1959, 1961). (b) Literalness has also been taken to play a major role in shaping interpretation processes; according to Grice, (1975), for example, Literalness would spring to mind unconditionally, faster than Nonliteralness, which would be slowed down by the initial involvement of Literalness, irrespective of contextual bias. (c) Context has also taken center stage; strength of contextual support has been viewed as most effective in determining processing, irrespective of degree of Non/Literalness (e.g., Gibbs, 1994). Then (d) degree of Salience occupied the scene; coded and salient meanings have been shown to be activated automatically, faster than noncoded salience-based and nonsalient alternatives, regardless of degree of Non/Literalness, Negation, or Contextual support (Giora, 1997, 1999, 2003, 2006; Giora, Fein, Kronrod, Elnatan, Shuval, & Zur, 2004). But then, (e) Default Nonliteralness was introduced (Giora, Livnat, Fein, Barnea, Zeiman, & Berger, 2013; Giora, Drucker, Fein, & Mendelson, 2015a). It attested to the priority of nonsalient, negative, yet Default Nonliteral *interpretations* (e.g., metaphor, sarcasm) over Nondefault, salience-based, yet negative Literal ones, irrespective of contextual support; no contemporary theory seemed to be able to account for the priority of default, nonsalient Nonliteralness over nondefault, salience-based Literalness. But then (f) the Defaultness Hypothesis emerged (Giora, Givoni, & Fein, 2015c), challenging all other factors, including degree of Literalness (literalness vs. nonliteralness), degree of Affirmation (affirmation vs. negation), degree of Context strength (weak vs. strong), and degree of Nonsalience (nonsalient vs. salience-based). Defaultness, then, and none other, is here to rule.

The prediction that Defaultness will prevail, irrespective of factors such as degree of Nonliteralness, Negation, Nonsalience, or Context strength, follows from the Defaultness Hypothesis, which was tested on Hebrew stimuli by Giora, et al., (2015c) and on English stimuli by Filik, Howman, Ralph-Nearman, & Giora (in progress). Whereas Giora, et al., (2015c) used reading times, Filik et al., used eye-movement during reading. Results of both studies support the Defaultness Hypothesis.

Below we introduce the Defaultness Hypothesis (Section 2). We then test its prediction that it is Defaultness rather than degree of Affirmation that matters. We start by looking into *default **meanings*** – responses that are **coded** in and accessed directly from the mental lexicon. Specifically, (a) we weigh *default meanings* of lexicalized **negative idioms** against the *nondefault interpretations* of their affirmative counterparts, and (b) *default meanings* of lexicalized **affirmative idioms** against the *nondefault interpretations* of their negative counterparts.

Next, we test the superiority of Defaultness with regard to *default **interpretations*** – responses **constructed** on the fly. Here we weigh *default* **Negative Sarcasm** against *nondefault* **Affirmative Sarcasm**, expecting the former to be effortless, on account of its Defaultness, and the latter – effortful, on account of its Nondefaultness (further involving its default interpretation in the process). Here too, we aim to show

that it is Defaultness rather than degree of Affirmation that matters. Finally, we test the prediction that when nondefaultness involves **retainable** Defaultness, which it de-automatizes, such default interpretation will render Nondefaultness pleasing. Defaultness, then, is expected to shape our understanding and pleasurability.

2. The Defaultness Hypothesis

The Defaultness Hypothesis (Giora et al., 2015c) posits the supremacy of Defaultness, which shapes processing, while further affecting pleasure. Being a general theory, the Defaultness Hypothesis encompasses both the Graded Salience Hypothesis (Giora, 1997, 2003, 2006) and the View of Default Nonliteral interpretations (Giora et al., 2013, 2015a; Giora, Drucker, & Fein, 2014), while reconciling their inconsistencies. It further prompts the revisitation of the Optimal Innovation Hypothesis (Giora et al., 2004; Giora, Fein, Kotler, & Shuval, 2015b), extending it beyond default **meanings** to further allow the inclusion of default **interpretations** (as proposed by Giora, Givoni, Heruti, & Fein, 2017).

Defaultness is defined in terms of an unconditional, automatic response to a stimulus. The Defaultness of lexicalized, salient **meanings** was predicted and established by the Graded Salience Hypothesis (Giora, 1997, 2003). However, the Defaultness of nonsalient, noncoded, constructed **interpretations** – an option deemed unfathomable by the Graded Salience Hypothesis – is not just predicted by the Defaultness Hypothesis but has also been established experimentally (see Filik et al., in progress; Giora et al., 2015c). Here, therefore, the predictions of the Defaultness Hypothesis are tested with regard to both **meanings** and **interpretations.** They are weighed against those following from the view of Affirmation as a significant facilitative factor. The overall aim is to testify to the superiority of Defaultness over Affirmation.

As mentioned above, the studies reported below test the superiority of Defaultness with regard to *meanings* (Section 2.1) and *interpretations* (Section 2.2). The focus here is on nonliteral (idiomatic and sarcastic) negatives and affirmatives and their respective counterparts. In Section (2.1), processing of **default** salient nonliteral **meanings** of familiar negative idioms (*The apple doesn't fall far from the tree*) is compared to processing **nondefault** nonsalient **interpretations** of nonliteral less-familiar affirmative counterparts (*The apple falls far from the tree*). Similarly, processing of **default** salient nonliteral **meanings** of familiar affirmative idioms (*The grass is always greener on the other side of the fence*) is compared to processing **nondefault** nonsalient **interpretations** of less-familiar nonliteral negative counterparts (*The grass is not always greener on the other side of the fence*). In Section (2.2), **default**, nonsalient **interpretations** of Negative Sarcasm (*He is not*

the most restrained person possible) are weighed against **nondefault,** nonsalient **interpretations** of Affirmative Sarcasm (*He is the most restrained person possible*). Section (2.3) tests the possibility that the costs of Nondefaultness, incurred by the initial involvement of Defaultness in the process, might be offset by hedonic effects, regardless of type of context (e.g., linguistic vs. pictorial).

2.1 On the superiority of default meanings

Construing the Graded Salience Hypothesis (Giora, 1997, 1999, 2003) in terms of the Defaultness Hypothesis (Giora et al., 2015c) allows us to rephrase the differences inherent to graded Salience in terms of degrees of Defaultness. Indeed, the Graded Salience Hypothesis distinguishes between default and nondefault *meanings* (Giora, 1997, 1999, 2003) and default and nondefault *interpretations* (Fein, Yeari, & Giora, 2015; Giora, Fein, Laadan, Wolfson, Zeituny, Kidron, Kaufman, & Shaham, 2007).[2]

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.) and/or degree of exposure (e.g., experiential familiarity, conventionality, or frequency of a stimulus). A case in point is the 'financial institution' meaning of *bank*. In contrast, *meanings* listed in the mental lexicon ranking low on prominence due to being less frequent, less conventionalized, less prototypical, etc., are *less-salient*. A case in point is the 'riverside' meaning of *bank*. Finally, *meanings* not listed in the mental lexicon are nonsalient. A case in point might be 'the killer of god' meaning of *deicide*. In sum, whereas a salient meaning is a default response, less-salient and nonsalient meanings are nondefault responses.

According to the Graded Salience Hypothesis, coded, salient *meanings* of e.g., words or collocations will be prompted automatically upon encountering the relevant stimulus, regardless of all other factors known to affect processing. Less-salient and nonsalient *meanings* will lag behind, and will often rely on explicit cuing (Givoni, Giora, & Bergerbest, 2013) or contextual information for their activation. Indeed, as predicted, salient meanings have been shown to be prompted automatically, faster than less or nonsalient counterparts (Giora, 2003).

The Graded Salience Hypothesis further distinguishes between default and nondefault *interpretations*. Default interpretations are responses constructed compositionally (e.g., 'He is very intelligent'), based on the coded, salient *meanings* of the stimulus components (*He is the smartest person around*). Being *salience-based*,

2. Although assumed as default, within the framework of the Graded Salience Hypothesis, such meanings and interpretations were not yet termed "default".

such *interpretations* are activated unconditionally, regardless of degree of nonliteralness or contextual support. In contrast, nondefault interpretations (e.g., 'He is stupid' of *He is the smartest person around*) are nonsalient responses, based primarily on contextual information (indicating that the person in question is an idiot).

Salience-based interpretations will be processed faster than nonsalient counterparts. Indeed, as predicted, salience-based interpretations (e.g., the contextually incompatible literal interpretations of sarcastic utterances) have been shown to be prompted automatically, faster than nonsalient sarcastic counterparts, irrespective of contextual bias (Fein et al., 2015; Filik, Leuthold, Wallington, & Page, 2014; Giora, 2003; Giora et al., 2007; but see Gibbs, 1994 for a different context-based view).

2.1.1 *Predictions*

Default (salient) *meanings* of any linguistic stimulus, whether a word or a collocation (*The apple doesn't fall far from the tree; The grass is always greener on the other side of the fence*), will be *accessed* automatically, faster than nondefault, noncoded counterparts, regardless of degree of Affirmation (*The apple falls far from the tree; The grass is not always greener on the other side of the fence*).

2.1.2 *Processing default meanings*

To test the prediction that Defaultness rather than Affirmation prevails, Meytes and Tamir, (2005) examined the processing speed of **default** negative and affirmative idiomatic *meanings* and their **nondefault** affirmative and negative idiomatic *interpretations*.

Participants were 40 volunteers, students of the Academic College of Tel-Aviv-Yaffo, all native speakers of Hebrew.

Materials consisted of 80 (Hebrew) idioms and proverbs, divided between 40 affirmative and 40 negative idioms. The affirmative items included 20 highly frequent affirmatives (*The grass is always greener on the other side of the fence*), conveying a **default** figurative *meaning* ('other people's lives always seem better than your/our own'), and 20 significantly less frequent affirmatives (*The apple falls far from the tree*), conveying a **nondefault** figurative *interpretation* ('the offspring doesn't take after his parents'); the latter involves the default idiomatic meaning in the process, while rejecting it (see Examples (2) and (4) below, bold added for convenience). The negative items included 20 highly frequent negatives (*The apple doesn't fall far from the tree*), conveying a **default** figurative *meaning* ('the offspring takes after his parents'), and 20 significantly less frequent negative counterparts (*The grass is not always greener on the other side of the fence*), conveying a **nondefault** figurative *interpretation* ('other people's lives are not always better than your/our own'), the latter involves the default, idiomatic meaning in the process, while rejecting it (see

Examples (1) and (3) below, bold added for convenience). Items' degree of frequency was established on the basis of a corpus search (in Hebrew). All materials were embedded in identical neutral contexts, which, were occasionally followed by a "yes" or a "no" comprehension question:

Items conveying Defaultness

Negative:

(1) Dani: Have you seen how Nachum's son behaves?
Yoel: Yes, **the apple doesn't fall far from the tree**.
Dani: He has such a nerve this little one!

Affirmative:

(2) Ruthi: My sister-in-law's kids seem so obedient and sweet, a real bliss.
Shira: **The grass is always greener on the other side of the fence**.
Ruthi: Still, it often seems to me that I am too lenient with my two naughty ones.

Items conveying Nondefaultness

Negative:

(3) Ruthi: My sister-in-law's kids seem so obedient and sweet, a real bliss.
Shira: **The grass is not always greener on the other side of the fence**.
Ruthi: Still, it often seems to me that I am too lenient with my two naughty ones.

Affirmative:

(4) Dani: Have you seen how Nachum's son behaves?
Yoel: Yes, **the apple falls far from the tree**.
Dani: He has such a nerve this little one!

Using a moving windows technique, participants self-paced their reading of the items, which were displayed on a computer screen one sentence at a time, and answered the "yes" or "no" comprehension questions that followed. Reading times of the target sentences were recorded by the software.

Results and discussion

Mean reading times (RTs) and standard deviations (*SD*s) are presented in Table 1 and illustrated by Figure 1. They were subjected to two two-way ANOVAs, for both participant (F_1) and item (F_2) analyses, with Defaultness (Default/Nondefault) and degree of Affirmation (Affirmative/Negative) as independent variables, and reading times of targets as a dependent variable.

Result showed no significant effect of degree of Affirmation ($F_1(1, 39) = 1.30$, $p = .26$, n.s.; $F_2(1, 76) = 0.14$,$p = .71$, n.s), but a significant effect of Defaultness ($F_1(1, 39) = 99.76$, $p < .001$.; $F_2(1, 76) = 16.50$,$p < .001$). As predicted, **default**

targets were processed significantly faster than **nondefault** counterparts (2.06 sec compared to 2.58 sec).

Table 1. Mean reading times of target sentences (in seconds) (*SD* in parentheses)

	Default items	**Nondefault items**
Negatives	2.05 (0.40)	2.65 (0.62)
Affirmatives	2.08 (0.47)	2.51 (0.58)
Mean	2.06 (0.39)	2.58 (0.57)

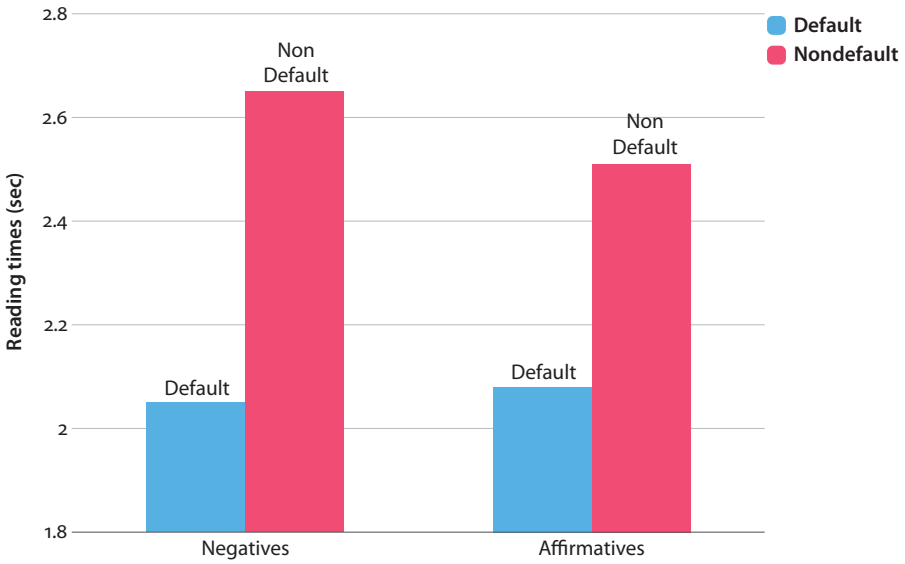

Figure 1. Mean Reading Times (in seconds) of target sentences in all experimental conditions

Processing linguistic stimuli, then, is **in**sensitive to degree of Affirmation. Instead, it is sensitive to degree of Defaultness. **Default** negative meanings are processed faster than **nondefault** affirmative interpretations; similarly, **default** affirmative meanings are processed faster than **nondefault** negative interpretations. Affirmation, then, pales in the presence of Defaultness. It is Defaultness rather than Affirmation that shines.

The superiority of Defaultness over Affirmation notwithstanding, it could still be argued that the phenomena addressed here do not really speak to the issue of degree of Defaultness, since what is compared here are two different response levels – lexicalized *meanings* (e.g., *The apple doesn't fall far from the tree*) and constructed *interpretations* (e.g., *The apple falls far from the tree*). Will comparing default and nondefault constructed *interpretations* allow us to replicate the findings attesting to the superiority of Defaultness over Affirmation?

2.2 On the superiority of default interpretations

Recall that the Graded Salience Hypothesis distinguishes between **default** lexicalized and prominent *meanings* (termed salient) and nondefault *meanings*, which are either not lexicalized (termed nonsalient) or lexicalized but not prominent (termed less-salient). It further distinguishes between **default** (lexicon-based) compositional *interpretations* (termed salience-based) and nondefault (primarily context-based) *interpretations* (termed nonsalient). These distinctions, however, are limited, as they would not allow to account for **default**, nonsalient interpretations of novel stimuli such as *He is not the most restrained person possible,* or *Do you really believe he is the most restrained person possible?* interpreted sarcastically by default, as established by Giora et al., (2015c) and Giora, Jaffe, & Fein (submitted) respectively; for similar **default**, albeit nonsalient, interpretations, see also Giora et al. (2013, 2015b). In contrast, the Defaultness Hypothesis, which defines as default an (establishable) unconditional response to a stimulus, can account for the **Defaultness** of nonsalient interpretations as well, which can be faster to process than **nondefault** yet salience-based counterparts (as shown by Giora et al., 2013, 2015b,c).

2.2.1 *Predictions*

Recall that the Defaultness Hypothesis (Giora et al., 2015c) predicts the superiority of **default** *interpretations* over **nondefault** counterparts, irrespective of factors known to affect processing, such as degree of Affirmation, Nonliteralness, Novelty, and Contextual support. Here, however, we focus on the prediction that Defaultness rather than Affirmation will prevail. Specifically,

i. **default** *interpretations* will be prompted instantly, initially and directly, faster than **nondefault** counterparts, irrespective of degree of Affirmation/Negation (Section 2.2.2 below).
ii. Invoked unconditionally, **default** *interpretations* will be further involved in retrieving **nondefault** counterparts, slowing those down in the process.
iii. Still, when Defaultness' interference with Nondefaultness renders it qualifiable for (revised) Optimal Innovation (Giora et al., 2017), such **nondefault** interpretations will be pleasing, more pleasing than both **default** and **nondefault** counterparts, not qualifiable for Optimal Innovation (Giora et al., 2017; see Section 2.3 below).

2.2.2 *Processing default interpretations*

This section focuses on the prediction that Defaultness rather than Affirmation will reign (see Section 2.2.1 prediction (i) above). In particular, default *interpretations*, whether negative or affirmative, will be processed faster than nondefault counterparts, whether affirmative or negative. To test this prediction, Giora et al. (2015c)

first established degree of Defaultness. In Experiment 1, Hebrew affirmative and negative counterparts (*He is/is not the most restrained person possible*), controlled for novelty, were presented in isolation, followed by a 7 – point scale, pseudorandomly instantiating a literal and a sarcastic interpretation at its ends. Native speakers of Hebrew, students of Tel Aviv University, were asked to rate the proximity of the stimuli's interpretation to those presented at the scale's ends. Results indicated that the favored interpretation of the negative items was sarcastic; the favored interpretation of the affirmative counterparts was literal. In addition, explicitly probing these items for degree of saracsm further guaranteed that the interpretations of the negatives were consciously perceived as sarcastic; those of the affirmatives, however, were taken at face value.

Giora et al.'s (2015c) Experiment 1, then, singled out 2 **default** (Negative Sarcasm and Affirmative Literalness) and 2 **nondefault** (Affirmative Saracsm and Negative Literalness) *interpretations*. Establishing degree of Defaultness of both negative and affirmative counterparts allowed us to weigh comparable phenomena (i.e., interpretations) against each other. In Giora et al.'s Experiment 2, these items were embedded in contexts, controlled for equal strength of support of their respective default and nondefault interpretations (all scoring significantly higher than 6 on a 7-point scale, all t's > 5, all p's < .005), thereby preempting a potential confound of contextual strength (see Examples (5)–(8) below, bold and italics added, for convenience).

(5) **Default 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."

(6) **Nondefault 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."

(7) **Default 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."

(8) **Nondefault 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."

The applied measures were processing speed of the target utterances and the spillover segments that followed.

Recall that according to the Defaultness Hypothesis, **default** interpretations of targets, such as **Negative Sarcasm** (5) (*He is not the most restrained person possible*) and **Affirmative Literalness** (7) (*He is the most restrained person possible*) should be processed faster than their **nondefault** counterparts, i.e., **Affirmative Sarcasm** (6) and **Negative Literalness** (8), the latter involving inappropriate **default** (sarcastic) interpretations in the process. Note, further, that only in the case of **nondefault, Negative Literalness**, these default interpretations are disruptive and will have to be discarded; in the case of nondefault **Affirmative Sarcasm**, however, they will be retained and contribute to the interpretation process. Consider, further, that, on account of its Defaultness, Affirmative Literalness is expected to be processed faster than **nondefault** Negative Literalness; **default** Negative Sarcasm, however, is expected to be processed faster than **nondefault** Affirmative Sarcasm.

As illustrated by Figures 2–3, results support the Defaultness Hypothesis. They attest to the superiority of Defaultness over Nondefaultness, irrespective of all other factors known to affect processing such as contextual support, degree of nonsalience, degree of nonliteralness, and degree of affirmation, the latter being the key issue at stake here. Indeed, the findings attest to the significantly speedier processing of **default** Negative Sarcasm and its spillover segment (5) over **nondefault** Affirmative Sarcasm and its spillover segment (6):

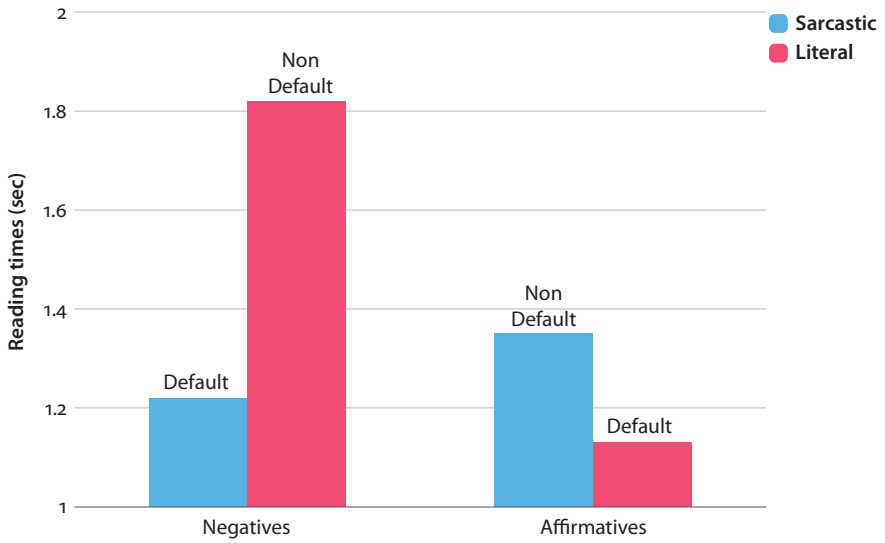

Figure 2. Mean Reading Times (in seconds) of target sentences in all experimental conditions

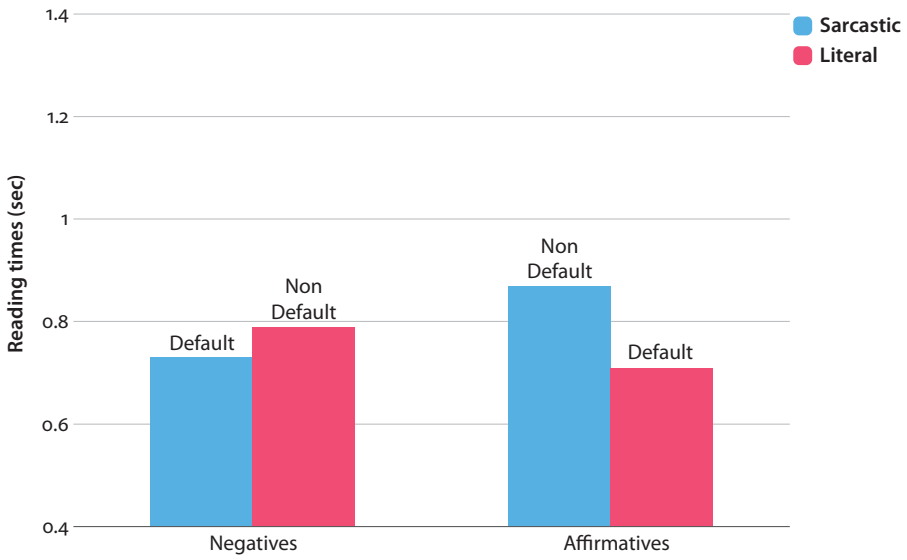

Figure 3. Mean Reading Times (in seconds) of two-word spillover segments in all experimental conditions

Defaultness, then, shines; affirmation, however, pales. Still, may the costs of Nondefaultness, incurred by the interference of Defaultness, be somewhat compensated for?

2.3 Non/defaultness and pleasurability

In Section (2.2.2), we have shown that, as predicted, Defaultness is processed faster than Nondefaultness, irrespective of degree of Affirmation (as well as other factors known to affect processing). Indeed, interpreting Defaultness (e.g., Negative Sarcasm) is a direct and speedy process; interpreting Nondefaultness (e.g., Affirmative Sarcasm) is indirect and slow, involving the unconditional **default** (e.g., literal) interpretation initially, thus obstructing the processing course (see also Fein et al., 2015; Giora et al., 2007). Still, the involvement of Defaultness in processing Nondefaultness might allow Nondefaultness to qualify for revised Optimal Innovation and consequently be gratifying (Giora et al., 2017). According to the revised Optimal Innovation Hypothesis (Giora et al., 2017), then, the processing costs of Nondefaultness may be compensated for by rewarding effects.

Specifically, according to the Optimal Innovation Hypothesis (Giora et al. 2004, 2015) and its revised version (Giora et al. 2017), pleasurability is sensitive to Optimal Innovation. A stimulus would be optimally innovative if

a. it involves a **nondefault** response, which differs from the **default** response associated with it both quantitatively and qualitatively, while
b. allowing for the automatic recoverability of that default response, which it de-automatizes, so that both responses are comparable and entertainable (e.g., their similarities and differences assessable).

Note that according to the original Optimal Innovation Hypothesis (Giora et al., 2004), a novel stimulus (*Know hope*) conveying a nondefault response (related to optimism) would qualify for optimal innovation if it de-automatized a default, coded and salient *meaning* of a familiar stimulus (*No hope*; related to pessimism). Default conventionalized sarcastic *meanings*, such as the familiar *Big deal*, may also be de-automatized and rendered optimally innovative by a nondefault literal counterpart, such as *BigDeal* – the name of an e-shop.[3] These default meanings spring to mind automatically. However, once they are entertained and de-familiarized, they allow for both responses, the familiar and the novel, to interact and carve an optimally innovative interpretation.

In contrast, the revised version of the Optimal Innovation Hypothesis (Giora et al., 2017) allows optimal innovations to involve de-automatization of both, **default** coded *meanings* as well as **default** constructed *interpretations*. Here, the relevant candidate for a revised optimal innovation is the *interpretation* of Affirmative Sarcasm. Given that Negative Sarcasm is a **default** response, involving no other responses while being construed, it cannot be considered a candidate for optimal

3. http://www.bigdeal.co.il/AllCamp.aspx

innovation (as can't Affirmative Literalness, which is also a default interpretation, and Negative literalness, which suppresses its automatic default interpretation; see also Giora et al., 2017). However, **nondefault** Affirmative Sarcasm, activating a default (e.g., literal) interpretation when constructed, which, however, is instrumental in deriving the sarcastic interpretation, is qualifiable for optimal innovation.

2.3.1 *Predictions*

According to the Defaultness Hypothesis (Giora et al., 2015c) and the revised Optimal Innovation Hypothesis (Giora et al., 2017) which follows it, **Affirmative Sarcasm** (6), de-automatizing a default interpretation (i.e., Affirmative Literalness), will be rated as more pleasing than **Negative Sarcasm** (5), which is activated directly (see also prediction (iii) Section 2.2.1 above). This should be also true of such items when preceded by pictorially biasing contexts.

2.3.2 *Hedonic effects*

In Giora et al. (2017, Example (1)), participants were presented items, tested for processing speed in Giora et al. (2015c, Example (2)), all controlled for novelty and equal strength of contextual support. Pleasurability scores, ranging on a 7-point scale, were collected from 40 native speakers of Hebrew. Results are illustrated by Figure 4. They indicate that, as predicted, nondefault **Affirmative Sarcasm**, the only candidate here qualifiable for Optimal Innovation, was pleasing (4.07) – significantly more pleasing than default **Negative Sarcasm** (3.48), $t_1(39) = 2.53$, $p < .01$; $t_2(11) = 3.91$, $p < .005$ (and the rest of the options not qualifiable for Optimal

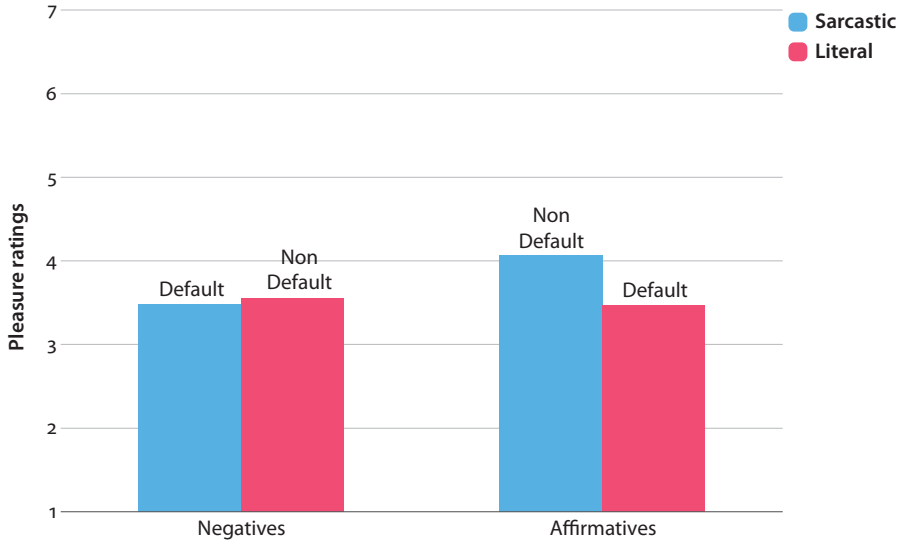

Figure 4. Mean Pleasure Ratings

Innovation, namely, default Affirmative Literalness and nondefault Negative Literalness, which did not differ from each other pleasurability-wise).

As predicted, Defaultness, being unconditionally swift, rendered Nondefaultness slow, which, in turn, allowed for Nondefaultness to induce pleasure. Will these results be replicated in the presence of pictorial contexts, as predicted by the Defaultness Hypothesis and the revised Optimal Innovation Hypothesis (see Section 2.3.1)?

In Giora et al. (2017, Example (2)), we put this question to the test. Here, participants were presented one pair of Negative and Affirmative targets, used in Giora et al., (2017, Example (1)), biased toward their sarcastic interpretation by the same pictorial context (see Figure 5 below). Equal strength of contextual bias was controlled by a pretest. Results show that negative targets scored as high on sarcasm (M = 5.49, SD = 0.94) as did their affirmative counterparts (M = 5.70, SD = 0.88), $t_1(39) = 1.48$, $p = .15$ (two-tail), $t_2(11) = 1.49$, $p = .16$ (two-tail), scoring significantly higher than5 on the 7-point contextual strength scale (all t's > 3, all p's < .005).

Figure 5. *He is/is not the most restrained person possible*

As before, pleasurability scores, ranging on a 7-point scale, were collected from 30 volunteers, students of Tel Aviv University, all native speakers of Hebrew. Results are illustrated by Figure 6. They show that, as predicted, nondefault **Affirmative Sarcasm**, the only candidate here qualifiable for Optimal Innovation, was pleasing (4.25; SD = 1.41) – significantly more pleasing than default Negative Sarcasm (3.65; SD = 1.30), $t_1(29) = 3.23$, $p < .005$; $t_2(11) = 3.95$, $p < .005$.

Defaultness, then, reigns. Being automatic and speedy, it interferes with deriving Nondefaultness. However, when relevant to the nondefault interpretation, it is retained and contributes to affecting pleasure.

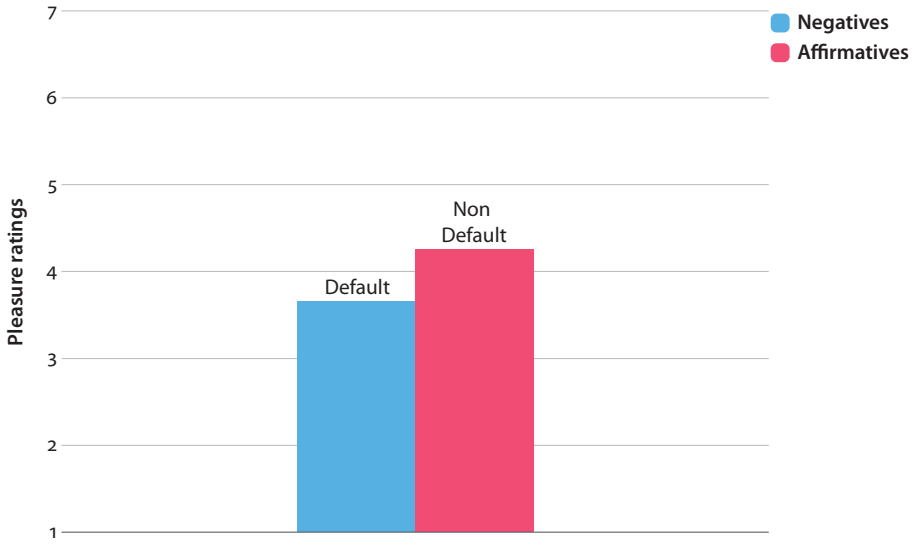

Figure 6. Mean Pleasure Ratings of sarcastic items

3. Conclusions

According to the Defaultness Hypothesis (Giora et al., 2015c) **default**, unconditional responses, whether affirmative or negative, literal or nonliteral, salient, salience-based, or nonsalient, will prevail, regardless of the presence of a strong context, supportive of a **nondefault** alternative. To test this prediction, we focused here on the specific prediction that Defaultness rather than Affirmation (assumed to facilitate processing) will affect processing costs and pleasing effects significantly. Results from a number of studies showed that, as predicted,

i. **default** salient *meanings* of familiar nonliteral *negative* stimuli (*The apple doesn't fall far from the tree*) were processed faster than **nondefault** nonsalient *interpretations* of nonliteral *affirmative* counterparts, lower on familiarity (*The apple falls far from the tree*), while both were embedded in equally neutral contexts (see Section 2.1);
ii. **default** *nonsalient nonliteral interpretations* of unfamiliar *negative* stimuli (*He is not the most restrained person possible*) were processed faster than **nondefault** *nonsalient nonliteral interpretations* of similarly unfamiliar affirmative counterparts (*He is the most restrained person possible*), both embedded in equally strong contexts biased toward their sarcastic interpretation (see Section 2.2);

iii. Invoked unconditionally, **default** literal *interpretations* of novel affirmative stimuli (*He is the most restrained person possible*) were involved in retrieving **nondefault** Affirmative Sarcasm, slowing it down, while further rending it qualifiable for (revised) Optimal Innovation (see Section 2.3).
iv. As a result, such **nondefault** interpretations of affirmative stimuli were pleasing, more pleasing than both **default** and **nondefault** counterparts, not qualifiable for Optimal Innovation (see Section 2.3). Relevant to our discussion here is the finding that **nondefault** Affirmative Sarcasm was more pleasing than **default** Negative Sarcasm, although both were equally novel and equally strongly supported by contextual information, whether linguistic or pictorial.

It is only Defaultness that reigns, superseding degree of Affirmation, degree of Nonliteralness, degree of Nonsalience, or degree of Context strength. No contemporary theory can account for all these findings taken together. Negation theories, for one (e.g., Clark & Clark, 1977; Horn, 1989; Givón, 1993, 2002; Wason, 1959, 1961), cannot explain the processing superiority of negative idioms and Negative Sarcasm over affirmative counterparts; given the superiority of default idioms and default Negative Sarcasm, Literalness-based accounts (e.g., Grice, 1975) cannot account for these differences either; neither can Contextualists (e.g., Gibbs, 1994) explain these differences, given that contexts are equally strongly biased in favor of both affirmative and negative counterparts; echoic mention accounts too (e.g., Sperber & Wilson, 1986/1995) cannot explain the superiority of Negative Sarcasm over Affirmative Sarcasm, given that only the latter is echoic; after all, Negative Sarcasm does not echo a negative alternative. Nor can pretense theories explain these findings, given that Negative Sarcasm does not involve pretense, or allusional-pretense, whereas affirmative sarcasm does (e.g., Barnden, this volume; Clark & Gerrig, 1984; Kumon-Nakamura, Glucksberg, & Brown, 1995). And will a unified theory of irony, such as proposed by e.g., Colston (this volume), Gibbs & Samermit (this volume), and Willison (this volume) be able to accommodate this new concept of **default**, non-echoic Negative Sarcasm, given that irony research has exclusively dealt with **nondefault** affirmative ironies (termed here Affirmative Sarcasm)?

So far, the Defaultness Hypothesis is the only theory that can account for all the results taken together. It is only Defaultness that shines.

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