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This is a contribution from *Belgian Journal of Linguistics* 28
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Resonating with default nonsalient interpretations

A corpus-based study of negative sarcasm

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Based on natural language use, we examine the contextual environment of some negative constructions (e.g., *Punctuality is not her forte/best attribute*). Previous findings show that, as predicted by the view of default nonliteral interpretations, such negative constructions are interpreted nonliterally by default: (a) when presented in isolation, they are interpreted sarcastically and rated as sarcastic compared to affirmative counterparts; (b) when embedded in equally strongly biasing contexts, they are processed faster in sarcastically than in literally biasing contexts (Giora et al., 2013; Giora, Drucker et al., 2014). Here we test a third prediction that, unlike affirmative sarcasm, (c) such negative utterances will convey a sarcastic interpretation and their natural environment will echo their nonsalient (sarcastic) interpretation rather than their salience-based (literal) interpretation (Giora et al., 2010, 2013). Findings from 2 corpus-based studies of (Hebrew and English) negative constructions lend usage-based support to the view of default nonliteral interpretations (Giora et al., 2010, 2013; Giora, Drucker et al., 2014). They show that when occurring in natural discourses, such utterances communicate sarcasm significantly more often than their alternative affirmatives. Their neighboring utterances further reflect their nonsalient sarcastic interpretation rather than their salience-based nonsarcastic interpretation.

Introduction: Default nonliteral interpretations

In this paper we are looking at *novel nonliteral* interpretations derived by default. Note that for any interpretation to be favored by default, stimuli must be potentially ambiguous between various interpretations *a priori*, so that one may be preferred over the other. Thus, for a nonliteral interpretation to be favored by default, utterances must be potentially ambiguous between literal and nonliteral interpretations. The conditions guaranteeing such potential ambiguity are specified in (1)

(and are articulated in detail in Giora, Fein, Metuki, & Stern, 2010; Giora, Livnat, Fein, Barnea, Zeiman, & Berger, 2013; Giora, Drucker, Fein, & Mendelson, 2014):

- (1) For utterances to be potentially ambiguous between literal and nonliteral interpretations,
 - a. familiarity should be avoided, so that coded/salient nonliteral meanings will not be involved (e.g., Giora, 1997, 2003); and if negative utterances are involved, they should not contain negative polarity items but should have an acceptable affirmative counterpart, so that conventionality is sieved out;
 - b. semantic anomaly or internal incongruity should be avoided, so that nonliteralness would not be prompted by nonliteral cues (Beardsley, 1958; Partington, 2011); and
 - c. specific and informative contextual information should be avoided, so that nonliteral interpretation would not be invited by pragmatic cues such as pragmatic incongruity (Grice, 1975) or a nonliterally biasing context (Gibbs, 1994, 2002).

According to the view of default nonliteral interpretations (Giora et al., 2010, 2013; Giora, Drucker et al., 2014), some constructions, such as those involving low-salience markers (e.g., “not”, “almost”, rhetorical questions, or “about”), meeting the conditions specified in (1), will invite nonliteral interpretations unconditionally. For example, constructions such as “X is not Y” (*I am not your social worker*), “X is almost Y” (*I am almost your social worker*), “What am I, your X?” (What am I, your *social worker*?) will invite a metaphorical (rather than a definition-based) interpretation (as shown by Giora et al., 2010, 2013); constructions such as “X is not his/her forte/best attribute” (*Supportiveness is not my forte/best attribute*), “X s/he/is not” (*Supportive she is not*), “X is not particularly Y” (*He is not particularly smart*), “about as X as Y” (*about as bright as sunlit asphalt*¹) will invite a sarcastic (rather than a literal) interpretation (see Giora, Drucker et al., 2014; Giora, Fein, Ganzi, Alkeslassy Levi, & Sabah, 2005; Veale, 2012, 2013; on low salience marking see, Givoni, Giora, & Bergerbest, 2013).²

1. We thank Tony Veale for this example (P.C.1.1.14).

2. We view “sarcasm” and “verbal irony” as interchangeable.

Default sarcastic interpretations

(2) Predictions

According to the view of default nonliteral interpretations, such constructions, meeting the conditions for default nonliteral interpretations (1), will generate sarcastic interpretations by default. Specifically, they

- a. will be interpreted sarcastically and rated as more sarcastic compared to their affirmative counterparts when presented in isolation; and
- b. will be interpreted sarcastically initially, regardless of contextual information to the contrary. As a result, they will be processed faster when embedded in contexts biasing them toward their nonsalient sarcastic interpretation than toward their (equally biased) salience-based (literal) interpretation.
- c. When in natural discourse, they will be (i) interpreted sarcastically conveying a nonsalient nonliteral interpretation more often than a salience-based literal interpretation, whereas (ii) their affirmative counterparts will convey a salience-based interpretation. Therefore such negative constructions (iii) will be echoed by neighboring utterances via their nonsalient sarcastic interpretation.

Findings in Giora et al. (2013) support all three predictions (2a–c) with regard to “X s/he is not”. Findings in Giora, Drucker et al. (2014) support the first two predictions (2a–b), tested there with regard to “X is not his/her forte/best attribute”. We therefore test here the third set of predictions (2c) with regard to these constructions.

Assuming its default interpretation (demonstrated in Giora, Drucker et al., 2014), negative sarcasm is expected to behave differently from affirmative sarcasm (Giora, 2014). Rather than involving a privileged salience-based literal interpretation initially, as does affirmative sarcasm (Fein, Yeari, & Giora, 2014; Giora, Fein, Laadan, Wolfson, Zeituny, Kidron, Kaufman, & Shaham, 2007), the kind of negative sarcasm to be discussed here is expected to be interpreted directly; it should activate a nonsalient sarcastic interpretation immediately. Note, however, that when intended literally, such a negative construction should be interpreted indirectly, involving its inappropriate sarcastic interpretation initially, only to be revised later on.

Salience-based vs. nonsalient interpretation – A note on terminology

Before moving on to discuss the kind of negative sarcasm examined here, let us first clarify the difference between *salience-based* and *nonsalient* interpretations.

Note that both salience-based and nonsalient interpretations are not *salient* in that they are not coded in the mental lexicon. Instead, they are constructed. However, like *salience*, *nonsalience* is also a matter of degree. Note that salience acknowledges salient (coded and prominent) and less-salient (coded and less prominent) meanings as a function of degree of exposure and prototypicality (Giora, 1997, 2003); for example, a salient meaning of *film* would be ‘a movie’; a less-salient meaning would be ‘a thin layer’ or a ‘tape’ on which a movie can be recorded. The graded notion of salience further acknowledges nonsalient meanings and interpretations. *Nonsalient* meanings could be meanings of novel stimuli such as a new word or collocation. However, nonsalient interpretations must be derived, either on the basis of the salient meanings of the utterance components – termed here *salience-based* interpretations – or triggered on the basis of contextual information or some sort of internal or semantic incongruity. Given that a *salience-based* interpretation, albeit nonsalient, is based on the salient, coded meanings of the utterance components, it is relatively accessible. In contrast, a *nonsalient* interpretation, the interpretation of e.g., novel sarcastic remarks, novel metaphors, or highly familiar idioms intended literally, is removed from the salient meanings of the components of the collocation or utterance. As a result, it is harder to derive (Giora et al., 2007; Fein et al., 2014).

Importantly, according to the graded salience hypothesis (Giora, 1997, 2003), degree of salience and nonsalience and ease of processing are insensitive to degree of (non)literalness. For illustration, consider the following examples (3)–(6) (taken from Colston & Gibbs, 2002):

- (3) This one’s really sharp (said of a pair of scissors that would cut anything).
- (4) This one’s really sharp (said of a pair of scissors that wouldn’t cut anything).
- (5) This one’s really sharp (said of a brilliant student).
- (6) This one’s really sharp (said of a stupid student).

The example in (3) activates a salience-based (noncoded) literal interpretation; it is based on the salient (coded and prominent) literal meaning (‘razor-edged’) of *sharp*. The example in (4) conveys a nonsalient (noncoded) sarcastic interpretation (‘blunt’) of *sharp*, which is removed from the salient literal (‘razor-edged’) meaning of the keyword and hence from the salience-based literal interpretation of the utterance. Example (5) conveys a salience-based metaphorically intended interpretation, since it is based on the salient (coded and prominent) metaphorical (‘smart’) meaning of *sharp*. Example (6), however, conveys a nonsalient sarcastically intended interpretation (‘dumb’) – an interpretation removed from the salient metaphorical (‘smart’) meaning of *sharp* and hence from the salience-based metaphorical interpretation of the utterance.

Research shows that constructing the nonsalient sarcastic interpretation of affirmative utterances such as (4) and (6) involves their salience-based, incompatible interpretation initially. In contrast, the negative utterances examined here, such as *Punctuality is not her forte*, *Punctuality is not her most prominent feature*, are interpreted sarcastically directly, without having to go through a salience-based literal interpretation first (as shown by Giora et al., 2013; Giora, Drucker et al., 2014).

Affirmative sarcasm – On the priority of salience-based interpretations

Indeed, reviewing the way affirmative sarcasm (e.g., (4) and (6) above) is interpreted indicates that it differs from what is predicted for the negative constructions examined here. For instance, when presented outside of a specific context, non-conventionalized affirmative utterances, involving no semantic anomaly or any internal incongruity, were rated as conveying a salience-based (here, literal) interpretation; their negative counterparts, however, were rated as sarcastic (see Giora, Drucker et al., 2014). Affirmative utterances may, however, be interpreted sarcastically when presented in a context supportive of this interpretation. However, most of the studies looking into the processing of such affirmative sarcasm show, instead, that, as predicted by the graded salience hypothesis (Giora, 2003; Giora et al., 2007), noncoded salience-based contextually incompatible interpretations become available initially; nonsalient sarcastic interpretations, however, do not.³ This has been demonstrated by using various methodologies, ranging from exploring spoken natural language, which attests to the involvement of incompatible salience-based interpretation in sarcastic irony interpretation (e.g., Eisterhold, Attardo, & Boxer, 2006; Giora & Gur, 2003; Kotthoff, 2003), to reading times and response times (Colston & Gibbs, 2002; Fein et al., 2014; Gibbs, 1986b; Giora & Fein, 1999; Giora et al., 2007; see also Akimoto, Miyazawa, & Muramoto, 2012 for intentional irony), to moving windows (e.g., Ivanko & Pexman, 2003, Exp. 3; Pexman, Ferretti & Katz, 2000), eye tracking (e.g., Filik, Leuthold, Wallington, & Page, 2014; Filik & Moxey, 2010), ERPs (Filik et al., 2014), brain imaging (e.g., Eviatar & Just, 2006), and brain damage (Giora, Zaidel, Soroker, Batori, & Kasher, 2000).

3. The exception here is Gibbs' (1986a) where indirect requests (*Sure is nice and warm in here*) were understood faster when intended sarcastically (as a request to close the windows in a freezing room) than when intended literally (as complimenting a host the warmth of the place). For a reinterpretation of Gibbs (1986b), see Giora (1995).

The temporal priority of (incompatible) salience-based interpretations over (compatible) nonsalient sarcastic alternatives has been demonstrated even when targets' contextual information was highly and sometimes even explicitly supportive of a sarcastic interpretation (e.g., Katz & Pexman, 1997; Fein et al., 2014; Giora, Fein, Kaufman, Eisenberg, & Erez, 2009; Giora et al., 2007; Fein et al., 2014; Pexman et al., 2000; Pexman & Olineck, 2002; for a review, see Giora, 2014). No wonder their neighboring utterances in natural discourses resonate with this more available interpretation (see Giora, Raphaely, Fein, & Livnat, 2014). Our present studies, however, aim to show that a reverse pattern of results will be obtained for the negative utterances examined here (see also Giora et al., 2013). As shown by Giora et al. (2013) and Giora, Drucker et al. (2014), such negative constructions are interpreted and rated as sarcastic by default and are processed faster in contexts biasing them toward their sarcastic than toward their equally strongly biased salience-based interpretation. Here we will show that unlike affirmative sarcasm, when studied in corpora, such negative constructions are echoed by neighboring utterances via their default albeit nonsalient sarcastic interpretation rather than by their salience-based interpretation.

Negative sarcasm – On the priority of nonsalient interpretations

Consider the following examples, which instantiate “X is not her forte” constructions (7)–(8) and “X is not her best attribute” constructions (9)–(10), interpretable either sarcastically (7), (9) or literally (8), (10) (target constructions in boldface; interpretations in italics, for convenience):

- (7) The Columnist picked 30 good names for the article, but his comments were *lame*. Yeah ... **humor is not his forte**. (hodyYanksFan, 2005)
- (8) This is officially the first Powerpuff Girl story I ever wrote. I wrote it in 2000 shortly after I started watching the show. I found it recently and now I am sharing it with you fantabulous readers. I don't know if this is considered *funny*, because **writing humor is not my forte**, but I hope you get a *chuckle* or two out of this. Anyway, please R&R! (Rose, 2003)
- (9) Alas, **humor was not her strongest point**, and today this faux-romp looks *strained and moribund*.
- (10) **Humor is not her plus point** but she has always made us *laugh with her gimmicks*.

In examples (7), (9), the discourses feature a negative statement (*Humor is not his forte; humor was not her strongest point*), which conveys a nonliteral, sarcastic

interpretation, suggesting an opposite or an attenuated opposite of what is negated⁴ ('Rather than being humorous, "his comments were *lame*"; 'Rather than being funny, "this faux-romp looks *strained and moribund*"). In examples (8), (10), however, rather than a contrastive reading of the negated concepts, similar negative statements (*writing humor is not my forte*; *Humor is not her plus point*), convey a literal, mitigated interpretation of the concept of humor ("I hope you get a *chuckle* or two out of this"; "she has always made us *laugh with her gimmicks*").

Negative constructions such as those tested here, then, are susceptible to both nonliteral and literal interpretations. Based on natural data, however, we will adduce evidence showing that it is the nonsalient sarcastic interpretation that prevails.

Corpus-based studies – Default sarcastic interpretation

If negative constructions such as "X is not her forte" and "X is not her best attribute" generate nonliteral interpretations by default (as shown by Giora, Drucker et al., 2014), discursal instances of such constructions, potentially ambiguous between literal and nonliteral interpretations,

- i. should communicate sarcastic interpretations more frequently than salience-based (here literal) ones;
- ii. should communicate sarcastic interpretations more frequently than their affirmative counterparts, which should be primarily viewed as literal; and
- iii. their neighboring utterances should resonate with their nonsalient sarcastic rather than salience-based literal interpretation (as shown by Giora et al., 2010, 2013).

According to Du Bois (2014), discursal "resonance" relates to "the activation of affinities across utterances". Among other things, this means that neighboring statements, either preceding (as proposed by Giora, 2007) or following a given utterance, echo or relate to that utterance's interpretation, thereby reflecting activated correspondences across utterances.

Previous studies, looking into the environment of affirmative sarcasm, show that the neighboring utterances of such remarks resonate with their salience-based interpretation. For instance, findings of an hour's conversation among Israeli friends showed that 75% of such sarcastic remarks were referred to via their

4. On sarcasm or verbal irony denoting an opposite or a near opposite of what is said, see Giora (1995). On negative sarcasm as a form of understatement, see Giora et al. (2005).

salience-based (often) literal interpretation, despite its contextual inappropriateness (Giora & Gur, 2003; see also Giora, 2003). Similarly, findings in Kotthoff (2003) showed that affirmative sarcastic utterances, exchanged among German friends, were also referred to via their salience-based interpretation. This has also been shown to be true of written discourses, when the self-same writers resonated with their own affirmative sarcastic remarks via their salience-based interpretations (Giora, Raphaely et al., 2014). These findings, then, suggest that, like comprehenders (Giora et al., 2007; Giora, 2011a), producers (of both written and spoken discourse) activate contextually inappropriate but salience-based interpretations of affirmative sarcasm, as would be predicted by the Graded Salience Hypothesis (Giora, 2003).⁵

However, the view of default nonliteral interpretations (Giora et al., 2010, 2013; Giora, Drucker et al., 2014) has different predictions with regard to the way neighboring utterances of the negative constructions under scrutiny here will relate to their interpretations. In contrast to affirmative sarcastic utterances, the negative constructions are expected to be referred to via their sarcastic albeit non-salient interpretation (see examples (5)–(8) above).

In what follows, then, the distribution of nonsalient vs. salience-based interpretations of negative and affirmative constructions will be examined (Study 1). How selectively the environment of such negative constructions resonates with their potentially ambiguous interpretation will be also investigated (Study 2).

Study 1

In Study 1 we test the first two predictions concerning the usage of such constructions. Specifically, (i) constructions such as “X is not her forte” and “X is not her best attribute” will be used sarcastically, conveying their nonsalient sarcastic interpretation more often than their salience-based literal interpretation. In contrast, (ii) their affirmative versions will be used literally, conveying their salience-based interpretation. To provide such evidence, we set out to study the various interpretations of the first approx. 150 occurrences of such negative and affirmative constructions in Hebrew and English, carrying out a Google search. On the basis of the contextual environment of these constructions, four judges whose expertise is sarcasm interpretation (including two of the authors, one of whom wasn't originally a prospective author) decided whether each utterance was

5. On production and comprehension sharing similar processes, see Pickering & Garrod (2013) and references therein; on speakers and comprehenders mirroring each other's neural activities while interacting, see Hasson, Avidan, Gelbard, Vallines, Harel, Minshew, & Behrmann (2009); Stephens, Silbert, & Hasson (2010); see also Giora (2011b).

Table 1. Distribution of sarcastic and literal interpretations in negative and affirmative utterances (in Hebrew and English)

Forte constructions	Sarcastic	Literal	Total
Patience is not his/her/my forte (Hebrew)	17	0	17
Patience is his/her/my forte (Hebrew)	0	4	4
English is not his/her/my forte (Hebrew)	16	5	21
English is his/her/my forte (Hebrew)	0	9	9
Humor is not his/her/my forte (Hebrew)	13	0	13
Humor is his/her/my forte (Hebrew)	0	11	11
Patience is not his/her/my forte (English)	28	1	29
Patience is his/her/my forte (English)	0	22	22
French is not his/her/my forte (English)	12	0	12
French is his/her/my forte (English)	0	8	8
Humor is not his/her/my forte (English)	31	4	35
Humor is his/her/my forte (English)	0	72	72
Most prominent characteristic			
X is not his/her/my most prominent characteristic (Hebrew)	10	4	14
X is his/her/my most prominent characteristic (Hebrew)	4	25	29
Total			
Negative	127	14	141
Affirmative	4	151	155

used sarcastically, or literally, or was unclear (given the paucity of the context). In addition to unclear cases, repetitions were also excluded (all in all 799 cases). Agreement between judges was very high overall (96%), and all differences were resolved after a discussion.

As demonstrated by Table 1, looking at 141 naturally occurring negative utterances, such as *Patience is not her forte/most pronounced characteristic*, reveals that, as predicted, most of them (90%) were intended sarcastically; by contrast, most of the 155 (approx. 97%) affirmative counterparts examined, were intended literally.

Findings based on natural uses of negative constructions (*Humor is not my forte/best attribute*) and affirmative counterparts (*Humor is my forte/best attribute*), both in Hebrew and English, then, support the view that such constructions invite nonsalient nonliteral interpretations by default. They show that (i) the default interpretation of such constructions is sarcastic. They further show that such constructions communicate sarcastic interpretations more frequently than their affirmative counterparts, which communicate a salience-based literal interpretation. (For similar results with regard to another negative construction – “X s/he is not”, see also Giora et al., 2013).

Study 2

In Study 2 we test the prediction that (iii) the contextual environment of the negative utterances (“X is not her forte/most impressive quality”), which were shown to trigger a sarcastic interpretation (see Study 1), will resonate with their nonsalient sarcastic interpretation (11) rather than with their salience-based literal interpretation (12). This should be true of utterances’ prior and late context (target utterances in bold; resonating utterances in italics, for convenience):

(11) “I am *fast*. To give you a reference point, I am somewhere between a snake and a mongoose. And a panther.” – Dwight Schrute, *The Office*.

Patience is not my forte. *I like to get things done yesterday*, and it’s in my nature to want to get everywhere *as fast as humanly possible*. My attitude toward my debt is no different. I’m *in a hurry*, so heaven help anything that gets in my way!⁶

(12) A lot of people do something like this by sending their dog to his bed to *calm down and wait*, and it does teach them *patience*. I do not know how young you can start with that length of time – Capri was about 5 months when I started with her with decent results (though she is a different dog, and **patience is not her forte**). (Melbrod, 2010)

In (11), features denoting the opposite of *patience* reverberate in the given context of the target utterance (*I like to get things done yesterday; as fast as humanly possible; in a hurry*). In (12), affinities with *patience* are activated (*calm down and wait; patience*).

The same three expert judges from Study 1 (educated in discourse resonance) examined the contexts of 127 such naturally occurring instances. Agreement between judges was high (89%) and all disagreements were resolved after a discussion. Findings show that, in 83 cases, the environment of the negative targets in question resonates either with their nonsalient sarcastic interpretation or with their salience-based literal interpretation. However, as predicted by the view of default nonliteral interpretations, the environment of 73 out of these 83 cases (88%) resonates only with their nonsalient sarcastic interpretation; while in only 10 cases (12%) does it resonate with the salience-based literal interpretation only. Thus, for each of the items examined (*Patience is not his forte; Humor is not her forte*) and other such constructions with different concepts (*Charm is not his most endearing quality*), resonance with the nonsalient sarcastic interpretation is the norm, as an exact binominal probability test shows (see Table 2). Of the other

6. <http://bsindebt.com/en/Page-9>

Table 2. Distribution of different types of resonance in the environment of negative utterances in Hebrew and English and results of exact binominal probability test for the superiority of sarcastic resonance

Forte/most prominent characteristic constructions	Only sarcastic	Only literal	Both	None	Total	p-values
Patience is not my/our/his/her forte (Hebrew)	7	3	6	1	17	p = .17
English is not my/our/his/her forte (Hebrew)	13	1	2	0	16	p < .001
Humor is not my/our/his/her forte (Hebrew)	9	0	2	2	13	p < .005
Patience is not my/our/his/her forte (English)	15	4	9	0	28	p < .01
French is not my/our/his/her forte (English)	7	0	3	2	12	p < .01
Humor is not my/our/his/her forte (English)	15	2	11	3	31	p < .005
X is not my/our/his/her most prominent characteristic (Hebrew)	7	0	2	1	10	p < .01
Total	73	10	35	9	127	p < .0001

44 cases, the environment of 35 utterances reflects *both* their sarcastic and literal interpretation, while in 9 cases the environment does not reflect any of the interpretations.

Evidence of the frequency of contextual resonance with the nonsalient sarcastic interpretation of such negative utterances, then, provides support for the view that such negative utterances communicate a low-salience sarcastic reading by default.

Discussion

In this article we weigh nonsalient sarcastic interpretations against salience-based literal interpretations. We examine negative utterances of the form “X is not her/his forte” and “X is not her/his most prominent characteristic”. Results from two corpus-based studies lend support to the view of default nonliteral interpretations (Giora et al., 2010, 2013; Giora, Drucker et al., 2014). They show that negative constructions of the kind tested here are interpreted sarcastically by default.

For any utterance to convey a nonliteral interpretation *by default*, it has to meet the conditions for default nonliteral interpretations. These conditions guarantee that utterances are ambiguous between literal and nonliteral interpretations

a priori so that a preference of one over the other is permissible. To maintain such an ambiguity, utterances have to be novel and free of both utterance internal and external cues known to invite nonliteralness. They should thus be

- a. *unfamiliar* so that salient, coded nonliteral *meanings* of expressions and collocations may not be involved;
- b. free of *semantic anomaly* or *any kind of internal incongruity* (known to trigger nonliteralness), so that both literal and nonliteral interpretations may be allowed; and
- c. presented outside of a biasing *context* so that any pragmatic incongruity or supportive information, including explicit marking (e.g. *metaphorically/sarcastically speaking, literally, pun intended; gee, gosh*), intonation, prosodic cues, or nonverbal cues (e.g., facial expressions, gestures) may neither invite nor disinvite a specific interpretation.

The view of default nonliteral interpretations predicts that under such conditions, some negative constructions, such as tested here, will be (i) rated and interpreted sarcastically when presented in isolation, and (ii) will be processed faster in contexts biasing their interpretation toward their nonsalient sarcastic interpretation than toward their salience-based literal interpretation. (iii) When occurring in natural discourse, (a) they will convey a nonsalient sarcastic interpretation more often than a salience-based literal interpretation and (b) more often than their affirmative versions, which will convey a salience-based (here literal) interpretation. Furthermore, (c) their contextual environment will align with their sarcastic interpretation rather than with their literal alternative.

Giora, Drucker et al. (2014) tested the first two predictions (i–ii) with regard to the constructions examined here. To test predictions (iii a–c), Studies 1–2 here were designed. Results support the view of default nonliteral interpretations. They demonstrate that, when in a natural environment, these negative utterances (e.g., *Punctuality is not his forte; Humor is not my best attribute*) convey their nonsalient sarcastic interpretation more often than their salience-based literal interpretation, and more often than their affirmative counterparts, which are primarily literal (Study 1). Furthermore, the contextual environment of these negative utterances resonates with their nonsalient sarcastic interpretation (Study 2), disclosing their preference for nonliteralness. (For similar findings concerning sarcastic constructions such as “X s/he is not”, see Giora et al., 2013).

Although the full set of features constraining these constructions has yet to be discovered, one wonders whether it is the structural markedness of these fronted constructions that plays a crucial role in affecting sarcasm. Giora, Drucker et al. (2014, Experiment 5) rule out this option. They show that structural markedness does not play any role in prompting sarcasm. Both the marked versions

(*Punctuality is not his forte; Humor is not my best attribute*) and their unmarked counterparts (*His forte is not Punctuality; His best attribute is not humor*) scored similarly high on sarcasm approx. 5 on a 7 point sarcasm scale). In contrast, their affirmative alternatives scored similarly low on that scale (approx. 2). Such results suggest that markedness is ineffective in affecting sarcasm by default. Negation, however, is!⁷

Recall that when affirmative sarcasm was tested, its environment reflected its salience-based nonsarcastic interpretation significantly more often than its nonsalient sarcastic interpretation, as predicted by the Graded salience hypothesis (Giora, 1997, 2003; Giora et al., 2007; Fein et al., 2014; on Affirmative Sarcasm, see above). In contrast, it cannot explain the priority of nonsalient interpretations of negative utterances over their salience-based interpretations.

We propose to view negation as a low-salience marker, alerting addressees to features low on salience such as when a negated positive concept is at stake (on low-salience marking, see Givoni et al., 2013). For instance, in Giora et al. (2005), when in a biasing context, (Hebrew) overstatements, marked by low-salience markers, whether negative (*He is **not** particularly bright*) or affirmative (*Looks like he is particularly smart*) were interpreted sarcastically. Importantly, however, when these items were presented in isolation, negated overstatements were rated as more sarcastic than both the non-modified (affirmative) overstatements (*He is particularly smart*) and the non-overstatements versions of the negated utterances (*He is not smart*). Attenuated (negated) overstatements, then, were interpreted sarcastically even without contextual support.

Along similar lines, Veale (2012, 2013) has shown that another such hedge – *about* – tends to invite a sarcastic interpretation when modifying *as X as Y* similes (...*about as soothing as a cat in a blender*). Findings based on a large database of creative similes, show that hedging a simile (which on its own is a hedged construction) by using the *about* marker alerts “the audience to the possibility of irony”, thereby minimizing “the risk that the author’s creative intent is misunderstood” (p. 14).

7. In Giora et al. (2013) we weighed Hebrew constructions marked for negation (*Smart he is not*) against their affirmative alternatives marked for affirmation (*Smart he is yes*). As here, it was only the negative versions that facilitated sarcasm immediately and were rated and interpreted as sarcastic; versions marked for affirmation were interpreted literally. Additionally, as here, the environment of the negative utterances resonated with their nonsalient sarcastic interpretation; their affirmative versions were echoed via their salience-based literal interpretation. Diverging from Horn’s (1984, 1989, 1993) principle of “Division of Pragmatic Labor”, then, in the cases tested in our studies, markedness of any sort cannot account for the various results reported here and elsewhere related to default interpretations (Giora et al., 2010, 2013).

As mentioned above and following Giora et al. (2010, 2013) and Givoni et al. (2013), negation is shown here to highlight a concept's meanings low on salience via rejecting them. Hence, it also prompts a concept's end-of-the scale features, making accessible nonsalient sarcastic interpretations.

In sum, the results of the present studies are unprecedented. They adduce evidence supporting the view of default nonliteral interpretations.

Acknowledgments

This research was supported by a grant to Rachel Giora by THE ISRAEL SCIENCE FOUNDATION (grant no. 436/12).

References

- Akimoto, Yoritaka, Shiho Miyazawa, & Toshiaki Muramoto. 2012. Comprehension processes of verbal irony: The effects of salience, egocentric context, and allocentric theory of mind. *Metaphor and Symbol*, 27(3), 217–242. DOI: 10.1080/10926488.2012.691750
- Beardsley, Monroe C. 1958. *Aesthetics*. New York: Harcourt, Brace and World.
- Colston, Herbert L., & Raymond W. Gibbs Jr. 2002. Are irony and metaphor understood differently? *Metaphor and Symbol*, 17, 57–80. DOI: 10.1207/S15327868MS1701_5
- Du Bois, John W. 2014. Dialogic syntax. *Cognitive Linguistics*, 25(3), 359–410.
- Eisterhold, Jodi, Salvatore Attardo & Diana Boxer. 2006. Reactions to irony in discourse: Evidence for the least disruption principle. *Journal of Pragmatics*, 38(8), 1239–1256. DOI: 10.1016/j.pragma.2004.12.003
- Eviatar, Zohar, & Marcel Adam Just. 2006. Brain correlates of discourse processing: An fMRI investigation of irony and conventional metaphor comprehension. *Neuropsychologia*, 44(12), 2348–2359. DOI: 10.1016/j.neuropsychologia.2006.05.007
- Fein, Ofer, Menahem Yeari & Rachel Giora. 2014. On the priority of salience-based interpretations: The case of irony. *Intercultural Pragmatics*, 12(1).
- Filik, Ruth, Hartmut Leuthold, Katie Wallington & Jemma Page. 2014. Testing theories of irony processing using eye-tracking and ERPs. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. Advance online publication. <http://dx.doi.org/10.1037/a0035658>
- Filik, Ruth, & Linda M. Moxey. 2010. The on-line processing of written irony. *Cognition*, 116(3), 421–436. DOI: 10.1016/j.cognition.2010.06.005
- Gibbs, Raymond W. Jr. 1986a. Comprehension and memory for nonliteral utterances: The problem of sarcastic indirect requests. *Acta Psychologica*, 62, 41–57. DOI: 10.1016/0001-6918(86)90004-1
- Gibbs, Raymond W. Jr. 1986b. On the psycholinguistics of sarcasm. *Journal of Experimental Psychology: General*, 115, 3–15. DOI: 10.1037/0096-3445.115.1.3
- Gibbs, Raymond W. Jr. 1994. *The poetics of mind: Figurative thought, language, and understanding*. New York: Cambridge University Press.

- Gibbs, Raymond W. Jr. 2002. A new look at literal meaning in understanding what is said and implicated. *Journal of Pragmatics*, 34, 457–486. DOI: 10.1016/S0378-2166(01)00046-7
- Giora, Rachel. 1995. On irony and negation. *Discourse processes*, 19(2), 239–264. DOI: 10.1080/01638539509544916
- Giora, Rachel. 1997. Understanding figurative and literal language: The graded salience hypothesis. *Cognitive Linguistics*, 7, 183–206. DOI: 10.1515/cogl.1997.8.3.183
- Giora, Rachel. 2003. *On our mind: Salience, context, and figurative language*. New York: Oxford University Press. DOI: 10.1093/acprof:oso/9780195136166.001.0001
- Giora, Rachel. 2007. “A good Arab is not a dead Arab – a racist incitement”: On the accessibility of negated concepts. In I. Kecskés, and L. R. Horn (eds.) *Explorations in Pragmatics: Linguistic, Cognitive, and Intercultural Aspects*, 129–162. Berlin: Mouton de Gruyter.
- Giora, Rachel. 2011a. Will anticipating irony facilitate it immediately? In Dynel, M. (ed.), *The pragmatics of humour across discourse domains*, 19–31. Amsterdam: John Benjamins. DOI: 10.1075/pbns.210.03gio
- Giora, Rachel. 2011b. “Your baby is no longer an infant”. On metaphor as context. In Michael Gluzman & Orly Lubin (eds.), *Intertextuality in literature and culture*, 235–247. Tel Aviv: Hakibbuz Hameuchad. (In Hebrew)
- Giora, Rachel. 2014. When negatives are easier to understand than affirmatives: The case of negative sarcasm. In Chungmin Lee and Pierre Larrivé (eds.). In press.
- Giora, Rachel, Ari Drucker, Ofer Fein & Itamar Mendelson. 2014. Default sarcastic interpretations: On the priority of nonsalient interpretations. *Discourse Processes*. In press.
- Giora, Rachel & Ofer Fein. 1999. On understanding familiar and less-familiar figurative language. *Journal of Pragmatics*, 31(12), 1601–1618. DOI: 10.1016/S0378-2166(99)00006-5
- Giora, Rachel, Ofer Fein, Jonathan Ganzi, Natalie Alkeslassy Levi & Hadas Sabah. 2005. Negation as mitigation: the case of negative irony. *Discourse Processes*, 39, 81–100. DOI: 10.1207/s15326950dp3901_3
- Giora, Rachel, Ofer Fein, Dafna Laadan, Joe Wolfson, Michal Zeituny, Ran Kidron, Ronie Kaufman & Ronit Shaham. 2007. Expecting irony: Context vs. salience-based effects. *Metaphor and Symbol*, 22(2), 119–146. DOI: 10.1080/10926480701235346
- Giora, Rachel, Ofer Fein, Nili Metuki & Pnina Stern. 2010. Negation as a metaphor-inducing operator. In L. Horn (ed.), *The expression of negation*, 225–256. Mouton de Gruyter series “The expression of cognitive categories” under the general editorship of Wolfgang Klein and Stephen Levinson.
- Giora, Rachel, Ofer Fein, Ronie Kaufman, Dana Eisenberg & Shani Erez. 2009. Does an “ironic situation” favor an ironic interpretation. *Cognitive poetics: Goals, gains and gaps*, 383–399. Berlin/New York: Mouton de Gruyter.
- Giora, Rachel & Inbar Gur. 2003. Irony in conversation: salience and context effects. In B. Nerlich, Z. Todd, V. Herman and D. Clarke (eds.) *Polysemy: Flexible Patterns of Meanings in Language and Mind*, 297–316. Berlin: Walter de Gruyter.
- Giora, Rachel, Elad Livnat, Ofer Fein, Anat Barnea, Rakefet Zeiman & Iddo Berger. 2013. Negation generates nonliteral interpretations by default. *Metaphor and Symbol*, 28, 89–115. DOI: 10.1080/10926488.2013.768510
- Giora, Rachel, Moshe Raphaely, Ofer Fein & Elad Livnat. 2014. Resonating with contextually inappropriate interpretations: The case of irony. *Cognitive Linguistics*, 25(3), 443–445.
- Giora, Rachel, Eran Zaidel, Nachum Soroker, Gila Batori & Asa Kasher. 2000. Differential effects of right- and left-hemisphere damage on understanding sarcasm and metaphor. *Metaphor and Symbol*, 15(1–2), 63–83. DOI: 10.1080/10926488.2000.9678865

- Givoni, Shir, Rachel Giora, & Dafna Bergerbest. 2013. How speakers alert addressees to multiple meanings. *Journal of Pragmatics*, 48(1), 29–40. DOI: 10.1016/j.pragma.2012.11.011
- Grice, H. Paul. 1975. Logic and conversation. In P. Cole & J. Morgan (eds.), *Speech acts. Syntax and semantics*, Vol. 3, 41–58. New York: Academic Press.
- Hasson, Uri, Galia Avidan, Hagar Gelbard, Ignacio Vallines, Michal Harel, Nancy Minshew & Marlene Behrmann. 2009. Shared and idiosyncratic cortical activation patterns in autism revealed under continuous real-life viewing conditions. *Autism Research*, 2(4), 220–231. DOI: 10.1002/aur.89
- HodyYanksFan 2005. <http://forums.nyyfans.com/archive/index.php/t-92160.html> (Retrieved on February 18th, 2014).
- Horn, R. Laurence. 1984. Toward a new taxonomy for pragmatic inference: Q-based and R-based implicature. In Schiffrin, D. (ed.), *Meaning, Form and Use in Context (GURT '84)*, 11–42. Washington: Georgetown University Press.
- Horn, R. Laurence. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.
- Horn, R. Laurence. 1993. Economy and redundancy in a dualistic model of natural language. In Shore, S., & Vilkuina, M. (eds.), *SKY – Yearbook of the Linguistic Association of Finland*, 33–72.
- Ivanko, Stacey L., & Penny M. Pexman. 2003. Context incongruity and irony processing. *Discourse Processes*, 35(3), 241–279. DOI: 10.1207/S15326950DP3503_2
- Katz, Albert N. & Penny M. Pexman. 1997. Interpreting figurative statements: Speaker occupation can change metaphor to irony. *Metaphor and Symbol*, 12(1), 19–41. DOI: 10.1207/s15327868ms1201_3
- Kotthoff, Helga. 2003. Responding to irony in different contexts: On cognition in conversation. *Journal of Pragmatics*, 35(9), 1387–1411. DOI: 10.1016/S0378-2166(02)00182-0
- Melbrod. 2010. <http://www.dobermantalk.com/general-training-obedience/37864-near-misses-obedience-training-lol.html>. (Retrieved on February 14th, 2010).
- Partington, Alan. 2011. Phrasal irony: Its form, function and exploitation. *Journal of Pragmatics*, 43(6), 1786–1800. DOI: 10.1016/j.pragma.2010.11.001
- Pexman, Penny M., Todd R. Ferretti & Albert N. Katz. 2000. Discourse factors that influence on-line reading of metaphor and irony. *Discourse Processes*, 29, 201–222. DOI: 10.1207/S15326950dp2903_2
- Pexman, Penny M. & Kara M. Olineck. 2002. Understanding irony how do stereotypes cue speaker intent? *Journal of Language and Social Psychology*, 21(3), 245–274. DOI: 10.1177/0261927X02021003003
- Pickering, Martin & Simon Garrod. 2013. An integrated theory of language production and comprehension. *Behavioral and Brain Sciences*, 36(4), 329–392. DOI: 10.1017/S0140525X12001495
- Rose, Z. 2003. Miss Keane strikes back. <https://www.fanfiction.net/s/1466130/1/Miss-Keane-Strikes-Back> (Retrieved on January 14th, 2013)
- Stephens, Greg J., Lauren J. Silbert & Uri Hasson. 2010. *PNAS Early Edition*, 1–6. <http://www.pnas.org/content/107/32/14425>
- Veale, Tony. 2012. *Exploding the creativity myth: The computational foundations of linguistic creativity*. London New York: Continuum International Publishing Group.
- Veale, Tony. 2013. Humorous similes. *Humor*, 26(1), 3–22.