Making ads less complex, yet more creative and persuasive: the effects of conventional metaphors and irony in print advertising

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Rhetorical tropes like metaphors and irony are widely used in print advertising. Current advertising literature assumes that these different tropes (metaphor, irony) are persuasive when they are sufficiently novel and complex to increase advertising elaboration. However, we propose that, in some cases, tropes can also be persuasive when they present conventional and concrete images of abstract product qualities. To test if conventionality can explain the persuasiveness of various tropes (metaphor, irony), we conducted a 2 (conventional metaphor vs. no metaphor) × 2 (conventional irony vs. no irony) multiple-message experiment. Results demonstrate that conventional metaphors are persuasive by reducing complexity and increasing creativity and ad appreciation. Conventional irony, in contrast, has little effect on persuasiveness. Thus, differentiating between various tropes (metaphor, irony) is important in predicting persuasion effects: advertisers should refrain from using conventional irony, but including conventional metaphors about abstract product qualities in print advertising is advisable.

Keywords: print advertising; rhetoric; metaphors; irony; conventionality; experiments

It is a truism that advertising has to be creative in order to be effective (Rossiter and Bellman 2005). In a cluttered advertising environment, micro-executional elements of advertisements such as the person of the presenter (cf. Praxmarer 2011) or the type of appeal (cf. Chang 2011; Chang and Li 2010; Lin and Shen 2012) can make a large impact on persuasiveness. Another micro-executional element that can be persuasive is rhetorical figures, i.e., deviations from expected language (Mothersbaugh, Huhmann and Franke 2002). Because rhetorical figures increase message elaboration (e.g., Hoeken et al. 2009; McQuarrie and Mick 1996), they can positively influence the persuasiveness of advertisements (e.g., McQuarrie and Mick, 2003, 2009; Stathakopoulos, Theodorakis and Mastoridou 2008; van Mulken, Le Pair and Forceville 2010). These findings can be explained by resource-matching theory (Anand and Sternthal 1990; Huhmann and Albinsson 2012): resolving a rhetorical figure is like solving a puzzle. If the puzzle is too easy or too difficult, readers experience no processing pleasure. However, if the puzzle is moderately difficult, recipients may solve the puzzle with relative ease and experience pleasure in processing the ad, which in turn enhances the persuasiveness of these advertisements. In the case of the moderately complex rhetorical figure, available cognitive resources match resource demand, which is why these are assumed to be most persuasive.

These previous findings assume a curvilinear relationship (a so-called inverted U-curve) between complexity and persuasion. However, resource matching may not be

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the only way in which tropes like metaphors can be persuasive. Both linguists and psychologists have recently investigated the persuasiveness of conventional metaphors, which, for instance, help to construct organizational identities (Cornelissen, Holt and Zult 2011), help in sensemaking of illnesses (Gibbs and Franks 2002), and help in thinking about complex political issues (Jaspaert et al. 2011). Such conventional metaphors are not persuasive via resource matching. Instead, they make abstract concepts easier to understand for recipients, which positively influences recipients' evaluation of the objects described.

Many advertisements focus on relatively abstract product qualities like the storage capacity of an e-reader or the image quality of a TV. Given the ubiquity of positive effects of conventional metaphors in other fields, it could be expected that conventional metaphors positively affect the persuasiveness of advertisements by making these abstract qualities more concrete. Hence, a first aim of this paper is investigating the potential persuasiveness of conventional metaphors in print advertising.

Second, advertising theorists have divided rhetorical figures (e.g., metaphor, irony, rhyme, alliteration) into the general categories of schemes and tropes (cf. Huhmann and Albinsson 2012; McQuarrie and Mick 1996; Mothersbaugh, Huhmann, and Franke 2002; van Enschot, Beckers and van Mulken 2010). Schemes like rhyme (e.g., 'Nicorette, you can beat the cigarette') and alliteration (cf. Diet Coke's 'Love it Light') are built around excessive regularity, while tropes like metaphor and irony consist of an intended meaning that is different from the literal meaning; tropes thus have to be re-interpreted by recipients. Various advertising scholars generalize their findings to the levels of schemes or tropes (e.g., Huhmann and Albinsson 2012; Kjeldsen 2012; Kronrod and Danziger 2013; McQuarrie and Mick 1996; Mothersbaugh, Huhmann, and Franke 2002; van Enschot, Beckers and van Mulken 2010). An implicit assumption of such research is that results found for one trope (e.g., metaphor) also apply to another trope (e.g., irony). In contrast, other studies focus on individual rhetorical figures in advertising such as novel metaphors (cf. Phillips and McQuarrie 2009; van Mulken, le Pair, and Forceville 2010), hyperbole (extreme exaggeration, e.g., the campaign for *AXE* deodorant in which men using this specific brand become irresistible to women; Callister and Stern 2007), personification (i.e., 'inanimate objects are assigned human attributes,' cf. Delbaere, McQuarrie and Phillips 2011) and resonance (i.e., 'a twist within the advertisement structure that ends in a doubleness of meaning,' Stathakopoulos, Theodorakis, and Mastoridou 2008). These studies implicitly assume that different figures may lead to differential ad responses. The second aim of our paper is to test whether the effects of conventionality on persuasiveness hold when comparing two different figures: metaphor and irony.

Conventional metaphors in advertising

Metaphors are cross-domain mappings, which means that elements from a source domain are mapped onto a target domain (Lakoff and Johnson 1980). So, when the Dutch airline KLM, for instance, metaphorically compared their airplanes to swans, elements from the source domain of swans (e.g., elegance) were mapped onto the target of planes. However, even though all cross-domain comparisons are classified under the term 'metaphor,' not all metaphors are processed equally. The Career of Metaphor Theory (CaMeTh, Bowdle and Gentner 2005) posits that metaphors have an evolution of their own and − depending on their place in the evolutionary chain − are processed in one of two distinct ways: by comparison or by categorization.

When metaphors are first introduced and novel, CaMeTh argues that they are processed by comparison. For example, in the metaphoric comparison of swans and airplanes, the reader is forced to compare the two concepts to discover what they have in common. Only after some scrutiny of comparing source and target can the reader solve and interpret the metaphor. In this way, novel metaphors serve as a puzzle the reader needs to solve by connecting source and target domains.

Novel metaphors have been widely investigated in advertising, and various studies show that novel metaphors can indeed be effective persuasive devices in advertising (e.g., McQuarrie and Mick 2003, 2009; Mothersbaugh, Huhmann, and Franke 2002; Phillips and McQuarrie 2009; van Mulken, le Pair, and Forceville 2010). These studies unequivocally demonstrate that novel metaphors are most persuasive when they are moderately complex; when the metaphoric comparison is too complex, readers get frustrated and do not appreciate the metaphor. When the metaphor is moderately complex, readers experience pleasure in having successfully solved the metaphoric puzzle, which in turn leads to a more positive assessment of the ad and the brand.

When a specific metaphor has been used for some time, it loses its novelty and becomes conventional. CaMeTh argues that these metaphors are processed by categorization, which means that the metaphor's intended meaning is already stored ('categorized') in the recipient's mind (Bowdle and Gentner 2005; Steen 2011). For instance, the metaphor of the digital filing cabinet embedded in computer operating systems like MS Windows has become so conventionalized that recipients no longer notice its metaphoric nature.

Neurological evidence suggests that different brain regions are activated during the processing of *novel* as compared to *conventional* metaphors (e.g., Mashal et al. 2007; Subramaniam et al. 2012). These different processes suggest that both types of metaphors can impact persuasion in different ways. Where novel metaphors present the recipient with a puzzle to be solved, conventional metaphors may serve to make an abstract concept more concrete (Steen 2011). Research from other fields shows that this process of reducing complexity can affect issue perceptions. For instance, scholars from organizational communication argue that conventional metaphors are used to think of organizations in metaphoric terms of machines or organisms (e.g., Cornelissen and Kafouros 2008; Cornelissen, Holt, and Zundel 2011; Morgan 2006). These conventional metaphors help to make the abstract organization more concrete and provide a frame for thinking about the organization. In order to bolster support for organizational change (Cornelissen, Holt, and Zundel 2011) or new business ventures (Cornelissen, Clarke and Cienki 2012), organizational literature suggests that the most effective pitches for change adequately address these changes or new ventures from within the metaphors that are already in usage.

Further support for the impact of conventional metaphors can be found in the field of political communication. Lakoff (2009) presents an overview of metaphors in US political discourse and argues that debates between Republicans and Democrats mainly centre around different conventional metaphors, leading to advocating different political policies. This perspective has been underscored by recent empirical research showing how Democrats and Republicans differentially use such conventional metaphors in their presidential campaign advertisements (Moses and Gonzales, forthcoming; Ohl et al. 2013). Furthermore, exposure to conventional metaphors about complex political issues like sustainable food production can steer the way people think about such issues (Jaspaert et al. 2011).

Thus, conventional metaphors may act implicitly as persuasive vehicles in providing concrete content to abstract concepts. We posit that conventional metaphors may serve a

similar purpose in advertising, especially when they are used to visualize abstract qualities of products (e.g., the storage capacity of an e-reader). So, we expect that such conventional metaphors can make an abstract concept more concrete, which may affect important advertisement evaluations. In other words, conventional metaphors may make it easier for consumers to understand the abstract benefit of the product that is emphasized. This implies that conventional metaphors may make the advertisement less complex than literal claims of the product's qualities.

A second expectation raised by the above reasoning is that ads with conventional metaphors are perceived as more creative than ads with literal statements, through vividness. As concreteness is one of the constituents of vividness (e.g., Fennis, Das and Fransen 2012), advertisements with conventional metaphors may be perceived as more vivid than advertisements with literal statements. Various studies have shown positive relations between vividness and perceived creativity (e.g., Antonietti and Colombo 2011; LeBoutillier and Marks 2003) and between vividness and ad appreciation (Burns, Biswas and Babin 1993; Fennis, Das and Fransen 2012), which implies that ads with conventional metaphors would be perceived as more creative and are more appreciated than ads with literal statements. Thus, our first hypothesis is:

H1: Advertisements including conventional metaphors are (a) perceived as less complex, (b) perceived as more creative, and (c) appreciated more than advertisements without conventional metaphors.

Furthermore, using conventional metaphors may have positive effects on ad persuasiveness. After all, various studies have shown that advertisements that are seen as relatively easy and creative (e.g., Burns, Biswas and Babin 1993; McQuarrie and Mick 2003, 2009; Phillips and McQuarrie 2009) and that are well appreciated (Brown and Stayman 1992; Burns, Biswas and Babin 1993) typically result in a more positive brand attitude and purchase intention. While many studies assume such a causal relationship also exists for rhetorical tropes like metaphors (cf. McQuarrie and Mick 2003, 2009; van Mulken, le Pair, and Forceville 2010), few studies have actually investigated these relationships in a causal mediation model. Therefore, we assume that:

H2: The persuasive effects of conventional metaphors on brand attitude and purchase intention are mediated by (a) perceived complexity, (b) perceived creativity, and (c) ad appreciation.

Metaphor versus irony

Many advertising studies generalize their findings to the level of schemes or tropes (e.g., McQuarrie and Mick 1996; Mothersbaugh, Huhmann, and Franke 2002; van Enschot, Beckers and van Mulken 2010), implicitly assuming that results found for the trope of metaphors are also applicable to the trope of irony. Metaphors and irony are both seen as so-called 'destabilization tropes' (McQuarrie and Mick 1996), which implies that the reader has to infer the difference between the literal and intended meaning of the trope. However, the two types of tropes assume a different relation between the literal and intended meanings. In metaphor, a comparison is made between elements from a source and a target domain (Lakoff and Johnson 1980). Irony, however, works with opposition, because irony implicitly indicates an evaluation contrary to the literal one (Burgers, van Mulken and Schellens 2011).

For instance, in a recent advertising campaign for the fashion website *Zalando*, consumers are ironically warned about the *Zalando virus* (Weber 2012): people who visit the

website are said to lose the ability to stop purchasing clothes from the store. In this campaign, the literal evaluation is negative as the website is compared to an illness. The intended message is positive, however, because *Zalando* wants the consumer to see its website in a positive light as pleasantly contagious.

Like metaphor (Koc and Ilgun 2010; Phillips and McQuarrie 2005), irony is often used in print advertising (Burgers, van Mulken and Schellens 2012a; Koc and Ilgun 2010; Phillips and McQuarrie 2005). Like metaphor, irony can also be conventional or novel (e.g., Barbe 1995). Yet conventional irony may work in different ways from conventional metaphors. While conventional metaphors can become lexicalized to such a degree that the metaphoric meanings are even included in the dictionary (cf. MacArthur 2005), irony is context-dependent. This means that every comment can be literal or ironic depending on the context (Wallace, forthcoming). For instance, in the case of a clever performance, the comment 'Gee, he is really smart' is literal, and in the case of a dim performance, it is ironic.

Thus, even when irony is conventional, recipients have to solve a little puzzle (albeit a simple one) to come to the intended meaning. This implies that when consumers succeed in comprehending conventional irony on a level comparable to literal statements, the small puzzle may have led them to perceive the conventional irony as more complex than literal statements. For conventional irony, we thus expect that:

H3: Advertisements including conventional irony are perceived as more complex than advertisements without conventional irony.

Second, conventional irony may be a puzzle, but it is likely to be a very easy one. After all, conventionality has been noted as one of the constituents of salience (Giora 1999, 2003). The more salient a certain expression, the easier it is to understand that expression (Giora 1999, 2003). Thus, building on the theory of the inverted U-curve (McQuarrie and Mick 2003, 2009; van Mulken, le Pair, and Forceville 2010), conventional irony may be so easy that recipients almost immediately come to the intended meaning. As such, we expect that recipients experience no additional pleasure in processing this trope which implies that conventional irony will have little or no effects of persuasiveness.

Finally, most studies on tropes in advertising focus on single tropes in isolation, which means that, for instance, they only focus on metaphors or only focus on irony. Yet various studies demonstrate that such tropes can be combined in discourse (e.g., Burgers, van Mulken and Schellens 2012a; Camp 2012; Ritchie 2005). For instance, metaphor has been proposed to be a marker of irony (cf. Burgers, van Mulken and Schellens 2012a; Ritchie 2005), which means that metaphors are proposed to serve as cues facilitating irony detection. However, these studies were either theoretical (Camp 2012; Ritchie 2005) or content-analytic (Burgers, van Mulken and Schellens 2012a), which means that the effects of combining metaphor and irony have been understudied. Thus, this paper also explores the interconnections of metaphor and irony by analysing whether a combination of the two tropes can enhance persuasiveness.

Method

Participants

A total of 165 adult respondents were recruited online using various social media (e.g., by advertising the study on the walls of different general and open LinkedIn and Facebook groups for people interested in language, through an online participant pool of first-year

students, and through the administration of a college for secondary education) to participate in the main experiment by completing a 15-minute questionnaire. We included only native Dutch speakers in our final dataset, because a recent study showed that native language is an important moderator of irony recognition (Cheang and Pell 2011). This left a total sample of 152 participants. The average age of these 152 participants was 33.71 years ($SD = 15.22$, range $= 17-70$). A majority of participants (64.5%) was female. The distributions of both age ($F(3, 148) = 1.20$, $p = 0.31$) and gender ($\chi^2(3) = 1.55$, $p = 0.67$) were equal across conditions. Participants received no compensation for participation in the study.

Design

The experiment had a 2 (conventional metaphor vs. no conventional metaphor) $\times$ 2 (irony vs. non-irony) $\times$ 4 (advertisement set) mixed design. Both conventional metaphor and irony were within-subjects variables. Advertisement set was a between-subject variable. We used multiple advertisement sets to increase external validity.

Our design was set up in such a way that each participant saw four advertisements in random order, as follows: a literal advertisement, an advertisement with a conventional metaphor, an advertisement with irony, and an advertisement with a conventional metaphor and irony combined. Within this series of ads, participants saw an advertisement for a specific brand only once. The total number of participants per individual advertisement in a specific condition varied between 37 and 39. Advertisements were presented in a randomized order.

Materials and pretest

Following Phillips and McQuarrie (2009), we designed eight sets of advertisements for products of fictitious brands for a pretest. Because we hypothesize that conventional tropes work to make abstract product qualities clearer, we restricted our study to informational, high-involvement products (e.g., TVs, e-readers; Rossiter and Bellman 2005). These types of products typically have many of the abstract product qualities (e.g., sound quality, storage capacity) through which conventional tropes may work.

In a first pre-test ($N = 26$, $M_{age} = 33.00$, $SD_{age} = 14.04$, 57.7% female), we presented participants with all advertisements in the condition with metaphor and irony combined. We asked them in an open question what they liked and did not like about the advertisements. Second, we asked them to indicate the perceived authenticity and attractiveness of the advertisements on 7-point rating scales. Repeated-measures analyses of variance (ANOVAs) showed that the eight ads differed both in perceived authenticity ($F(7, 175)$ $= 9.09$, $p < 0.001$, $\eta_p^2 = 0.27$) and attractiveness ($F(7, 175) = 9.54$, $p < 0.001$, $\eta_p^2 = 0.28$). In order to motivate our choice, we looked at the post-hoc analyses and chose the four sets of advertisements that scored highest on both variables for the experiment proper. Post-hoc analysis showed that these four ads were perceived as equally authentic (range of means: $5.15-5.69$), but differed in attractiveness. Therefore, we adapted the ads based on the feedback participants provided on what they liked or did not like about the ads, to make them more equally attractive. We subsequently indicated these adapted ads as appropriate for the experiment proper.

To test whether the slogans selected in the first pre-test indeed reflected conventional metaphors and irony, we conducted a second pre-test in which 80 first-year bachelor students in communication science participated for course credit. Four participants

were non-native and were excluded from further analysis, leaving 76 participants (M_{age} = 19.4, SD_{age} = 1.59, 82.9% female). Participants were presented the metaphoric and the ironic taglines separately and asked to evaluate the level of conventionality on a 7-point semantic-differential scale ranging from 1 = very conventional to 7 = very unconventional. To disguise the specific slogans we were interested in, we also presented participants with a number of filler slogans. Results demonstrate that both the four metaphoric and the four ironic slogans were perceived as relatively conventional (M_{range} metaphors: 3.34−3.76; M_{range} irony: 3.87−4.41), especially given that these were slogans participants had never seen before and that were developed for this experiment. Furthermore, the four metaphoric ($F(3, 73)$ = 1.29, p = 0.29) and the four ironic slogans ($F(3, 73)$ = 1.86, p = 0.14) did not differ in perceived conventionality, and were thus used in the experiment proper.

The four advertisements that were included in the main experiment promoted a flat-screen-design TV, an e-reader, a computer for children, and a TV with surround sound. All advertisements were formatted in a similar way, based on the stimuli of McQuarrie and Mick (2009). We placed an eye-catching image of the product central in the advertisement. Above the image, we placed the slogan, which we manipulated for the use of conventional metaphors and irony. The conventional metaphors all accentuated abstract product qualities like product function (computer as teacher), storage capacity, or image and sound quality. As frequency of usage is one of the constituents of conventionality, and as ironic blame (i.e., an ironic utterance with a negative literal meaning and a positive intended meaning) is used relatively often in Dutch commercial print advertisements (Burgers, van Mulken and Schellens 2012a), we used ironic blame as our form of conventional irony.

Below the product, we placed the name of the fictitious brand and some (made-up) factual information about the product (e.g., 'this TV is available at selected retailers from 6 April onwards'). All advertisements promoted different products for different fictitious brands, to prevent the evaluation of one brand or product from affecting participants' judgments of subsequent brands or products. Table 1 gives an overview of the manipulated sentences used in the various advertisement sets.

Measurements

We designed a questionnaire to measure *comprehension of the tagline* and *perceived complexity* and *creativity* of the advertisement, as well as the *ad appreciation*, *brand attitude*, and *purchase intention* of the participants.

Comprehension of the tagline was measured with an open question (cf. Burgers, van Mulken and Schellens 2012b). Participants were asked to indicate in their own words what they thought that [BRAND NAME] wanted to convey about their [PRODUCT NAME] in the text above the image. The answers were coded such that the participants had understood the tagline if they could argue which aspect of the product the advertiser wanted to promote. Open answers were then recoded into a binary variable indicating whether the participant had understood the tagline or not. This measure thus enabled us to directly ascertain whether our conventional tropes indeed made the tagline easier to understand.

All other items were measured on 7-point Likert-type scales, ranging from 1 = completely disagree to 7 = completely agree. Because we had a mixed design in which every participant saw one instance of every advertisement set in a different experimental condition, we calculated the Cronbach's alpha per advertisement set and report the mean and range below. For scales that comprised two items, we also report the Pearson's correlation coefficient.

Table 1. Overview of manipulations of stimulus sentences.

Set	Product		Without conventional metaphor	With conventional metaphor
1	TV with surround sound	Without conventional irony	Invitation: Tonight, the upstairs neighbors watch TV.	Invitation: Tonight, the upstairs neighbors have a *live concert in their living room.*
		With conventional irony	Warning: Tonight, the upstairs neighbors watch TV.	Warning: Tonight, the upstairs neighbors have a *live concert in their living room.*
2	Computer for children	Without conventional irony	Parents, don't worry: Your children will always want to learn with this computer.	Parents, don't worry: Your children will always want to learn with this *teacher.*
		With conventional irony	Parents, beware: Your children will always want to learn with this computer.	Parents, beware: Your children will always want to learn with this *teacher.*
3	E-Reader	Without conventional irony	Fantastic that a heavy bag has become obsolete because of this e-reader.	Fantastic that a heavy bag has become obsolete because of this *library.*
		With conventional irony	A pity that a heavy bag has become obsolete because of this e-reader.	A pity that a heavy bag has become obsolete because of this *library.*
4	Flat screen design TV	Without conventional irony	Isn't it great that everyone can now own a TV with a beautiful screen quality.	Isn't it great that everyone can now have such a beautiful *vista.*
		With conventional irony	Isn't it annoying that everyone can now own a TV with a beautiful screen quality.	Isn't it annoying that everyone can now have such a beautiful *vista.*

Note: Metaphors are indicated in italics; ironic elements are underlined.

Perceived complexity was tapped by asking whether participants thought the advertisements were clear (reverse-coded) and difficult to understand (McQuarrie and Mick 1999; $\alpha_{\text{average}} = 0.86$, range: $0.77-0.92$, $r_{\text{average}} = 0.76$, range: $0.63-0.84$).

Perceived creativity was measured by asking whether participants thought the ad was surprising and original (van Mulken, le Pair, and Forceville 2010; $\alpha_{\text{average}} = 0.80$, range: $0.7-0.82$, $r_{\text{average}} = 0.67$, range: $0.61-0.71$).

To measure *ad appreciation*, we asked whether participants thought the advertisement was well made, annoying (reverse-coded) and appealing (Heath and Heath 2008; $\alpha_{\text{average}} = 0.80$, range: $0.75-0.84$).

Brand attitude was measured by asking whether the brand was appealing and evoked a positive feeling (based on Cho, Lee and Tharp 2001; $\alpha_{\text{average}} = 0.90$, range: $0.90-0.91$, $r_{\text{average}} = 0.82$, range: $0.81-0.84$).

Purchase intention was tapped by asking whether it was likely that participants would buy the product and recommend buying the product to a good friend ($\alpha_{\text{average}} = 0.94$, range: $0.93-0.95$, $r_{\text{average}} = 0.89$, range: $0.86-0.91$).

Finally, respondents had to fill out some demographic questions about their gender, age, nationality, and native language.

Results

Given that a counterbalanced design was used, between-subjects results are reported for the direct effects (Raaijmakers, Schrijnemakers and Gremmen 1999), which implies that all direct effects were analysed with 2 (conventional metaphor vs. no conventional metaphor) × 2 (conventional irony vs. no conventional irony) repeated measures (M) ANOVAs generalizing across participants. Nevertheless, various respondents saw different stimuli in different conditions. To account for the variation within stimuli, group mean centring was applied to the data. While the analyses are computed on the group-mean-centred dataset, for reader convenience, Table 2 gives the unadjusted means.

Control analysis

A preliminary analysis checked whether our taglines with conventional metaphor and irony were indeed comprehended well. As expected, results showed an effect of conventional metaphors on comprehension of the tagline. ($F(1, 151) = 11.91$, $p < 0.01$, $\eta_p^2 = 0.07$). No main effect of irony ($F < 1$) and no interaction effect of metaphor and irony ($F < 1$) were found. Given that the taglines with conventional metaphors were better understood than those without conventional metaphors, and that the taglines with irony were understood as well as those without irony, our participants had little problem understanding the tropes.

Effects of conventional metaphors on advertisement evaluations

H1 predicted that advertisements with conventional metaphors would be (a) perceived as less complex, (b) perceived as more creative, and (c) appreciated more than advertisements without conventional metaphors. We found a significant multivariate effect of metaphors on advertisement evaluations (Wilks' $\lambda = 0.71$, $F(3, 149) = 20.25$, $p < 0.001$, $\eta_p^2 = 0.29$). Subsequent univariate analyses revealed main effects of conventional metaphors on perceived creativity ($F(1, 151) = 15.65$, $p < 0.001$, $\eta_p^2 = 0.09$), perceived complexity ($F(1, 151) = 44.89$, $p < 0.001$, $\eta_p^2 = 0.23$), and ad appreciation ($F(1, 151) = 41.53$, $p < 0.001$, $\eta_p^2 = 0.22$). Participants considered ads with conventional metaphors to

Table 2. Mean scores (and standard deviations) of comprehension, perceived creativity, perceived complexity, ad appreciation, brand attitude, and purchase intention, in the metaphor and irony conditions.

	Without conventional metaphor		With conventional metaphor	
	Without irony	With irony	Without irony	With irony
Ad comprehension	0.72 (0.45)[a]	0.68 (0.47)[a]	0.81 (0.39)[b]	0.82 (0.39)[b]
Perceived creativity	3.36 (1.24)[a∃]	3.59 (1.35)[ab$∃]	3.78 (1.36)[bc]	3.85 (1.30)[c∃]
Perceived complexity	3.62 (1.79)[a]	3.51 (1.69)[a]	2.62 (1.19)[b]	3.13 (1.37)[c]
Ad appreciation	3.97 (1.21)[a]	3.80 (1.36)[a]	4.61 (1.25)[b]	4.28 (1.29)[c]
Brand attitude	3.29 (1.41)[a]	3.24 (1.46)[a]	3.72 (1.42)[b]	3.66 (1.39)[b]
Purchase intention	2.92 (1.38)[a∃$]	2.84 (1.36)[a]	3.14 (1.41)[b∃]	3.12 (1.32)[b$]

Note: Ad comprehension is expressed as the percentage of participants who understood the stimulus sentence. All other variables are measured on 7-point scales; higher numbers indicate more creative and more complex advertisements and more favorable ad appreciation, and a more favorable brand attitude and purchase intention. Different superscript letters indicate significant differences with at least $p < 0.05$; superscript symbols indicate that the two variables with the same symbol (∃ or $) differ with at least $p < 0.10$.

be less complex and more creative than ads without conventional metaphors. Furthermore, they also appreciated ads with conventional metaphors more. These findings support H1.

Effects of conventional metaphors on persuasiveness and mediation analyses

H2 posits that persuasive effects of conventional metaphors on brand attitude and purchase intention are mediated by (a) perceived complexity, (b) perceived creativity, and (c) ad appreciation. To test this hypothesis, we first tested for direct effects of conventional metaphors on persuasiveness. We found a significant multivariate effect of metaphors on persuasiveness (Wilks' $\lambda = 0.88$, $F(2, 150) = 9.98$, $p < 0.001$, $\eta_p^2 = 0.12$). Subsequent univariate analyses revealed that metaphors had significant effects on brand attitude ($F(1, 151) = 20.09$, $p < 0.001$, $\eta_p^2 = 0.12$) and purchase intention ($F(1, 151) = 9.32$, $p < 0.01$, $\eta_p^2 = 0.06$). Participants in the conditions with conventional metaphors had a more favourable brand attitude and purchase intention than participants in the conditions without conventional metaphors.

To further assess our mediation hypothesis, we used the method developed by Judd, Kenny, and McClelland (2001) to test mediation and moderation in within-subjects designs. Following their recommendations, we created single dependent variables by subtracting the scores of the conditions without metaphors from those with metaphors (e.g., difference scores brand attitude = brand attitude advertisement with metaphor − brand attitude advertisement without metaphor). In a similar way, we created single mediator (e.g., difference scores ad appreciation = appreciation of advertisement with metaphor − appreciation of advertisement without metaphor) and moderator (e.g., sum score ad appreciation = appreciation of advertisement with metaphor + appreciation of advertisement without metaphor) variables for perceived creativity, perceived complexity, and ad appreciation. All sum and difference scores were calculated on the mean-centred data.

Judd, Kenny, and McClelland (2001) posit that mediation in within-subjects designs can be established if two conditions are met. First, the independent variable of conventional metaphors has to influence the proposed mediator's perceived creativity, perceived complexity, and ad appreciation. The MANOVA reported above indicates that this

condition is met. Second, we regressed both the difference and the sum scores of perceived creativity, perceived complexity, and ad appreciation on the difference scores of the dependent variables of brand attitude and purchase intention. Judd, Kenny, and McClelland (2001) propose to include both the sum and differences scores in the model. If the sum scores are a significant predictor in this model, then this implies a moderation effect. If the difference scores are a significant predictor, then this implies a mediation effect. Furthermore, if the constant in the analysis with mean-centred data is not statistically significant, this indicates full mediation. In the case that the constant is significant, this indicates partial mediation.

Table 3 gives an overview of these analyses and shows no moderation of perceived creativity, complexity, or ad appreciation on brand attitude or purchase intention. However, Table 3 does show significant mediation effects for all three proposed mediators on both dependent variables. In half of the cases, we find partial mediation and in the other half of the cases, we find full mediation. Thus, in all, mediation is established and H2 is supported by the data.

Effects of irony on advertisement evaluations and persuasiveness

H3 states that advertisements with conventional irony are perceived as more difficult than advertisements without conventional irony. We found a significant effect of conventional irony on advertisement evaluations (Wilks' $\lambda = 0.88$, $F(3, 149) = 6.84$, $p < 0.001$, $\eta_p^2 = 0.12$). Subsequent univariate analyses show a negative main effect of conventional irony on ad appreciation ($F(1, 151) = 7.48$, $p < 0.01$, $\eta_p^2 = 0.05$) and a trend on perceived complexity ($F(1, 151) = 3.56$, $p = 0.061$, $\eta_p^2 = 0.02$). Participants in the conditions with conventional irony perceived more complexity in the ads and appreciated the ad less than participants in the conditions without irony. This means that H3 is supported by the data. Conventional irony did not affect perceived creativity ($F(1, 151) = 2.44$, $p = 0.12$).

The main effect of conventional irony on advertisement evaluations was qualified by an interaction of metaphor and irony on this dependent variable (Wilks' $\lambda = 0.95$, $F(3, 149) = 2.71$, $p < 0.05$, $\eta_p^2 = 0.05$). Subsequent univariate analyses revealed an interaction on perceived complexity ($F(1, 151) = 7.05$, $p < 0.01$, $\eta_p^2 = 0.05$), but not on perceived creativity ($F < 1$) or ad appreciation ($F < 1$). Pairwise comparisons with Bonferroni correction revealed no effect of irony in the conditions without metaphor ($p = 0.59$). However, in the condition with metaphor, the perceived complexity of the advertisement without conventional irony was lower than that of the advertisement with conventional irony ($p < 0.001$). These data demonstrated that, also in the presence of irony, conventional metaphors reduce perceived complexity.

Finally, we found no effects of conventional irony on brand attitude and purchase intention. Our analyses showed neither a main effect of conventional irony (Wilks' $\lambda = 0.99$, $F(2, 150) < 1$) nor an interaction effect of metaphors and irony on persuasiveness (Wilks' $\lambda = 0.99$, $F(2, 150) < 1$).[1]

Conclusion and discussion

The aim of our study was to investigate the impact of conventional tropes on advertising persuasiveness. Results showed that metaphor and irony have different effects on persuasiveness. While conventional metaphor showed a positive effect on both advertisement evaluations and persuasiveness, conventional irony mostly showed negative effects on advertisement evaluations and no effects on persuasiveness. These differences in the

Table 3. Mediation analyses with perceived creativity, perceived complexity, and ad appreciation as hypothesized mediators of the effects of conventional metaphors (vs. no metaphors) on brand attitude and purchase intention.

Predictor	Brand attitude			Purchase intention		
	b (SE_b)	β	p	b (SE_b)	β	p
Perceived creativity:						
Constant	0.31 (0.10)	—	< 0.01	0.15 (0.08)	—	0.07
Sum scores	0.06 (0.05)	0.09	0.24	0.07 (0.05)	0.12	0.13
Difference scores	0.35 (0.09)	0.32	< 0.001*	0.31 (0.07)	0.32	< 0.001*
Model parameters	$F(2,149) = 9.57, p < 0.001, R^2_{adj} = 0.10$			$F(2,149) = 10.55, p < 0.001, R^2_{adj} = 0.11$		
Perceived complexity:						
Constant	0.18 (0.10)	—	0.079	0.10 (0.09)	—	0.26
Sum scores	0.03 (0.05)	0.05	0.57	0.04 (0.05)	0.07	0.36
Difference scores	−0.37 (0.07)	−0.39	< 0.001*	−0.22 (0.06)	−0.27	< 0.01**
Model parameters	$F(2,149) = 14.08, p < 0.001, R^2_{adj} = 0.15$			$F(2,149) = 6.72, p < 0.01, R^2_{adj} = 0.07$		
Ad appreciation:						
Constant	0.07 (0.09)	—	0.44	0.05 (0.09)	—	0.56
Sum scores	0.04 (0.05)	0.05	0.43	0.04 (0.05)	0.07	0.40
Difference scores	0.64 (0.09)	0.59	< 0.001**	0.36 (0.07)	0.38	< 0.001**
Model parameters	$F(2,149) = 40.70, p < 0.001, R^2_{adj} = 0.35$			$F(2,149) = 13.62, p < 0.001, R^2_{adj} = 0.14$		

Note: Mediation analyses follow the method of Judd, Kenny, and McClelland (2001) for mediation and moderation in within-subjects designs. Sum scores refer to the sums of the metaphor and no-metaphor conditions of the hypothesized moderator. Difference scores refer to the difference between the metaphor and no-metaphor conditions of the hypothesized mediator. * = partial mediation, ** = full mediation.

effects of metaphor and irony can be well explained by looking at the nature of metaphor and irony.

First, we found that conventional metaphor decreases perceived ad complexity and increases perceived creativity and ad appreciation (H1), which in turn positively impacts brand attitude and purchase intention (H2). These results support the view that conventional metaphors are powerful rhetorical devices in advertising: conventional metaphors make an abstract product quality more concrete, implying that ads with conventional metaphors are less complex than ads without conventional metaphors.

Next, conventional metaphors increase the perceived creativity and appreciation of the ad. This can be well explained, because conventional metaphors make an abstract product quality more concrete. Concreteness has been identified as one of the elements constituting the vividness of an advertisement (e.g., Fennis, Das and Fransen 2012). Vividness in turn is positively related to perceived creativity (e.g., Antonietti and Colombo 2011; LeBoutillier and Marks 2003) and ad appreciation (Burns, Biswas and Babin 1993; Fennis, Das and Fransen 2012). In our study, these relations were also found for conventional metaphors in advertising.

Furthermore, the persuasive effects of conventional metaphor on brand attitude and purchase intention were mediated by perceived ad complexity, perceived ad creativity, and ad appreciation (H2). As such, conventional metaphors are important persuasive devices in advertising. However, the mechanism underlying the persuasiveness of conventional metaphors is different from that of novel metaphors. While novel metaphors are mainly persuasive by presenting the reader with a puzzle (e.g., McQuarrie and Mick 2003, 2009; Mothersbaugh, Huhmann, and Franke 2002; Stathakopoulos, Theodorakis, and Mastoridou 2008; van Mulken, le Pair, and Forceville 2010), conventional metaphors are a means to enhance the concreteness (and thus the vividness) of the advertisement. This study has shown, for the first time, that using metaphors to decrease ad complexity compared to literal statements can enhance the persuasiveness of print ads.

Our study also demonstrates that different tropes can have differential effects on advertisement evaluations (H3). In contrast to conventional metaphors, conventional irony had little effect on advertising persuasiveness. In the case of conventional irony (i.e., forms of irony that are used relatively often in specific contexts like ironic blame in commercial advertising), recipients immediately come to the intended meaning and do not have to solve an ironic puzzle. This suggests that ironic warnings may have been used so often in commercial advertising that they have become a conventional technique (Burgers, van Mulken and Schellens 2012b; Lagerwerf 2007) and that the ironic joke has worn out, leading to no effects on persuasiveness.

We also found that combining conventional metaphor and conventional irony in one statement did not enhance their persuasiveness compared to an advertisement with only a metaphor or only an ironic comment. These results tie in with previous findings by Mothersbaugh, Huhmann, and Franke (2002, Study 1), who looked at the effects of combining several tropes (like metaphor and irony) in advertising headlines. Mothersbaugh, Huhmann, and Franke (2002) found that headlines with two tropes did not lead to additional ad processing compared to headlines with only one trope. Similarly, in our study, combining two types of conventional tropes in one headline does not increase the advertisement's persuasiveness compared to headlines with only one conventional trope. These results present converging evidence that stacking types of conventional tropes in one headline has little effect on the headline's persuasiveness compared to headlines that use only one conventional trope.

These results thus show that different tropes like metaphor and irony impact advertising persuasiveness in different ways: conventional metaphors add communicative value to an advertisement by making an abstract product quality more concrete. In contrast, irony does not have this quality, because irony only involves a shift in evaluative valence. As such, irony may only be persuasive in the way novel metaphors are persuasive: if an ironic utterance poses a moderately complex puzzle, readers may appreciate the irony which enhances its persuasiveness. This means that, following the theory of the inverted U-curve (McQuarrie and Mick 2003, 2009; van Mulken, le Pair, and Forceville 2010), conventional irony may not be a persuasive strategy to pursue in advertising.

The results thus demonstrate the importance of focusing on micro-executional elements of print advertising (cf. Chang 2011; Chang and Lin 2010; Lin and Shen 2012; Praxmarer 2011) and the need to differentiate between various rhetorical figures when establishing their effects in advertising. Various advertising scholars generalize findings on rhetorical figures to the levels of schemes or tropes (e.g., McQuarrie and Mick 1996; Mothersbaugh, Huhmann, and Franke 2002; van Enschot, Beckers and van Mulken 2010), implicitly assuming that results found for tropes like metaphor are also applicable to tropes like irony, and vice versa. Our study indicates that this may not be the case, because it demonstrates that different tropes have differential effects. These results warrant the investigation of individual tropes in advertising, demonstrating the relevance of recent advertising literature delineating the effects of individual tropes like novel metaphors (cf. Phillips and McQuarrie 2009; van Mulken, le Pair, and Forceville 2010), novel irony (Lagerwerf 2007), personification (Delbaere, McQuarrie and Phillips 2011), and resonance (Stathakopoulos, Theodorakis, and Mastoridou 2008) in advertising. Our study adds the investigation of conventional metaphor and conventional irony to this list.

Furthermore, other studies have demonstrated that rhetorical figures are processed differently in the verbal and visual modality. In fact, scholars have identified differential processing models of visual figures (e.g., Forceville 1996; Gkiouzepas and Hogg 2011; Phillips and McQuarrie 2004). This implies that visual figures may be processed in different ways from verbal figures. Future research should thus investigate whether the results found for conventional verbal figures in this study also apply to conventional visual figures.

Some caveats should be noted about our study. As our study is the first experimental study to investigate the effects of conventional metaphors and irony in advertising (as differentiated from novel metaphors and irony), the results should be further validated by replications using other types of products (e.g., low-involvement or transformational products; Rossiter and Bellman 2005) and various advertising media (e.g., TV and online advertising). The conventional metaphors in our study also served to illustrate relatively abstract product qualities like storage capacity. An interesting follow-up question would be if these results hold up when conventional metaphors are used to illustrate more concrete and visible product qualities. Furthermore, our participants were specifically asked to look at the advertisements. In a more natural setting, they would have had the opportunity to ignore the advertisements. We therefore recommend that future research includes manipulated advertisements with conventional metaphor or irony in a magazine format which participants may then browse at their own leisure (cf. McQuarrie and Mick 2009). Finally, the identification and appreciation of specific ironic comments may be different across cultures (Goddard 2006), which suggests that our results be should replicated for other languages and cultures.

We used so-called offline measures for our dependent variables, which means that we assessed our variables of interest after processing the ad. Empirical evidence from the field of neuroscience suggests that different regions of the brain are used to process conventional and novel metaphors (Mashal et al. 2007; Subramaniam et al. 2012).

Furthermore, both conventional metaphors (e.g., Mashal et al. 2007) and concrete words (e.g., Kiehl et al. 1999) have been associated with less brain activity in the right hemisphere of the brain compared to novel metaphors and abstract words, respectively. To bolster the validity of our claims about how conventional metaphors in advertising are processed, future research may replicate our studies using online measures like event related potential (ERP) or functional magnetic resonance imaging (fMRI) data to contrast processing of conventional and novel metaphors in advertising. If, indeed, such research can show that different brain regions are used to process conventional and novel metaphors, this would bolster our results that conventional metaphors in ads are processed differently from novel metaphors in ads. Finally, our study has shown that conventional metaphors can increase the persuasiveness of ads. An important question for future research is how this effect on persuasiveness compares to the effects of novel metaphors: are conventional metaphors more, equally, or less persuasive compared to novel metaphors?

In sum, our study shows the need to differentiate between various rhetorical tropes when determining advertising persuasiveness, and that conventional metaphors can be persuasive devices in print advertising. We found that conventional metaphors decrease advertising complexity while at the same time increasing perceived creativity and ad appreciation, which in turn affects brand attitude and purchase intention. Thus, conventional metaphors are persuasive in different ways from novel metaphors (cf. Phillips and McQuarrie 2009; van Mulken, le Pair, and Forceville 2010). While novel metaphors present recipients with a puzzle to be solved, conventional metaphors make abstract product qualities more concrete. We did not find such effects for conventional irony, which indicates that advertising scholars should aim at uncovering the effects of different types of rhetorical figures (in addition to this study, see also, Delbaere, McQuarrie, and Phillips 2011; Phillips and McQuarrie 2009; Stathakopoulos, Theodorakis, and Mastoridou 2008; van Mulken, le Pair, and Forceville 2010) rather than generalizing effects to the level of tropes.

Disclosure statement

No potential conflict of interest was reported by the authors.

Note

1. To exclude the possibility that the effects found for H1−3 were driven by an extreme advertisement set, we also re-ran our analyses for H1−3 on the four individual advertisement sets. Even though not every difference for each analysis on each individual advertisement set reached statistical significance at a level of at least $p < 0.05$, we did observe that all mean differences were in the same expected direction. For exact calculations and figures, please contact the corresponding author.

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