Implicit and Explicit Gender Attitudes as Predictors of the Effectiveness of Non-traditionally Gendered Advertisements

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Implicit and Explicit Gender Attitudes as Predictors of the Effectiveness of Non-traditionally Gendered Advertisements

Explicit measures of gender attitudes are vulnerable to egalitarian norms and thus may not predict the effectiveness of gendered advertising consistently. We report three quantitative studies which manipulate egalitarian norms (Study 1) and employ hierarchical regression analyses to test the predictive power of explicit and implicit gender attitudes in explaining the effectiveness of gendered advertisements. Study 1 (n=47) showed uniquely that only under conditions where egalitarian norms were inactive did the (subtle) explicit Benevolence toward Men attitude predict the effectiveness of non-traditional Househusband advert types (i.e. the higher the benevolence the greater effectiveness of these adverts). Study 2 (n=60) showed that under the same conditions a new *paper* Implicit Association Test (IAT) predicted their effectiveness better than explicit attitudes (the higher the relative implicit preference for non-traditional vs. traditional male type the greater effectiveness of the Househusband advert). Study 3 (n=72) replicated these findings for non-traditional female advert types (the higher the relative implicit preference for non-traditional vs. traditional female type the greater effectiveness of the Businesswoman advert). Thus paper IATs had greater utility than explicit gender attitude measures in predicting the effectiveness of gendered ads.

Key words: paper IAT, implicit gender attitudes, explicit gender attitudes, gendered advertising

Contents

Introduction

The question of predicting the effectiveness of gendered advertisements is of high practical importance given: (i) the continued presence of gender stereotypy still present in advertising today (Bakir and Palan 2013; Taylor et al. 2013; Eisend 2009; Maker and Childs 2003; Ford and LaTour 1996), (ii) their negative social effects (Davies et al. 2005; Davies et al. 2002), (iii) the increased public sensitivity to traditional gender appeals in advertising (Miley and Mack 2009; Bakir et al. 2008; Ford et al. 1999) and the related need to carefully position brands in an ever-changing landscape of social norms surrounding gender issues in very demanding markets. According to Garrubbo, executive VP at women's blogging network BlogHer: "There's this sort of backlash and anger that women have to marketers. [...] What they're saying [is]: 'Don't tell us what we think; don't tell us who we are.'" (Miley and Mack 2009, p. 14). It is thus especially important to focus on accurate estimation of audience's attitudes to gender roles. The focus on the effectiveness of non-traditionally gendered advertisements could facilitate attempts to prevent the perpetual use of the harmful, traditional, gender stereotypy in advertising. The three key concepts in the present paper are: (i) gendered advertising – defined as advertising which contains (here non-traditional) gender-role related content (e.g. adverts portraying men or women in non-traditional gender roles such as househusband or businesswoman); (ii) gender attitude – defined as a favorable or unfavorable disposition towards women or men performing traditional or non-traditional gender roles; and (iii) advertising effectiveness – understood here in terms of attitudes to ad, brand and purchase intent (these being the most

common measures which are not only related but also informative of advertising effectiveness (Dittmar and Howard 2004; Beerli and Santana1999; Burke and Edell 1989).

As will be discussed below, while the topic of gender and advertising has attracted a considerable amount of research attention over the last 40 years (see Eisend 2009; Zawisza 2006; Wolin 2003 for overviews) findings on the value of gender attitudes in predicting the effectiveness of gendered advertising, are mixed (Zawisza and Cinnirella 2010). We argue that this might, at least partially, be due to the limited sensitivity of the commonly used explicit measures, which are susceptible to social desirability concerns related to dominant egalitarian norms (i.e. norms which discourage inequality, Swim et al. 2005). This possibility of the moderating influence of egalitarian norms on the predictive power of gender attitudes in explaining the effectiveness of gendered advertisements has not been tested directly. This is surprising given that it often features as a potential explanation for null results or contradictory findings (Garst and Bodenhousen 1997; Debevec and Iyer 1986; Whipple and Courtney 1980; Duker and Tucker 1977). Moreover, while attitude measures which are more resistant to egalitarian norms, such as the Implicit Association Test (IAT, Greenwald and Banaji 1995), have been available and validated for use in consumer research (Perkins et al. 2008), there is a surprising paucity of research on the role of implicit and explicit gender attitudes in advertising effectiveness or on implicit gender attitudes as such (Rudman and Kilianski 2000). To the authors' best knowledge, only one study has used an IAT to investigate gendered advertisements (Vantomme et al. 2005). However, it tested explicit and implicit attitudes to the advertisements themselves rather than the role of implicit gender attitudes in determining those adverts' effectiveness.

The three studies presented here attempt to address directly the gaps in the literature mentioned above: (i) the contradictory findings regarding the predictive value of gender-related variables in explaining the effectiveness of gendered adverts, and (ii) the lack of research testing if these may be due to the operation of egalitarian norms interacting with the limitations of the older tools measuring gender attitudes. Specifically, Study 1 focuses on non-traditional househusband portrayals in advertisements and the predictive power of explicit gender attitudes in determining advert effectiveness as a function of egalitarian norms' salience. Studies 2 and 3 test the predictive value of both explicit and implicit attitudes (to men and women respectively) in determining the effectiveness of non-traditionally gendered ads. New adaptations of the paper IAT (Lemm et al. 2008) are developed and used here. The three studies constitute the first step in improving our understanding of the contradictions prevalent in the empirical literature on the predictive value of gender-related variables in explaining the effectiveness of gendered advertising. This literature is first reviewed below.

Gender-related Variables and the Effectiveness of Gendered Adverts

The research testing gender-related variables as predictors of the effectiveness of gendered advertisements has so far returned a mixed picture. For example, gender role expectations (Putrevu 2004), gender identity (Morrison and Shaffer 2003), belonging to feminist organizations (Ford and Latour 1993) and 'career' and 'home-maker' orientation (Barry et al. 1985) have been shown to predict the effectiveness of non-traditional advert strategies. However, other researchers found the very same variables were *not* predictive of advertising effectiveness (Duker and Tucker 1977; Bellizzi and Milner 1991; Whipple and

Courtney 1980). Regarding advertisements featuring depictions of males, neither attitudes toward male gender roles (Garst and Bodenhausen 1997) nor gender identity (Debevec and Iyer 1986) were found to influence the effectiveness of the non-traditional ads. More recently, Zawisza and Cinnirella (2010) reported only limited support for their match hypothesis: While attitudes toward women predicted advert affect for (non)traditionally gendered female advert versions, null results were obtained for the male advert versions.

Most of the findings above are, however, complicated by a couple of issues. First, the integration of this research is difficult due to methodological issues. For example, the originally continuous variables were at times artificially dichotomized leading to potential loss of statistical power (e.g. Zawisza and Cinnirella 2010; Garst and Bodenhousen 1997 - although the latter authors rule this possibility out). Moreover, various operationalizations of advertising effectiveness were employed: affect and purchase intention (Barry et al. 1985); attitudes and reactions to the ads and the spokesperson (Belizzi and Milner 1991); ad evaluation and recall (Whipple and Courtney 1980); attitudes toward ads, company, and purchase intention (Ford and Latour 1993); and preferences for particular advertisement types (Duker and Tucker 1977).

Second, and as discussed below, outdated, that is explicit, measures of gender-related variables were used in all the studies cited above. While this may not have been a problem in the early days when egalitarian norms were weaker and did not provoke social desirability concerns (Swim 2005), there are reasons to believe that over time this has changed. For example, career and homemaker orientation predicted the effectiveness of gendered advertising strategies in the 80s (Barry et al. 1985), but the same concept ceased

to be predictive in a later study from the 90s (Belizzi and Milner 1991). Gender attitudes specifically were not consistently predictive in later research either (Zawisza and Cinnirella 2010; Garst and Bodenhousen 1997). Even though in both cases valid reasons for the selection of the specific gender attitude measures were provided, as will be discussed later, the tools were nevertheless old-fashioned by today's standards. Specifically, Helmreich and Spence's Attitudes Toward Women Scale (AWS-B), which was adapted by Parry (1983) to the British population and Falkenberg et al.'s (1983) Attitudes to Men Scale (AMS) were employed in the first case while Gender Attitudes Inventory (Ashmoreet al.1995) in the second case. Moreover, research on the effectiveness of non-traditional female portrayals in advertising also suggests a trend towards greater egalitarianism from the 90s onwards: While traditional portrayals were favored in the 70s (Duker and Tucker 1977), since the 90s a largely consistent preference for the non-traditional ones has been reported (Orth and Holancova 2004; Hupfer 2002; Jaffe and Berger 1994; Bellizzi and Milner 1991).

To what extent, however, are egalitarian norms a problem for measurement of gender attitudes and thus for predicting the effectiveness of gendered adverts? Can new measures of implicit gender attitudes help in addressing this issue? Literature pertaining to these questions is overviewed next, and then an outline of the present studies which are designed to address these questions is presented.

Gender Attitudes Measurement

Rising social pressure in the form of egalitarian norms has resulted in changes to the ways sexism is expressed, and thus measured. Egalitarian norms promote (gender) equality by making overt prejudice socially unacceptable (McDaniel 2008). Older tools such as the

Attitudes toward Woman Scale (AWS by Spence and Helmreich 1973, as cited in Parry 1983) or Attitudes toward Men Scale (AMS by Falkenberg et al. 1983) captured overt negativity and ceased to be effective measures of contemporary sexism due to the diminished predictive value of such measures. Of particular relevance here, a shift from traditional sexism to its more subtle manifestations such as Modern Sexism (Swim et al. 1995), Neo-sexism (Tougas et al. 1995) and Ambivalent Sexism (Glick and Fiske 1999; Glick and Fiske 1996) has been reported in the literature. The latter authors postulate an Ambivalent Sexism Theory (AST) according to which contemporary sexism takes two forms, hostile and benevolent, both of which serve to maintain the subordinate status of women (Glick and Fiske 2012; Glick and Fiske 2011). Hostile attitudes indicate overt antipathy toward men (HM) or women (HS), while benevolent attitudes are characterized by positive, but still patronizing, beliefs about certain groups of men (BM) or women (BS) (Glick 2004). The function of both types of sexism serves hierarchy stabilization and therefore the maintenance of gender inequality (Glick and Fiske 2001). While hostile sexism punishes behaviors which undermine the status quo, benevolent sexism rewards behaviors which maintain it (Sibley and Wilson 2004). Despite their opposing evaluative nature, the two types of attitudes correlate positively (Glick and Fiske 2012).

According to AST, the development of benevolent attitudes was a response to the increasing egalitarian norms and the resultant growing unacceptability of the overtly hostile views. Benevolent attitudes therefore are more subtle then hostile ones, to the point where they are often not perceived as sexist by the society (Viki and Abrams 2004). As such they are less susceptible to social desirability concerns resultant from the dominant egalitarian

norms. Indeed, compared to AWS and Hostile Sexism scales, Benevolent (and Modern) Sexism scales are reportedly more subtle and thus less vulnerable to egalitarian norms (Swim et al. 2005). However, only hostile and benevolent attitude scales have been developed to measure attitudes towards both men and women, and hence these are used here.

While these new measures certainly constitute an improvement, they have nevertheless been shown to be overly reactive and transparent: They are said to measure the willingness to express sexist attitudes rather than the attitudes themselves (Nelson 2002). If that is the case, then the predictive superiority of benevolent over hostile attitudes should only hold in conditions when egalitarian norms are not salient. The salience of such norms should prevent expression of even the subtle benevolence and thus lead to diminished predictive power of these attitudes. The validity of this egalitarian norms argument could be tested by direct manipulation of the salience of such norms and by measuring the predictive value of benevolent and hostile attitudes in explaining the effectiveness of non-traditionally gendered adverts. Study 1 tests this possibility by manipulating the salience of egalitarian norms and by employing two types of explicit gender attitude measures which vary in their vulnerability to such norms as explained above.

However, in recognition of the weaknesses of even the benevolent attitude scales, more sophisticated tools, measuring implicit concepts have been proposed, such as the IAT (IAT, Greenwald and Banaji 1995; Greenwald et al. 2002, Lane et al.; 2007). The strength of the IAT lies in capturing automatic reactions that are not consciously controlled and,

thus, are less vulnerable to demand characteristics. In the conventional, well-established, computerized IAT, double-categorisation tasks are performed, and reaction time is treated as an indicator of the strength of automatic association between the two categories (Rudman 2011). For example, a faster categorization of stimuli as belonging to 'positive or men/negative or women' categories than to 'positive or women/negative or men' categories respectively would indicate relative preference for men over women. In the recently developed and validated *paper* IAT (Lemm et al. 2008), accuracy rate under timed conditions is used instead of reaction time. It can also be used to capture attitudes to men as well as women. Since the IAT has been designed to address the weaknesses of explicit measures (such as the said vulnerability to demand characteristics), when applied to measuring gender attitudes it should produce the strongest predictor of the effectiveness of non-traditionally gendered advertisements (followed by benevolence and then hostility).

However, whilst some literature on measuring implicit gender stereotypes using the IAT exists (Carlsson and Björklund 2010; Kiefer and Sekaquaptewa 2007; White and White 2006; Rudman and Glick 2001; Rudman et al. 2001) surprisingly few studies have used implicit measures of gender *attitudes* (Rudman and Kilianski 2000) and very few have employed the IAT specifically (Aidman and Carroll 2003; Carpenter 2000). Those that have used the computerised version, and none has applied it to measuring attitudes toward (non)traditional men specifically – the subject of interest here. Since it is a new tool, to our best knowledge, no study thus far has yet developed and used a paper IAT to measure

gender attitudes[3]. Studies 2 and 3 do so and test the predictive value of a paper IAT measuring implicit gender attitudes in explaining the effectiveness of advertisements featuring non-traditional males and females respectively.

Hypotheses Development

The literature overview highlights three problems: (i) the contradictory findings of previous studies on the predictive power of gender-related variables in determining the effectiveness of gendered advertising, (ii) the (varied level of) vulnerability of the explicit measures of contemporary gender attitudes to egalitarian norms, and (iii) the scarcity of studies which test the egalitarian norms hypothesis in advertising context directly, or at least use more current explicit and/or implicit measures of gender attitudes in predicting advertising effectiveness.

The three studies reported below were designed to systematically address these gaps in the literature. According to AST (Glick and Fiske 1999), benevolent attitudes evolved in response to the increasing egalitarian norms which made more old-fashioned, or overt, hostility socially unacceptable. The superficially evaluative positivity of benevolent attitudes makes expressing them more socially acceptable and hence the benevolent attitude scale is a more subtle and sensitive measure of gender attitudes than the hostile attitude scale (Swim 2005). Thus benevolent attitudes should be a better predictor of non-traditionally gendered advertisements than hostile attitudes. However, these are still explicit measures which are nevertheless susceptible to egalitarian norms (Nelson 2002). Thus, if

[3] Measurement of gender attitudes is particularly relevant here: Unlike gender stereotypes which are defined as culturally shared beliefs and knowledge systems, gender attitudes capture people's individual dispositions to men and women (Eagly and Chaiken 1993). Thus only the latter may differentiate individual responses to advertisements.

egalitarian norms indeed interfere with the predictive value of explicit gender attitudes, then eventually the subtle benevolent measure should cease to predict the effectiveness of the gendered advertisements when the norms are activated. Hypothesis 1 thus states: Benevolent attitudes to men will significantly predict the effectiveness of the advertisements featuring non-traditional male portrayals, but only when egalitarian concerns are *not* activated (control condition). When the egalitarian concerns are activated participant's explicit gender attitudes (whether benevolent or hostile) will not be capable of significantly predicting advertising effectiveness.

The IAT has been developed to address the vulnerability of the explicit measures of attitudes to egalitarian norms (Greenwald et al. 2002) and since, by virtue of its design, it is the most subtle tool available. Thus it can be also predicted that, other things being equal, implicit gender attitudes will be more predictive of the effectiveness of the non-traditional advertisements than explicit attitudes – our Hypothesis 2.

Overview of the Current Study

Study 1 was designed to test H1 and focused on male gender portrayals in advertising. It manipulated the salience of egalitarian norms explicitly while measuring explicit gender attitudes only. Since egalitarian norms concern males who contravene gender role expectations (rather than those who follow them), only portrayals of the non-traditional Househusband type were used in the target advertisements. Explicit attitudes to men were measured using two scales of varied susceptibility to egalitarian norms: open hostility and more subtle benevolence toward men (Glick and Fiske 1999).

Study 2 seeks to partially replicate and extend Study 1. While it still focuses on non-traditional male gender roles it does not manipulate egalitarian norm salience. Instead it employs implicit as well as explicit measures of attitudes to men. It replicates the use of explicit attitudes employed in Study 1 under the condition of egalitarian norms *not* being activated. Thus, again, it is expected to support H1. Study 2 takes, however, a step further in developing this hypothesis to include implicit attitudes to men and thus tests H2 as well.

Study 3 tests further the generalizability of Hypothesis 2 to non-traditional female gendered adverts and female gender attitudes. Both Studies 2 and 3 use new (pictorial and verbal respectively) paper IATs to measure implicit attitudes to men and women. We report the three studies in turn below.

Study 1

Method

Design. Study 1 employed multiple hierarchical regression analyses with forced entry method where benevolent (step 1) and hostile (step 2) attitudes to men were entered as predictors of the effectiveness of advertisements portraying a non-traditional male – in this case a Househusband (Hh) - in conditions of egalitarian norms being activated (n=22) or not (control, n=21).

Participants. The participants were 47 female psychology students recruited on voluntary basis from The University of Winchester. The exclusive focus on female participants was determined by the need to obtain a homogenous sample in the context of a typically uneven distribution of men and women in the convenience sample of psychology students. The mean age of participants was 25.39 (SD = 8.89). The ethnicity of the

participants was in 90.9% white British, and 8.1% represented different origins (other white background 6.8% and black 2.3%). Four participants were removed from the initial sample due to their familiarity with the aims of the study[4], leaving 43 for the analysis. This sample size allowed us to comfortably meet the recommendation of employing a minimum of 10 participants per predictor for multiple regression (Field 2009, p. 222).

Procedure, stimuli and measures. Participants were asked to take part, in groups or individually, in a study on people's responses to different aspects of media and were given a paper booklet containing an information sheet, consent form, and egalitarian norms salience manipulation (for half of the sample) followed by one (out of two) randomly selected advertisement versions and scales evaluating its effectiveness. After this, measures of hostile and benevolent attitudes to men were administered. The session took around 15 minutes. Once data collection was completed participants were debriefed.

Stimulus adverts. In order to improve external validity, two mock print advertisements for a fictitious brand of *X Orange Juice* were used. One portrayed a househusband ironing and the other a househusband ironing and holding an infant. These characters were matched in terms of attractiveness, level of masculinity-femininity and gender role (non)traditionality. The product was also pre-selected as gender-neutral and low-involving. The images were positioned in the advert with the product name above and a description of the product at the bottom of the advertisement. Each participant in the study saw just one of the advertisements.

[4] Towards the end of the study participants were asked two questions: 1) what they thought the study was designed to measure and 2) if they had participated in similar study by the same researcher or their associates in the past year. Those who answered the first question correctly or had taken part in similar studies in the past were removed from the sample. The same procedure was followed in Studies 2 and 3.

Egalitarian norms salience manipulation. Participants in the experimental condition were asked to recall and describe a time when they had committed an act of sexism which they felt ashamed or embarrassed about. They were then asked to indicate on 6-point Likert scales to what extent they felt guilty and embarrassed about their actions (where 1 = 'not at all' and 6 = 'very'). In the control condition participants were not asked any of these questions.

Advert effectiveness measure. Dittmar and Howard's (2004) advert effectiveness index measuring attitude to the advert, brand and purchase intent was used due to its tested reliability (here $\alpha = .90$), unidimensionality and ease of use. It consisted of four 6-point semantic differential scales anchored unfavorable-favorable and negative-positive (for both advert and brand attitude), and one 6-point Likert scale assessing purchase intention likelihood. The higher the mean score, the more effective the advert was with a possible range of 1 to 6.

Explicit benevolent and hostile attitudes towards men. Glick and Fiske's (1999) Ambivalence toward Men Inventory (AMI) was employed to measure explicit attitudes towards men. The scale consists of 20, 6-point Likert scales (where 0 = disagree strongly and 5 = agree strongly). Ten items capture benevolence toward men (BM), and another 10 hostility towards men (HM). Examples of BM items include statements such as: *"Even if both members of a couple work, the woman ought to be more attentive to taking care of her man at home."* and *"Every woman needs a male partner who will cherish her"*. Examples of HM items are: *"When men act to 'help' women, they are often trying to prove they are better than women."* and *"Men will always fight to have greater control in society than*

women." As discussed earlier, BM is a more subtle measure of attitudes to men than HM. Glick and Fiske report reliability coefficients between .79 and .86 for each sub-scale (here .80 and .87 respectively). Evidence of factorial, or metric, invariance which attests to the validity of this measure for use in the UK was provided by Zawisza et al. (2012). Higher mean scores indicate higher levels of hostility or benevolence to men.

Results and Discussion

Manipulation check. A one-sample t-test was performed on the experimental subsample to test whether it triggered the expected feelings of guilt and embarrassment. Indeed the mean scores for both feelings (M = 2.68 and M = 2.32 respectively) differed significantly from one: $t(18) = 5.333$, $p < .001$ and $t(18) = 4.435$, $p < .001$.

Testing the primacy of benevolent over hostile attitudes as predictors of advert effectiveness. Study 1 tested H1; that only the more subtle BM (rather than the more overt HM) would predict the effectiveness of the non-traditional Hh adverts exclusively under conditions where egalitarian norms are *not* activated. Two separate analyses were performed; one for the experimental group (where egalitarian norms were salient) and one for the control group. In both analyses overall advert effectiveness (mean scores were collapsed across the two advert versions) acted as the criterion variable. It was predicted, in turn, by BM and HM (step 1 and step 2 respectively). Tests for multicollinearity indicated that a very low level of multicollinearity was present (tolerance was .473 for HM, comfortably exceeding the recommended .10 threshold).

---- insert Table I about here ----

As shown in Table I H1 was supported: only in the control condition, where egalitarian norms were *not* activated, was BM a significant predictor of advert effectiveness (in step 1 $\beta = .47$, $t = 2.31$, $p < .05$; $F(1,20) = 5.356$, $p < .05$) and the model accounted for 22% of variation in advert effectiveness ($R^2_{adj} = .179$). Specifically, the higher the benevolence toward men, the greater the advert effectiveness. Once HM was entered in step two, BM ceased to be a significant predictor of advert effectiveness ($\beta = .21$, $t = 0.714$, $p = .484$) but the model was still (marginally) significant, $F(2,20) = 3.52$, $p = .051$, and accounted for 28% of the variance. This change was not significant ($R^2_{adj} = .20$; $\Delta R^2 = .06$, $p = .231$). Thus addition of the overt HM did not significantly improve the model. In line with our egalitarian norm salience argument, no significant results were returned by the same regression analysis in the experimental condition in either step (i.e., when egalitarian norms were activated)[5].

The findings from the control condition correspond with the literature which reports the greater subtlety of BM over HM (Swim et al. 2005; Glick and Fiske 1999), while the findings from the experimental condition substantiate the reported vulnerability of both these measures to social desirability concerns (Nelson 2002) – when egalitarian norms were active neither the subtle BM nor the overt HM were able to predict advertising effectiveness. This therefore supports our argument that egalitarian norms may have been, at least in part, responsible for the contradictory findings regarding the usefulness of

[5] The same results were returned by a moderated hierarchical regression in which Egalitarian Norms Salience (ENS) and the interaction terms (ENS x centred BM and ENS x centred HM) were entered into the analysis. Specifically, BM and BM x ENS terms were significant in Step 1 of the analysis. However since such analysis did not meet the sample size requirements we instead report above two separate analyses for the control and experimental conditions with two predictors each (which do meet this requirement).

gender-related variables (e.g. Barry et al. 1985 vs. Belizzi and Milner 1991; Garst and Bodenhousen 1997; Zawisza and Cinnirella 2010): They may have contributed to the null results in the studies conducted in the 90s onwards.

Since, as shown in Study 1, BM is still susceptible to egalitarian norms, its predictive power in explaining the effectiveness of the Househusband advert type should be exceeded by that of the IAT. As explained earlier, this is due to the IAT's greater resistance to egalitarian norms, and thus its greater subtlety as a measure of attitudes toward men. Study 2 below tested this possibility.

Study 2

Method

Design. The study followed the same design as Study 1, with an added predictor of implicit attitudes to men. Similar multiple hierarchical regression analysis with forced entry was employed to test H2, with IAT entered first.

Participants. Participants were 60 female University of Winchester students, recruited on either voluntary basis or in return for course credit, aged between 18 and 51 (M = 21.98, SD = 6.56). The majority of them were British (90%) and white (88%) followed by Asian (5%), black (3%), and mixed (3%). Most of them studied psychology (82%) and others studied arts (10%), education/health/social care (7%), or humanities (2%).

Procedure and Materials. Participants were informed that the study investigated peoples' responses to different aspects of media. The same stimuli and measures of explicit attitudes to men and advert effectiveness as in Study 1 were used. However, this time one

of the two target advertisements was embedded amongst five filler advertisements for the same product featuring neutral images. The filler advertisements were included to mask the focus of the study. The order in which these advertisements were presented was counterbalanced using the *Latin Square* method. All participants completed the measures in the following order: (1) IAT, (2) advert effectiveness (α = .92), (3) AMI (α = .91 for BM and .86 for HM). This sequence was selected to tackle possible order effects (Devos 2008)[6]. The measures were completed during group sessions. A practice round of the IAT featuring flowers and insects was completed first to acclimatize participants to the IAT procedure. Half of the participants saw advert version 1 and half saw advert version 2. Most participants completed the study in approximately 15 minutes. Participants were subsequently debriefed.

Implicit measure of attitudes towards men. A variation of the Lemm et al.'s (2008) paper IAT was developed to measure implicit attitudes to men. Test-retest reliability of the paper IAT versions are broadly comparable to computerized IATs (*r* of .50, Lemm et al. 2008). IATs measure implicit attitudes towards an object *relative* to a contrasting object. The paper IAT here required categorizing accurately as many exemplars of four categories (businessman vs. househusband, and pleasant vs. unpleasant) as possible in 20 seconds per IAT block. Stimuli for each category were displayed on an A4 sheet of paper, with categories allocated to either the left or right of the page. In one block, the double category consisted of 'businessman or positive' vs. 'househusband or negative'. The other block

[6] Although some authors (e.g. Lane et al. 2007; Maison et al. 2004) report that the order in which implicit measures are placed relative to explicit measures does not systematically affect their relationship, they do concede that it has been found to do so on occasion. Furthermore, Devos (2008) reports evidence for the impact situational factors (e.g. recent exposure to attitude objects) may have on IAT performance.

(presented on a separate A4 sheet) consisted of 'businessman or negative' vs. 'househusband or positive'. The order of the two IAT blocks was counterbalanced to prevent order effects (see Lane et al. 2007). Participants were asked to categorize the stimuli by marking a tick to the left or right of exemplars presented. Due to the lack of synonyms for 'househusband' in the English language, pictorial rather than verbal stimuli were used. Specifically, five images of traditional and non-traditional male models, preselected and matched on attractiveness, were employed. The pleasant and unpleasant attribute categories were represented by words taken from Lemm et al. (2008). IAT score was extracted as the difference in the number of correctly categorized items in each block and was calculated using the *product square root difference* algorithm recommended by Lemm et al. (2008). Positive scores indicated greater implicit preference for the traditional businessman, relative to the non-traditional househusband, while negative scores indicated a reversed preference.

Results and Discussion

Study 2 tested H2; that the IAT would be the best predictor of advertising effectiveness, followed by BM and then by HM. The results were analyzed using multiple hierarchical regression with forced entry method as before. First, in line with Lemm et al.'s (2008, p.11) recommendation, participants with an error rate greater than 20% in the IAT were excluded from the analysis reducing the sample to 45. Tests for multicollinearity returned satisfactory results (tolerance was comfortably above the .10 cut-off point for all variables in all steps: 1.00 for BM and 0.99 for HM in step 1 and 0.66 for HM in step 2).

The overall IAT mean was -3.49 (*SD* = 2.87) indicating relative implicit preference of the Househusband over the Businessman male type.

Results of the main regression analysis provided support for our hypothesis. In the third model, IAT was the strongest significant predictor of advert effectiveness (β = -.295, *t* = -2.123, *p* < .05) followed by non-significant and weaker contribution of BM (β = .246, *t* = 1.336, *p* = .189) and HM which was also non-significant (β = .118, *t* = .638, *p* = .527). All models fit the data well: $F(1,43) = 5.558$, $p < .05$ for model 1; $F(1,42) = 6.852$, $p < .01$ for model 2 and $F(1,41) = 3.982$, $p < .05$ for model 3. However, model 3 explained the greatest percentage of variance followed by models 2 and then 1 (23%, 22% and 12% respectively). The addition of BM in step 2 resulted in significant R^2 change of .10, $F(1,53) = 6.633$, $p < .05$. However, similarly to Study 1, addition of HM in step 3 did not significantly improve the predictive power of the model ($R^2\Delta = .008$, $F = .407$, $p = .527$) and resulted in BM ceasing to be a significant predictor. The latter effect may be due to a small sample size which does not carry enough statistical power to allow the BM to emerge as a significant predictor in both steps – an issue addressed in Study 3. Overall, the lower the implicit relative preference for the traditional businessman (over the non-traditional househusband), the higher the effectiveness of the Househusband advert type. Effectiveness of this advert also increased as benevolent attitudes to men did – a result which replicates the pattern found in Study 1 (see Table II for summary).

The findings from Study 2 relating to the IAT's predictive power are promising. They attest to the paper IAT's superiority in explaining the effectiveness of gendered advertisements as compared to both explicit gender attitude measures. This adds to the

research reporting the greater utility of implicit measures of attitudes in sensitive domains open to social desirability concerns such as gender attitudes (Lemm et al. 2008). However, this study demonstrates this specifically for the newly developed paper gender attitude IAT for first time. Moreover, again in line with AST (Glick and Fiske 1996), the predictive power of BM was greater than that of HM. This pattern replicated a similar pattern from Study 1. Once more, the addition of BM to the model significantly increased its explanatory power, meaning that the combined use of the two subtle scales is still useful in explaining the variance in advertising effectiveness.

It needs to be noted that there may be an alternative, methodological, explanation for the successful contribution of IAT in this model: Our *attitudes to men* IAT used pictorial exemplars of the target househusband (and businessman) category. Two of the five pictures used were also employed in the advertisements evaluated later by the participants. Thus, the greater predictive power of IAT, compared to BM, might have been caused by greater similarity between the IAT and the assessed advertisements. However, the reason for using a pictorial paper IAT (the aforementioned lack of synonyms for 'househusband') does not apply to the non-traditional types of a woman. Thus, Study 3 tested if our findings from Study 2 (and 1) would generalize over female versions of non-traditional advertisements and when using a *verbal* paper IAT measuring implicit attitudes to women. A larger and demographically different sample was also used: participants were older, and consisted of both men and women, and mostly non-psychology students.

Study 3

Method

Design and procedure. Study 3 followed the same design and procedures as Study 2 but used different stimuli adverts and measures, as outlined below.

Participants. Participants were recruited on the University of Winchester campus and consisted of a mixture of undergraduate and postgraduate students and staff. A total of 72 participants took part with an age range from 19 to 63 (M = 30.2, SD = 11.6) including 45 females, and 26 males (plus one participant who did not indicate their gender). Most participants were British (93%) and white (94%) with one black, one Asian and one mixed. Only a minority of these participants studied psychology (7%). Other participants were studying, or had previously studied, courses in education/health/social care (32%), arts (25%), humanities (21%), business/law/sport (8%), or an unknown subject (0.7%).

Materials

Implicit attitudes to women. A new version of verbal paper IAT was constructed in a similar way as described in Study 2. While the attribute categories were the same (pleasant vs. unpleasant) the target categories, traditional women vs. non-traditional women, were represented by five words each (*housewife, child-minder, secretary, midwife,* and *librarian* vs. *businesswoman, carpenter, pilot, soldier* and *builder*). These words had been pre-tested as being clearly associated with women in traditional or non-traditional roles respectively. The test was administered in the same way as in Study 2. Block 1 paired traditional women with positive attributes and non-traditional women with negative attributes while in Block 2 the pairing was reversed. Positive scores indicated a relative implicit preference for the

traditional women while negative scores indicated a relative implicit preference for the non-traditional women.

Explicit benevolent and hostile attitudes towards women. The Ambivalent Sexism Inventory (ASI, Glick and Fiske 1996), which consists of 22 items scored on a 6-point scale (0 = disagree strongly to 5 = agree strongly), was used to measure two types of explicit attitudes to women: Hostile Sexism (HS) and Benevolent Sexism (BS). Each subscale was represented by 11 items. Examples of HS items include statements such as: "*Most women interpret innocent remarks or acts as being sexist.*" and "*Women seek to gain power by getting control over men"*' Example BS items are as follows: "*Women should be cherished and protected by men.*" and "*Women, compared to men, tend to have a superior moral sensibility."* As discussed earlier, BS is a more subtle measure of sexism than HS. Items 3, 6, 7, 13, 18 and 21 required recoding. Original reliability of each scale varied between .73 and .92 (Glick and Fiske 1996) and here reached .78 for each subscale. Zawisza et al. (2013) provide evidence of factorial, or metric, invariance which attests to the validity of this measure for use in the UK. Higher scores indicated higher benevolence or hostility to women.

Stimulus adverts. The stimuli consisted of two versions of mock print adverts for orange juice portraying a non-traditional businesswoman. These, again, were pre-selected in a separate study and administered in the same way as described in Study 2 (i.e. one of the two advert versions was embedded among five filler advertisements ordered using the *Latin Square* approach). Half of the participants saw advert version 1 and half saw advert version 2.

Advertising effectiveness. This time purchase intent, measured on an 11-point probability scale, was used to capture advertising effectiveness. Higher scores indicated greater likelihood of buying the product.

Results and Discussion

To test H2; that IAT would be the best predictor of advert effectiveness, followed by BS and then HS, the results were analyzed using forced-entry hierarchical linear regression in the same manner as in Study 2 (see Table II for summary). After filtering out participants with more than 20% errors on the IAT, the sample size was reduced to 55. Again, tests for multicollinearity returned satisfactory results (tolerance was comfortably above the .10 cut off point for all variables in all steps: 1.00 for BS and 0.98 for HS in step 1 and 0.80 for HS in step 2). The overall IAT mean was -4.02 (SD = 2.74) indicating relative implicit preference of the non-traditional over the traditional female type.

---- insert Table II about here ----

Results of the regression analysis largely supported our hypothesis and thus replicated Study 2. In the third model, IAT reached the highest significance level as a predictor of advert effectiveness (β = -.281, t = -2.140, p <.05) followed by BS (β = .287, t = 2.009, p = .05), while HS was non-significant (β = -.043, t = -0.299, p = .766). All models fit the data well: $F(1,53) = 4.166$, p <.05 for model 1; $F(1,52) = 4.417$, p<.05 for model 2 and $F(1,51) = 2.923$, p<.05 for model 3. However, models 2 and 3 explained greater percentage of variance than model 1 (15% each vs. 7% respectively). While the addition of BS in step 2 resulted in significant R^2 change of .10, $F(1,53) = 4.400$, p <.05, addition of HS in step 3 did

not significantly improve the predictive power of the model ($R^2\Delta$ = .001, F = .090, p = .766). This pattern of results shows that both the subtle (implicit and explicit benevolent) measures are useful predictors of the effectiveness of gendered advertisements but the overt HS is not. Notably, unlike in Studies 1 and 2, BS retains its contribution at a significant level after HS is entered into the model. This may be due to greater statistical power of the larger sample used in Study 3. Overall, the lower the implicit relative preference for the traditional women (over the non-traditional women), the higher the effectiveness of the non-traditional Businesswoman advert type. Effectiveness of this advert also increased with the increase in benevolent attitudes to women – a finding which replicates the pattern found in Studies 1 and 2 with respect to male gender roles.

The findings from Study 3 confirm both H1 and H2 in that the IAT was a more significant predictor of advertising effectiveness, followed by benevolence and then hostility. This lends validity to the usefulness of the new verbal paper IAT measuring implicit gender attitudes (Lemm et al. 2008) and rules out the possibility that a similar finding from Study 2 was merely down to the structural similarity between this measure and the adverts tested. Moreover, these findings also support the predictions based on AST that benevolence is a more subtle measure of sexism than hostility (Swim et al. 2005; Glick and Fiske 1996). Unlike in Studies 1 and 2, this time benevolence retained significance after the addition of hostile attitudes to the model. This shows that benevolent sexism is a particularly useful tool in predicting the effectiveness of non-traditionally gendered adverts which valuably adds above and beyond the contribution of the IAT to the model.

General Discussion

The aim of the three studies reported here was to address gaps in the literature on predicting the effectiveness of gendered advertisements; namely, inconsistency in findings and a lack of research which tests: (i) the role the egalitarian norms' salience plays in predicting advert effectiveness based on gender attitudes, and (ii) the predictive power of implicit and explicit gender attitudes in determining their effectiveness. An additional aim was to address the conspicuous lack of research investigating implicit gender attitudes. We argued that the inconsistency in past findings may have been down to varied, and increasing over time, levels of social desirability concerns fueled by gender egalitarian norms. Such norms would diminish predictive power of explicit gender attitudes in explaining the effectiveness of gendered ads.

We expected that if egalitarian norms are indeed responsible for the limited success with which gender attitudes predict advert effectiveness, then explicit and implicit gender attitudes should vary in their predictive usefulness as a function of their subtlety and activation of egalitarian norms. As anticipated, Study 1 showed that only the subtler, benevolent, attitudes to men were capable of explaining the variance in the effectiveness of the Househusband advert type successfully. Moreover, even this predictor ceased to be significant in conditions where egalitarian norms were activated. Study 2 largely replicated the success of benevolent attitudes, and furthermore showed, for the first time, that the subtler still *implicit* attitudes to men were an even better predictor. The same pattern was replicated in Study 3 on a non-student sample, with a verbal (rather than pictorial) IAT measuring implicit attitudes to women to predict the effectiveness of Businesswoman

advert types. Thus, the three studies overall showed the superiority of implicit, over even the most subtle explicit, measures of gender attitudes when predicting the effectiveness of non-traditionally gendered adverts.

These findings shed some light on the contradictory results of the past where, for example, career and homemaker orientation predicted the effectiveness of gendered ad strategies in the 80s but not in the 90s (Belizzi and Milner 1991; Barry et al. 1985), when at the same time preferences for traditional portrayals reported in the 70s (Duker and Tucker 1977) converted to more egalitarian preferences for the non-traditional ones in the 90s and beyond (Orth and Holancova 2004; Hupfer 2002; Jaffe and Berger 1994; Bellizzi and Milner 1991). We argued that these contradictions might have been due to the increased interference of egalitarian norms contributing to the null results. Indeed, our findings point to greater usefulness of the subtle gender attitude measures in predicting the effectiveness of gendered advertisements. This is in line with Ambivalent Sexism Theory which recognizes the varied susceptibility of the hostile and benevolent attitude measures to egalitarian norms (Glick and Fiske 1996; Swim et al. 2005).

Our findings also provide further support for the resistance of implicit attitudes to such norms (Greenwald et al. 2002; Lane et al. 2007; Lemm et al. 2008) compared to explicit HS and HM. The possibility that the success of our *attitudes toward men* paper IAT could be down to the use of stimuli similar to those used in our adverts is ruled out by the findings of Study 3, where a verbal version of that tool was employed. This last study therefore speaks against the possibility that the simple greater similarity between the stimuli advertisements and the IAT structure (than between these advertisements and the structure of the BM or

BS measures) is responsible for the findings. In fact, had that been the case, we should have observed a much greater difference between the predictive values of the subtle explicit and the implicit measures here. Interestingly, given the lack of such structural match between the explicit measures and the ads, the predictive power of benevolent attitudes was rather high.

The implicit relative preference of the non-traditional male and female types (over the traditional ones) was revealed here for the first time using an IAT. It corresponds, however, with Wade and Brewer's (2006) findings obtained with lexical decision task where the content of the businesswoman stereotype was evaluated implicitly, by female participants, as more positive than that of the housewife. They contradict, however, Rudman and Kilianski's (2000) findings where implicit attitudes to female authorities were negative (more so than attitudes to low-authority females). Whether these inconsistencies are down to methodological (different measures of implicit phenomena), conceptual (testing evaluative elements of gender stereotypes and not attitudes as such) or gender differences remains to be tested (in Study 3, the distribution of men and women did not allow for investigation of gender differences).

Limitations and Future Research

One of the limitations of our studies may be the lack of data on the reliability of the two paper IATs used here. As stated in Lemm et al. (2008): "Paper IATs [...] do not allow for trial by trial timing, thus it is not possible to compute split-half or alpha reliability." (p. 22). However, test-retest reliability of her paper IATs was comparable to that of the computerised IAT with pictorial paper IATs scoring slightly lower than verbal ones. Our

post-hock tests of alternate form reliability of the tools used here, though by necessity conducted on different samples, similarly revealed acceptable levels of reliability: r=.548, p<.01 (n =55) for the paper pictorial IAT measuring implicit attitudes to men and r=.709, p<0.001 (n=31) for the paper verbal IAT measuring implicit attitudes to women. Moreover, the robustness of our findings is seen also in their generalization across both male and female gender roles, student and non-student samples, and different measures of advertising effectiveness. Nevertheless further research could fruitfully test the reliability of paper IATs in a consumer context.

Another point in need of further investigation is the predictive stability of the explicit but subtle measure of Benevolence to Men (BM). While BM was predictive of advertising effectiveness in the control condition (when social desirability was not activated) in both Studies 1 and 2, on both occasions it ceased to be a significant predictor once HM was entered into the regression in Step 2. This may have been due to inadequate power to retain a significant association between BM and ad effectiveness in these two studies: This problem did not appear in Study 3 which had the biggest sample. Alternatively, since Study 3 focused on attitudes to women instead of men, another possibility is that the gender portrayed in the advert may have been a moderator of the benevolence-advert effectiveness relationship. For example, while according to AST, BS is more subtle than HS, the two types of attitudes are also said to function slightly differently: BS rewards traditional women while HS is said to punish non-traditional ones (Sibley and Wilson 2004; Glick and Fiske 1996). The theory however does not explicitly state that this is also the case for attitudes to men (BM and HM). Instead it maintains that benevolent and hostile attitudes to

men are still sexist to women (rather than to men, Glick and Fiske, 2012). It is thus possible that the subtlety and the function of the benevolent attitudes interact differently depending on whether the target of these attitudes is male or female. Further research is needed to investigate this intriguing possibility.

The role of participants' gender also requires discussion. The samples in Studies 1 and 2 were exclusively female and the distribution of sexes and sample size in Study 3 did not allow for reliable tests of gender effects. However, although research shows that women are generally more liberal than men (Glick and Fiske 1996; Zawisza et al. 2013), this does not seem to apply to benevolent attitudes to men in the UK, where men and women did not differ (Glick and Fiske 1999; Zawisza et al. 2012). More importantly, the susceptibility of hostile vs. benevolent gender attitudes to egalitarian norms applies to both sexes equally: According to Swim et al. (2005, p. 406): "Variation in judgments of beliefs as sexist was related to differences in likelihood of endorsing such beliefs. This relation fully accounted for the tendency for men to be less likely to judge beliefs as sexist in comparison to women." Although testing for participant's sex effects in future studies would be recommended, the fact that the pattern of findings largely replicates across all three studies despite difference in the sample composition here is reassuring.

Theoretical and Practical Implications

Our studies present a valuable contribution to the scarce literature on: (i) the use of (paper) IATs in an advertising context, (ii) implicit gender attitudes, and (iii) the role egalitarian norms play in affecting the explicit attitudes' predictive power in explaining advertising effectiveness. Of practical importance, they present encouraging findings for researchers

and practitioners as they indicate that the new, subtle measures of implicit gender attitudes are useful predictive tools in determining the effectiveness of gendered ads. On a theoretical level, the match hypothesis (Zawisza and Cinnirella 2010) may need to be revisited using implicit (rather than solely explicit) measures of gender attitudes: The present findings support the possibility that inconsistent findings regarding this hypothesis in the past (i.e. gender attitudes being an unreliable predictor of the effectiveness of the gendered ads) may well be due to the moderating effects of egalitarian norms, to which explicit measures of gender attitudes are particularly vulnerable. The present findings also indicate an implicit preference for non-traditional gender types which is contrary to the continued dominance of traditional gender portrayal in advertising (Eisend 2009) – a practice which needs to be questioned in the light of these findings.

Using our findings marketers can start addressing 'women's backlash' (Miley and Mack 2009) and, instead of telling them what they think or who they are, effectively match advertising appeals to the changing attitudes of their audiences. In light of the present findings this could be achieved best by not relying solely on explicit measures of gender attitudes and instead using implicit measures of gender attitudes, especially in cases where strong egalitarian norms are in operation and subtle explicit measures are unavailable.

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Rosemary Lobban, MSc, was at the time of writing a post-graduate student within the Department of Psychology at the University of Winchester. She is particularly interested in the representation of gender within culture and the media. Her work is grounded within both positivist and critical approaches and has, to date, focused primarily on implicit and explicit gender attitudes and on how femininities are constructed.

Table I

Summary of Hierarchical Regression Analyses for Variables Predicting Advert Effectiveness for Non-traditional Advertisements in Social Desirability and Control Conditions.

	Model 1			**Model 2**		
	B	***SE B***	***β***	***B***	***SE B***	***β***
Egalitarian norms group (*n*=22)						
BM	-0.16	0.24	-.15	0.00	0.28	.00
HM				-0.30	0.29	-.28
R^2		0.03			0.08	
F for ΔR^2		0.46			1.08	
Control group (*n*=21)						
BM	0.56	0.24	.47*	.25	0.35	.21
HM				.66	0.53	.36
R^2		0.22			0.28	
F for ΔR^2		5.37*			1.54	

Note: HM = Hostile attitudes to Men; BM = Benevolent attitudes to Men; * $p<.05$.

Table II

Summary of Hierarchical Regression Analysis for Variables Predicting Advert Effectiveness for Non-traditional Advertisements in Studies 2 and 3.

	Model 1			**Model 2**			**Model 3**		
	B	***SE B***	***β***	***B***	***SE B***	***β***	***B***	***SE B***	***β***
Study 2 (*n*=45)									
IAT_m	-0.10	0.044	-.34*	-0.09	0.04	-.31*	-0.09	0.04	-.30*
BM				0.26	0.11	.32*	0.20	0.15	.25
HM							0.12	0.18	.12
R^2		.11			.22			.23	
F ΔR^2		5.56*			5.56*			0.41	
Study 3 (*n*=55)									
IAT_f	-0.22	0.11	-.27*	-0.22	0.11	-.27*	-0.23	0.11	-.28*
BS				0.80	0.38	.27*	0.86	0.43	.29*
HS							-0.09	0.30	-.04
R^2		.07			.15			.15	
F for ΔR^2		4.17*			4.40*			.09	

Note: IAT = Implicit Association Test (m = attitudes to males; f = attitudes to females); BM = Benevolent attitudes to Men, HM = Hostile attitudes to Men; BS = Benevolent Sexism, HM = Hostile Sexism, * $p<.05$.