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The implicit conditioning of consumer attitudes: Logo substitution effect

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Abstract The notion of the unawareness of influence posits that people are often not aware of the determining influences on their judgments or subjective feeling states. It gave rise to a new line of research on implicit consumer behavior, and helped overcome both conceptual and methodological shortcomings often subscribed to applied psychology of unconscious processes. This study compares explicit and implicit processes of attitude conditioning toward Carrefour supermarkets and McDonald's fast-food bars. It introduces an idea of a *logo substitute*: a formally similar graphic image that conserves essential features of the original logo, but otherwise is not consciously recognized or identified as the logo. The arrangement of experimental settings enabled to draw an operational distinction between

explicit and implicit influences. It was established that replacing of the original logo with its substitute was an effective method of the attitude change. Moreover, the study brought some interesting observations: 1. implicit persuasion manipulation resulted in significant attitude change, whereas no such findings were found in explicit condition; 2. more spectacular changes were produced by the *logo substitute* of a less known Carrefour logo. The general findings are discussed in the light of the model of central and peripheral persuasion extended to *visual* persuasive stimuli.

Key words consumer attitudes — implicit conditioning — unawareness of influence — low elaboration — logo substitution

Introduction

Until late 1980's debates on unconscious processing of information felt far beyond the interest of the mainstream academic psychology. It was mainly due to the lack of methodologically sound and replicable observations and to the notion that unconscious processes, even if proved to exist, are of marginal importance comparing with other social regulations of human behavior. The former shortcomings were eventually overcome with the appearance of technically advanced and well controlled experiments which reported instances of processing of unattended or subliminal (lexical or visual) stimuli (see: Bornstein and Pittman, 1992; Uleman and Bargh, 1989). The latter opinion started to change when Bargh raised the issue of the *(un)awareness of the influence* in his research on automaticity (Bargh, 1992; 1994). He posited there were three ways in which a one may be unaware of a mental process. Firstly, a person may be unaware of the stimulus itself, e.g. subliminal exposures in the mere exposure effect (Kunst-Wilson and Zajonc, 1980) or affective priming effect (Murphy and Zajonc, 1993). Secondly, a person may be unaware of the way in which the stimulus

event is interpreted or categorized, e.g. research on the procedural knowledge or nonconscious acquisition of information (Lewicki, Hill and Czyżewska, 1992; 1994; Lewicki, Czyżewska and Hill, 1997). Thirdly, the person may be unaware of the determining influences on judgments or subjective feeling states and thus may misattribute the reason to other causes (e.g. weather influences mood: Schwarz and Clore, 1983; eye-pupil dilation influences attractiveness: Niedenthal and Cantor, 1986; accidental touch influences amount of tipping: Crusco and Wetzel, 1984).

The notion of unawareness of influence helped bring the scientific debate on unconscious processes from laboratory setting to social environment. Examining situations in which persons were not aware that a stimulus plays a persuasive function revealed new, "implicit" perspectives both to traditional social psychology observations (social judgments, behaviors, attractiveness, persuasion) and to cognitive studies on attention, perception, learning, and automaticity. Greenwald and Banaji (1995) offered an impressive reinterpretation and categorization of the main social phenomena: attitudes, self-esteem and stereotypes, and provided a comprehensive

theoretical model of implicit social cognition. According to them, there exist implicit processes which occur beyond conscious awareness and control. From implicit social cognition perspective, people often do not realize that one event stimuli may influence the other, and automatically misattribute implicit to explicit processes. The notion of unawareness of influence gave rise to yet another line of research: implicit consumer behavior. Present, studies in this domain are founded on a well established cognitive and social psychology findings and carried out in a scientifically rigorous manner (Greenwald, McGhee and Schwartz, 1998; Hecker and Stewart, 1988; Maison, 1995; Maison and Bruin, 1999; Pawłowska and Sędek, 1999). The study presented in this article, aims to contribute to implicit consumer behavior research and raises the issue of *implicit conditioning of consumer attitudes*. In particular, it focuses on attitudes toward the product (or service), represented by a company's logo which is accompanied by a positive social event.

Implicit and explicit influences in persuasive advertising

Exposing a company's logo in a presence of positive stimuli enhances liking of that logo – and consequently – of a product it represents. It is one of the fundamental principles in persuasive advertising (e.g. Robertson and Kassarian, 1991; Moven, 1994; Krugman et. al. 1994), and has been commonly utilized by manufacturers placing their logos during music, sport or other entertainment events. Placing a company's logo as a background of a central figure (for instance: sponsor's logo during a rock concert) may be well explained in terms of *classical conditioning* (Kim et al., 1996; Kim et al. 1998; Janiszewski and Warlop, 1993; Grossman and Till, 1998; Greenwald and Banaji, 1995; Doliński, 2000). The novel, neutral or ambiguous logo (conditional stimulus – CS) is systematically associated with pleasant events (unconditional stimuli – UCS), and after some time it will itself become considered positive.

Greenwald and Banaji (1995) suggest that persuasive advertising may lead to implicit attitudes, i.e. introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable feeling, thought, or action toward social objects (here: liking the logo – and eventually the product – is misattributed to its quality and not to the influence of UCS). However, they are not quite sure, whether attitude change through conditioning should be considered implicit or explicit process. On one hand, they admit that “advertising audiences are aware that the advertiser is trying to influence attitude, (thus) there may be little likelihood of the audience misidentifying the source of positive reactions to the advertising message” (p. 9) (i.e. the process is “explicit” in nature). On the other hand, “advertising audiences are frequently inattentive and, in that circumstance, may be susceptible to implicit effects of an extraneous attractiveness cue” (p. 10) (i.e. the process is “implicit” in nature).

In psychology in general, and in persuasive advertising in particular, it is difficult to clearly discern what have been contributed by implicit and what by explicit processes. None of direct measures seem satisfactory for that purpose, as they may themselves activate the awareness of the influence, otherwise absent or latent. And most of indirect measures –

supposedly free of this guilt – still need conceptual and methodological advancement. Yet exploration of unconscious phenomena seems a tempting endeavor to many. It may not only clarify the definition and classification of the explicit/implicit interface, but also may produce an interesting comparison of their persuasiveness. Seeking to address, at least to some extent, the issue of unconscious processing of consumer information we decided to construct an original persuasive advertising situation and stimulus events. It was arranged so that one could clearly discern between explicit and implicit influences.

Experimental implicit vs. explicit conditioning of consumers attitudes

The problem to face in this experiment was how to hide an act of conditioning before audiences awareness, so that it could be truly called implicit? One possible method was to hide UCS that influences explicit CS, as in a case of subliminal affective priming (e.g. Murphy and Zajonc, 1993; Ohme, Pochwatko and Błaszczak, 1999). In this article another method is introduced: to show UCS and hide CS. It is done by presenting the entertaining show and simultaneously hiding the logo of the producer. This process is assumed implicit, because persons have no conscious awareness of CS and therefore of conditioning process itself.

But how to hide CS and still have it influenced through the process of conditioning? It is possible by replacing the logo with *logo substitute*: a formally similar graphic image (e.g. with similar shape or colors) that conserves essential features of the original logo, but otherwise is not consciously recognized or identified as the logo. I hypothesize that on unconscious level, it will play the function of the original logo. In other words the logo will be accessible semantically but not perceptually. Next, the *logo substitute* should be exposed to classical conditioning and thus become instrumental to attitude change.

As it was pointed before, such arrangement of the experimental situation draws an operational distinction between explicit and implicit attitude conditioning. It creates an opportunity to compare two kinds of influence. I hypothesize that implicit conditioning will turn out effective and result in a significant attitude change comparing with control condition (no logo presentation). In the two studies the *logo substitution* hypothesis is tested, using Carrefour and McDonald's products as targets of consumer evaluation.

Study 1: supermarket

Procedure

Students of the introductory course in social psychology (10 males and 50 females) were asked to evaluate artistic skills of two stand-up comedians. The comedians performance was video-taped and presented to the participants. After watching the show they were asked to fill out a Consumer.

Attitude Questionnaire, and choose between one of the two popular supermarkets – Carrefour and Auchan, on 5 nominal scales: 1. In which supermarket you feel more comfortable?; 2. Which supermarket is more likely to manipulate its customers?; 3. Which supermarket has a better customer service?; 4. Which supermarket is more likely to sell products that are outdated?; 5. Which supermarket is more clean? Participants were informed that this questionnaire was administered “just to give them a few minutes break before the main part of a study – the comedians evaluation”, but in fact it was a dependent variable measure. To make sure they properly associate the name of the supermarket with its graphic design (which was a critical issue here), the original logos of the two supermarkets were placed in front of participants throughout dependent variable assessment. Afterwards, they had to evaluate the two comedians on a variety of personality dimensions, relevant to the alleged purpose of the study. The participants watched the tape in 3–5 persons groups, the presentation lasted for approximately 8 minutes. After the study everyone was individually interviewed (see: Appendix) and then debriefed.

All participants were randomly assigned to one of the three experimental groups: *explicit condition* (n=20) – the comedians performed having the clearly visible Carrefour logo as a background; *implicit condition* (n=20) – the comedians performed having the Carrefour logo substitute as a background; *control condition* (n=20) – the comedians performed against a monochromatic background (blue screen) (Fig. 1).

Results

In the post-experimental interview participants declared no conscious recognition of the logo in implicit condition, and 92% correct recognition of the logo in explicit condition. Preliminary analysis revealed no significant effect caused by gender, recognition or other post-experimental interview variables, therefore these factors were excluded from the following analysis.

In a composite-item analysis a total number of Carrefour choices was counted from the questions 1, 3, 4 and 5 and compared with a total number of Auchan choices (prior to that data in the question 4 was recorded). It has turned out that Carrefour was more frequently chosen in implicit than in explicit and than in control group ($\chi^2=7.025$, $p<0.008$; $\chi^2=16.36$, $p<0.0001$, respectively) (Fig. 2). No statistically significant differences occurred between explicit and control condition, however there was a trend in choosing Carrefour more often in the explicit than in control group.

A separate-item analysis revealed significant differences between the control and implicit conditions. It turned out that the participants consistently chose Carrefour more frequently than Auchan in the implicit condition than in control condition (Fig. 3–6).

A very interesting result was obtained in question 2 (Fig. 7). Participants in the implicit condition chose Carrefour more frequently than Auchan as a supermarket which is more likely to manipulate its customers. The experimental manipulation was still in effect, but this time the direction of the change reversed.

Finally, participants in the implicit condition were more likely than in the explicit condition to choose Carrefour as a more clean supermarket ($\chi^2=4.33$, $p<0.037$) (Fig. 6). No statistically significant differences were found in the remaining between-groups comparisons on the separate-item level.

Discussion

The study created an opportunity to observe and compare two kinds of consumer influence. One was induced by the explicit conditioning, participants were likely to be aware of the influence of UCS on CS (visible logo clearly means “sponsorship”). The other consumer influence was caused by implicit conditioning, participants were not aware of any influence of UCS on CS (the attitude object was not perceptually accessible). It has been experimentally shown that the implicit conditioning was a more effective method of attitude change than the explicit conditioning. Moreover the explicit conditioning was not efficient enough to produce a significantly greater shift in evaluation comparing with the control condition. Another intriguing observation comes from the analysis of the question 2 (“which supermarket is more likely to manipulate its customers”). Comparing to the control condition, participants in the implicit condition were choosing Carrefour more frequently than Auchan in their answers. One may speculate that they somewhat “detected” our experimental manipulation, and articulated it accordingly in their evaluations. This fact however have not influenced their consecutive answers, and the following manipulation remained effective in questions 3 through 5 (i.e. Carrefour was preferred to Auchan). Along with Bogdan Wojciszke’s suggestion, in the replicating studies we will add a behavioral measure to elaborate on this dissociation effect more closely.

Study 2: fast-food bars

Procedure

Study 2 was conducted parallelly to Study 1, and based on the same procedure, but this time we used a logo of a world-known fast-food bar – McDonald’s. 63 students of the introductory course in social psychology (17 males and 46 females) had to choose between one of the two fast-food bars – McDonald’s and Burger King, on 4 nominal scales: 1. Which food is worse for your health?; 2. Which bar is a better place to meet friends at?; 3. Which bar has a better product offer? and finally, 4. Which bar is more clean? As in Study 1, the original logos of the two fast-food bars were placed in front of participants throughout dependent variable assessment.

All participants were randomly assigned to one of the three experimental groups: *explicit condition* (n=22) – the comedians performed having a clearly visible McDonald’s logo as a background; *implicit condition* (n=22) – the comedians performed having a McDonald’s logo substitute as a background; *control condition* (n=19) – the comedians performed against a monochromatic background (blue screen) (Fig. 1).

A



B



C



Fig. 1. Selected pictures from the video material presenting performances of two comedians with logo (A), logo substitute (B), and no logo in a background (C).

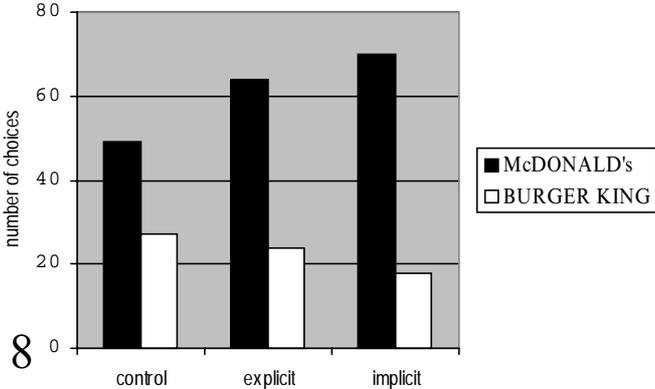
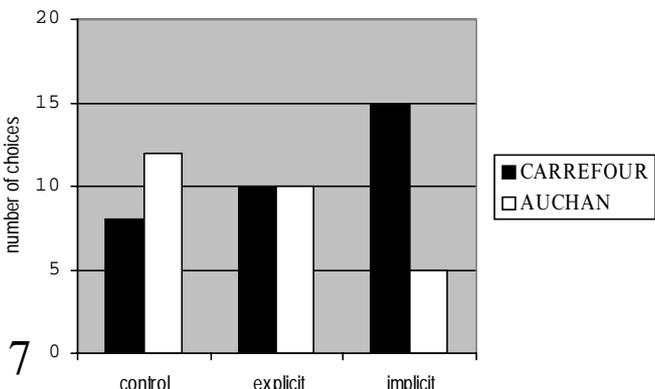
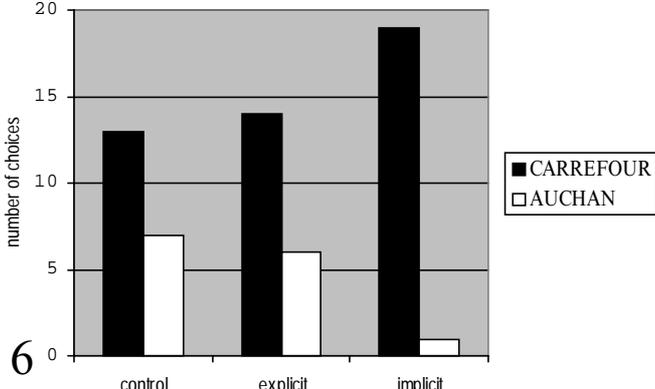
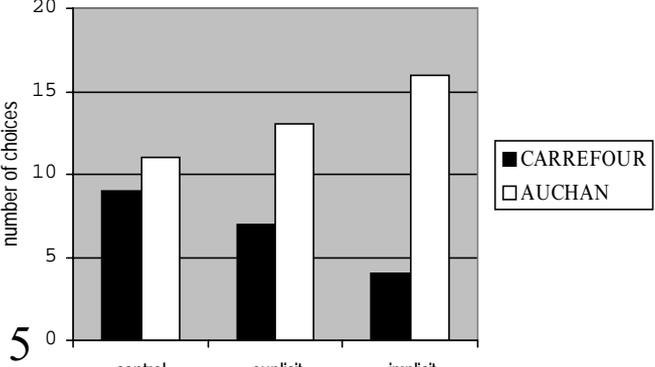
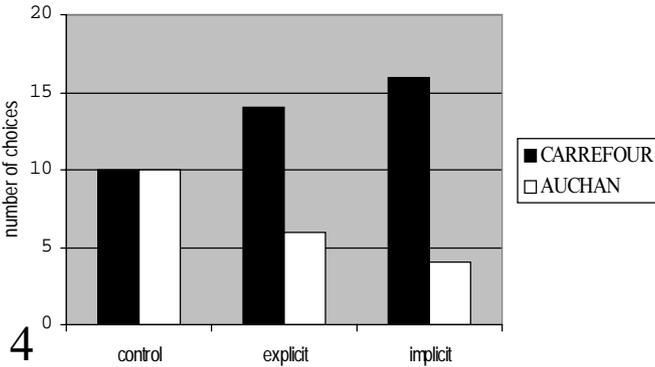
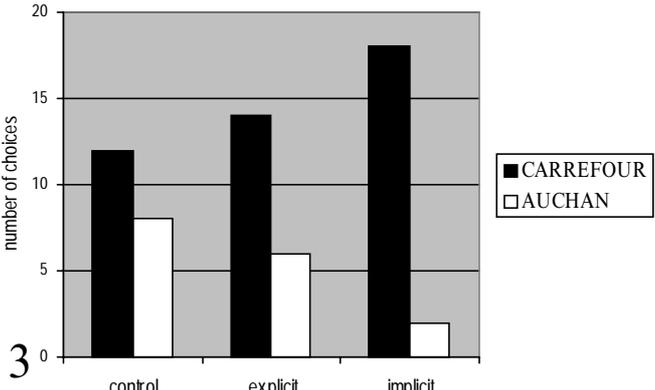
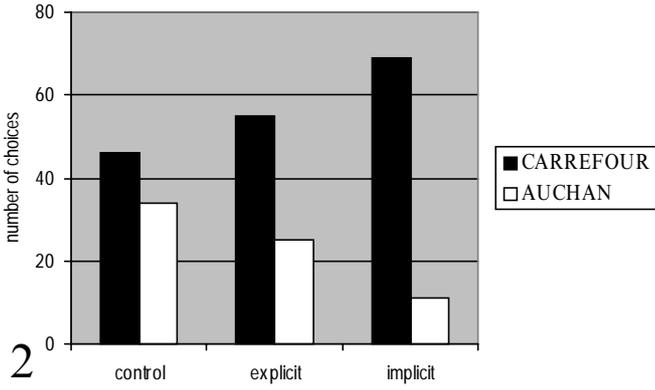


Fig. 2. Total number of choices between Carrefour and Auchan supermarkets (implicit/explicit) $\chi^2=7.025$; $p<0.008$; (implicit control) $\chi^2=16.36$; $p<0.0001$
 Fig. 3. "In which supermarket you feel more comfortable?" (implicit/control) $\chi^2 = 4.8$; $p< 0.028$
 Fig. 4. "Which supermarket has a better customer service?" (implicit/control) $\chi^2 = 3.96$; $p< 0.047$
 Fig. 5. "Which supermarket is more likely to sell products that are outdated?" (implicit/control) $\chi^2 = 2.85$; $p< 0.091$
 Fig. 6. "Which supermarket is more clean?" (implicit/explicit) $\chi^2=4.33$; $p<0.037$; (implicit/control) $\chi^2 = 5.63$; $p< 0.018$
 Fig. 7. "Which supermarket is more likely to manipulate its customers?" (implicit/control) $\chi^2 = 5.01$; $p< 0.025$
 Fig. 8. Total number of choices between McDonald's and Burger King fast-food bars (implicit/control) $\chi^2 = 4.65$; $p< 0.031$

Results

In the post-experimental interview participants declared no conscious recognition of the logo in implicit condition, and 100% correct recognition of the logo in explicit condition. Preliminary analysis revealed no significant effect caused by gender or other post-experimental interview variables, therefore these factors were excluded from the following analysis. In the composite-item analysis McDonald's was more frequently chosen in the implicit than in control group ($\chi^2=4.65$, $p<0.031$) (Fig. 8). No significant differences occurred between the implicit and explicit condition, however there was a trend in choosing McDonald's more often in the implicit group. Similar trend was found between the explicit and control condition, McDonald's was chosen more frequently in the explicit group. No statistically significant differences were found between any of the groups in the separate-item analysis.

Discussion

Results of Study 2 were consistent with Study 1 findings, showing that the implicit conditioning was a more effective method of attitude change than the explicit conditioning. Unlike Study 1 this pattern of results was obtained only in the composite-item analysis, none significant differences occurred in the separate-item analysis. This may indicate that the *logo substitution* effect was weaker for McDonald's than Carrefour logo. There may be at least two explanations of this result. One is an initial strong preference for a particular brand. In the control condition, we found a strong preference toward McDonald's (in 73% of all cases participants chose McDonald's). Therefore it could have been the ceiling effect, that restricted a possible range of attitude change. The other explanation is that the weaker effect for the McDonald's implicit conditioning was due to a poorer logo substitute image as compared with the Carrefour substitution image. In the Study 2 explicit conditioning did not produce a significantly greater shift in the evaluation comparing to the control condition, and this additionally supports the ceiling effect explanation.

Unfortunately, in this study we did not have the "tendency to manipulate customers" question. Therefore Study 2 did not provide any further data to extend the discussion of the reversed effect from the Study 1.

General discussion

It was experimentally established that replacing original logo with its substitute, and thus making it perceptually inaccessible, is an effective method to change the consumer evaluation of a product *via* a typical advertising technique: attitude conditioning. The results of the two studies consistently show that the implicit conditioning of consumer attitudes is an effective method of a persuasion, moreover it happened to be even more effective than the explicit conditioning. Of course it does not mean that the explicit persuasion is generally ineffective. There could have been for instance informational or motivational noise that disabled the sponsoring effect from its development. What it means, however, is that the implicit influence is a pervasive

phenomena that successfully changes attitudes toward a product beyond audiences conscious awareness.

What, in turn, could be the possible explanation of such effectiveness of the implicit conditioning? Being afraid of entering a controversial field of hidden persuasion and subliminal advertising, I restrict the discussion to a well known idea of central and peripheral persuasion (Petty, Cacioppo, 1986), and extend it to *visual* persuasive stimuli. Upon the Gestalt differentiation between a figure and a ground (originally with respect to visual objects) I think of some elements of a visual advertisement as brought to the fore, and some as a background.

Central visual route usually captures consumer's attention and thus favors full elaboration, which is precise and complex. It eventually may induce subprocesses of verification, falsification, or simple reactance against advertisement. Intention to manipulate customers, quite obvious in explicit advertising, may automatically trigger objections in many, and in some situations it may eventually lead to the overcorrection effect (see: Wegener, Petty, 1995; Stapel, Martin, Schwarz, 1998). Thus central route is likely to activate the mode of *critical thinking* – the very one advertisers try so eagerly to switch off in their audiences (Doliński, 1999). I believe the explicit conditioning – to some extent – reflects this route: participants have been aware of the sponsor represented by the logo in a background of an entertaining show. The *peripheral route* of the *visual persuasion* was in turn reflected by the implicit conditioning. Participants have not been able to recognize the original logo from its substitute, and the critical thinking mode and reactance behavior have not emerged. The peripheral route of visual persuasion is a more difficult way to transmit the persuasive message, but once the process is successfully accomplished, the persuasion becomes very influential on consumer decisions (see: discussion on low-involvement processing in advertising by Heath, 2000a; 2000b)

One should also comment on a finding that more spectacular results of the attitude change (i.e. significant shifts both in separate-item and composite-item analysis) were produced by the *logo substitute* not of the powerful McDonald's logo, but of a generally less known Carrefour logo. Before the studies we had serious concerns whether choosing of Carrefour logo was the right decision, but no such doubts about McDonald's logo. Intuitively we thought that the stronger logo is represented in memory, the more graphical deviations it could bear. In the light of the data however we come to the conclusion that maybe a strong cognitive representation of a company graphical image is not critical to the effect after all? Maybe only a certain level of such representation is necessary, but the main role is played by other factors? We plan to administer a more detailed inspection of attitudinal dimensions to establish whether the *logo substitution* effect is moderated by such variables as initial attitude strength (both to the preferred and rejected brand), personal experience, user type and brand loyalty.

It will be also crucial to establish rules by which process of logo substitution image should be carried out. For the purpose of these studies several sets of substitutes have been intuitively created and then consulted with experts who chose the projects they considered best. The research conducted presently focuses on seeking formal or structural elements of logo,

we call “logo identity markers”. I believe they are responsible for conserving implicit associations with the product even when the new image (the substitute) is not consciously recognized or explicitly associated with the logo. Finally, *logo substitution* effect captures an interesting memory phenomenon in consumer behavior domain: the mental representation of a logo may be well activated by its substitute, what consequently implies unspecific nature of such activation.

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Appendix

Post-experimental interview

1. Do you have any comments about the study you have just participated in?
2. Did you notice anything that could have been confusing?
3. Have you noticed the background of the performing actors?
4. Can you describe this background?

- 4.1. Do you remember its colors?
- 4.2. Have you notice any words or letters?
5. Has the background made any impression on you?
6. Do you think the stories were funny?
7. Did you enjoy the study?

Selected pictures from the video material presenting performances of two comedians with logo (Fig. 1A), logo substitute (Fig. 1B), and no logo in a background (Fig 1C).