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SOME EFFECTS OF COLOUR INCONGRUITY IN A VISUAL AD

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SOME EFFECTS OF COLOUR INCONGRUITY IN A VISUAL AD

Marie-Christine LICHTLE, Jean-Claude DANDOUAU

Abstract:

While the effects of an ad's colour on attitudes towards it have already been investigated, far less work has been done on the influence of incongruous colours. This paper examines the effects of an ad using an incongruous colour on several variables of the advertising persuasion process. Analyses of variance have been conducted for an experimental study involving 407 respondents. The results show that a colour that is incongruous with the ad or with the product advertised affects the elements of surprise, perceived provocation, attitudes towards the ad and the positive beliefs about it.

Key words:

- Incongruity,
- Surprise,
- Provocation,
- Attitude towards an advertisement
- Beliefs about an advertisement.

Today's consumers are increasingly well-informed about advertising. However, while they are able to decode advertising and demand more from it, they are also more reticent about it or even distrustful of it. Moreover, the development of means of communication has led to a fragmentation of media. It is increasingly difficult for goods and services to stand out from the crowd; consumers are assailed by ever more commercial offers. One way for advertisers to get ahead of the competition might be to play on consumers' emotions by manipulating certain non-verbal elements of advertisements. The use of an incongruous colour in an ad might be one way of catching attention in a very crowded commercial environment. Meyers-Levy & Tybout (1989) claim that a moderate amount of incongruity between a schema and an object may be beneficial, provided the incongruity is perceived as interesting and positive. However, an incongruous colour might also have adverse effects, shocking the consumer and so engendering a negative attitude towards the ad. It is important then, from a managerial standpoint, to know what might be the (positive or negative) effects of colour incongruity in advertising.

Our aim is precisely to study the consequences of using an incongruous colour in an ad. What emotional reaction(s) does it prompt? How does it affect attitudes towards the advertisement? The influence of colour on the emotions caused by and attitudes towards ads has already been investigated (Gorn *et al.*, 1997; Lichtlé, 2007). However, very little work has been done on the specific influence of incongruous colours. The effect of surprise in the persuasion process of advertising has already been studied (Vanhamme, 2000; Vanhamme & Snelders, 2001; Lindgreen & Vanhamme, 2003). Again, though, the influence of an incongruous colour on surprise and on perceived provocation has not yet been examined. The analysis of these relations is one of the theoretical contributions of this paper.

This paper is also part of the theoretical framework of consumer resistance to advertising (Knowles & Linn, 2003): while incongruity in advertising prompts negative reactions, it might, in the longer term, lead to a certain form of consumer resistance to the brand.

Our argument is arranged in three sections. The first examines how an incongruous colour exerts its influence, allowing us to set out our research hypotheses. The second presents the methods by which data were collected and the measurement scales evaluated. The third describes the main results. The paper ends by discussing the contributions and limits of the research and sets out avenues for future research.

THE THEORETICAL FRAMEWORK: COLOUR INCONGRUITY AND THE ADVERTISING PERSUASION PROCESS

Incongruity

Compared with the mass of literature on congruity, little research has been done specifically on incongruity. Congruity may be defined as 'the character of what is suitable'. Incongruity can therefore be defined as 'the character of what is unsuitable' because it is 'irrelevant' or 'unexpected' (Heckler & Childers, 1992). The concepts of congruity and incongruity are found in many areas of marketing, relating to such things as information (Heckler & Childers, 1992; Powell Mantel & Kellaris, 2003), product (Campbell & Goodstein, 2001), the self (Sirgy, 1982, Sirgy *et al.*, 1997), gender (Fisher & Dubé, 2005), and odour (Mitchell, Kahn & Knasko, 1995).

In the context of advertising more especially, congruity is the capacity of a stimulus to reinforce the meaning of the message with which it is associated. More specifically, colour congruity may be defined as the 'consistency between what the colour evokes and what the advertisement suggests'. Incongruity would therefore be inconsistency between the two.

The concept of incongruity is interesting because it runs counter to the principle of harmony and coherence, and to the absence of dissonance that characterises the homeostatic equilibria of each individual. Incongruity, as opposed to congruity, characterises a property of the object that is in opposition with the natural order of things. But as individuals always wield great power when it comes to manipulating this natural order, it is perceived incongruity that is at issue here.

Our aim is to test the influence of colour incongruity on the evaluation of advertising messages and their marketing effects (attitudes towards and beliefs about ads), and on the psychological reactions engendered in respondents (surprise and perceived provocation).

The effect of incongruity on attitudes towards and beliefs about an advertisement

Attitude towards the ad

Our first objective is to examine the impact of incongruity on the dependent variables of the persuasion process: attitudes towards and beliefs about the ad.

Early research argued that colour must be perceived as appropriate for the object in question (Norman & Scott, 1952) when we wish to measure individuals' responses to this variable. This is the case in advertising.

It has specifically been shown that attitudes towards ads vary with the emotions they cause (Batra & Ray, 1986; Holbrook & Batra, 1987; Edell & Burke, 1987; Burke & Edell, 1989). Attitudes are also influenced by the congruity between colour and ads: the more congruent the dominant colour of an ad, the more favourable are attitudes towards it. It is legitimate to think, therefore, that the incongruity of colour in an ad will have the reverse effect on this variable and we can hypothesise that incongruity will engender negative attitudes towards an ad (H1.1.)

Beliefs about the ad and perceived provocation

A great deal of work has been done on the congruity of music used in advertising. While much of that research has shown a beneficial effect of congruity, other commentators have reported that there is no obvious influence of congruity. Morris & Boone (1998) report that the consistency between the music used and the emotions evoked by an advertising theme may produce negative or positive evaluations in equal measure.

In the case of colour, we have seen that congruity may influence attitudes towards ads. The colour of an ad also affects individuals' beliefs (Gorn *et al.*, 1997).

We can therefore consider that the congruity of colour with the advertisement influences beliefs about the ad and that the same is true of incongruity. In particular, it should be tested whether this influence of incongruity is, as we suppose, negative (H1.2.).

Perceived provocation

Veza & Paul (1997, p.179) define provocation as 'a deliberate appeal, within the content of an advertisement, to stimuli that are expected to shock at least a portion of the audience, both because they are associated with values, norms or taboos that are habitually not challenged or transgressed in advertising, and because of their distinctiveness and ambiguity'. They report that provocation has three dimensions: distinction (the stimulus is emotionally striking and rouses curiosity), ambiguity (the stimulus is confusing or misleading) and transgression of norms and taboos (inclusion in the message of themes pertaining to sex, nudity, violence or death).

In the same order of ideas, some commentators have investigated offensive or shocking advertisements (Dahl *et al.*, 2003). They suppose that such ads engender negative emotions that arise in the advertising message, more especially in function of the types of shock appeals. Dahl *et al.* (p. 269) have defined shocking advertising content as 'that which attempts to surprise an audience by deliberately violating norms for societal values and personal ideas'. They identify seven types of shocking advertising stimuli: disgusting images, sexual references, profanity/obscenity, vulgarity, impropriety, moral offensiveness and religious taboos. In particular the shocking character could arise from impropriety, that is the violation of social, dress, gestural conventions and so on. It is in this context that we can integrate an incongruent colour: this may in itself be contrary to social norms and may therefore shock the audience. O'Keefe (2002) set out two ways of defining advertising messages: either in terms of the intrinsic characteristics of the message (comparative advertising, nudity stimuli, decorative models, etc.) or in terms of receptor responses (messages using humour fear, etc.). An incongruous colour falls into the first category.

An unusual colour, by emphasising a sign (an element of the ad) may engender an incongruity that is contrary to social conventions. It may be considered shocking and could be perceived as an attempt to provoke by the advertiser. We can therefore deduce from this a hypothesis bringing out a positive link between incongruity and the shocking character ascribed to the ad (H1.3).

The effect of colour on psychological reactions

Surprise

One of our research objectives is to study the relationship between incongruity and surprise. In a crowded advertising environment, creators vie to be original to ensure their ads are attractive. In exploring different registers in their mode of execution, they often try to surprise. We propose to check whether incongruity does indeed create an effect of surprise.

Surprise is considered an emotion in the psychological literature (Izard, 1977; Plutchik, 1980) and in marketing (Derbaix & Pham, 1991; Vanhamme, 2000). It is purportedly a short-lived emotion (Derbaix & Pham, 1991). Among the many definitions of surprise in dictionaries, encyclopaedias and psychology literature, the following seems to be the most suitable for our purposes: 'A brief emotional state that is the result of experiencing an unexpected event' (<http://www.nationmaster.com/encyclopedia>). Surprise may therefore be created by something unexpected (Plutchik, 1980; Izard, 1991) or something that departs from the theoretical schema (Reisenzein, 2000). Despite many disagreements in the literature, Derbaix & Gregory (2004) show the existence of a consensus on the elements that constitute surprise: cognitive evaluation, physiological activation, the motor component, the motivational component and the subjective component.

As Derbaix & Pham (1991) recall, surprise is among the shorter-lived affective reactions (emotions) and is contingent upon the object that created it. Vanhamme (2000) reviews the state-of-the-art on the subject, even if the paucity of applications in consumer behaviour is emphasised.

Surprise, she reminds us, amplifies subsequent affective reactions. For our research, surprise should engender more marked attitudes towards the advertisement presented and reinforce the internal conflict that might lead to manifestations of resistance.

While the definitions of incongruity and surprise share the character of being unexpected, it would be hazardous things to put them together, first of all because the two concepts arise from different processes; then because the dimension of relevance present in incongruity is not present in surprise. It is quite possible to come upon an object that is both incongruous and unsurprising. The impact of surprise on the intensity of the attitude takes on all its significance here.

The influence of the congruity of colour on certain emotions felt (especially pleasure and activation) has already been reported (Lichtlé, 2007). We therefore have every reason to think that incongruity also influences emotions and we can infer an effect of this variable on the surprise felt by individuals confronted with an advertisement (H2).

From this theoretical framework, we can formulate a series of hypotheses:

The more a colour is perceived as incongruous,

H1: the more negative are attitudes towards and beliefs about the ad

H1.1. the more unfavourable are individuals' attitudes towards the ad.

H1.2. the more negative are individuals' beliefs about the ad.

H1.3. the more the ad is considered shocking.

H2: the more surprised individuals feel.

Methodology

Experimentation and individuals

First exploratory phase: scale validation

From the literature review, we selected what seemed to us the more relevant scales. A first investigation was conducted to make sure they were reliable and valid.

This first phase consisted in an on-line questionnaire via Internet proposing a 'porno chic' visual register. The study used convenience sampling with 153 respondents.

The first phase tested the measurement scale for surprise, attitudes towards and beliefs about the advertisement measured by Likert items over seven levels of agreement. By using a large number of principal components analyses we were able to reduce the number of items included in the scales used for our second experiment.

Second phase: testing the hypotheses

The second phase used an on-line Internet survey of a convenience sampling of 407 respondents. It was made up of 264 women and 143 men throughout France: 45 aged 20 years or less, 187 aged 21–25 years, 170 aged 26–60 years and 5 older than 60 years. Some 338 had been or were in higher education.

The respondents were subjected at random to a visual ad with four levels of colour incongruity (the ad, appended, showed the faces of a man and a woman). The zero degree was a colour congruous with the sign (woman's lips coloured red). The next degree was a colour that was incongruous with the sign (woman's lips coloured green). Then came a congruous colour with an incongruous sign (man's lips coloured red). The final degree was an incongruous colour with an

incongruous sign (man's lips colour green).¹ The ad was selected for its ambiguity which was liable to engender an interesting variance for the experiment. Before the ad was presented, we made an ex-ante measure of the respondents' moods and attitudes toward advertising in general.

The following variables were measured after exposure to the visual ad: perceived incongruity, attitude towards the advertisement and beliefs about it. All the scales had seven points.

The independent variable

the perceived incongruity of the colour

The two-dimensional conception of congruity as developed by Heckler & Childers (1992) envisages both relevance and the unexpected. We opted for a semantic differentiator of seven adjectives with bijective relations of synonymy to the two dimensions of relevance and expectation. Such a measure allows easier transposition from one domain to another than an array of Likert-type items, the formulation of which is overly contingent on each experimental domain.

We measured perceived incongruity of the colour with the sign (lips) and the colour incongruity with the supposed category of product. The advertisement used did not refer explicitly to any product category so as to avoid a high contingency of our results on category. We measured openly the category supposed by respondents before questioning them about the congruity between the advertisement and the supposed product. In both cases of incongruity, while the structure revealed by PCA is two-dimensional, we do not quite find the dimensions of relevance and expectation of Heckler & Childers (1992).

For colour/lip incongruity, dimension 1 (the confusing character) comprises 3 items (alpha = 0.82): 'non-confusing – confusing', 'non-disconcerting – disconcerting', 'congruous – incongruous'. Dimension 2 (the appropriate character) is measured by 2 items (alpha = 0.76): 'inappropriate – appropriate', 'unsuitable – suitable'.

¹ The other colours were neutral; only the lip colour was bright (green or red).

A similar structure was found for the incongruity of colour compared with the product category (inferred by the respondent). Dimension 1, (the appropriate character), is composed of the 4 items (alpha = 0.81): 'inappropriate–appropriate', 'unsuitable–suitable', 'irrelevant–relevant', 'unexpected–expected'. Dimension 2 (the confusing character) comprises 3 items: 'non-confusing – confusing', 'non disconcerting – disconcerting', 'congruous – incongruous'.

The dependent variables

Attitudes towards the ad

The items from Holbrook & Batra's (1987) scale were used. The PCA we conducted allowed us to obtain a single dimension, including the following items (alpha = 0.88): 'I like this ad', 'I have only negative feelings towards this ad', 'I react favourably to this ad', 'This is a poor ad' (7-points Likert scale).

Beliefs about the ad

Although the measurement of attitudes towards the ad is characterised by the overall evaluative and affective dimension of the ad, it provides no indication as to the reasons for the evaluation. Burton & Lichtenstein's (1988) scale makes good this shortcoming by looking in detail at the underlying components of attitudes. This scale comprises two series of beliefs. The first relates to the message. The second to the way it is put across.

For our first exploratory field study, the initial 11 items were supplemented by several items relating to perceived provocation. After reducing the scale, we selected 13 items, three of which related to Burton & Lichtenstein's (1988) first dimension and 10 to their second dimension.

Provocation is a form of shock appeal for which the intensity of reactions is poorly covered by Burton & Lichtenstein's initial scale. The items measuring provocation are derived from a review

of the state-of-the-art and from ongoing research into this theme. They seek to identify the degree of internal conflict that might engender manifestations of resistance.

Our PCAs highlighted two dimensions. The first, evaluating the effectiveness of the visual ad, comprises (alpha = 0.85): *'I find this ad: 'effective', 'original', 'arresting', 'clever', 'daring', 'credible'*. The second, the shocking character of the visual ad, comprises three items (alpha = 0.85): *'shocking', 'exaggerated', 'uncalled for'*.

Surprise felt

Among the many measures, we selected three items from the Differential Emotions Scale (DES) of Izard (1977) for psychometric qualities, reliability and validity of the scale.

The results of our PCAs allowed us to identify a one-dimensional structure comprising three items (alpha = 0.79): *'I was astonished', 'I was surprised', 'I was stupefied'*.

The moderating variables

The two variables of mood and attitude towards the ad in general were included in the experiment to better control the effect of exposure to the experimental visual ad. They are considered to be covariants.

Mood before exposure to ads

We measured this variable using the 'Mood Short Form Scale' of Peterson & Sauber (1983). The results of our PCAs allowed us to identify a one-dimensional scale comprising three items (alpha = 0.76): *'I'm going through a period of being in a good mood'; 'at the time I am answering these questions, I feel in a good mood'; 'at present I feel irritable and impatient'*.

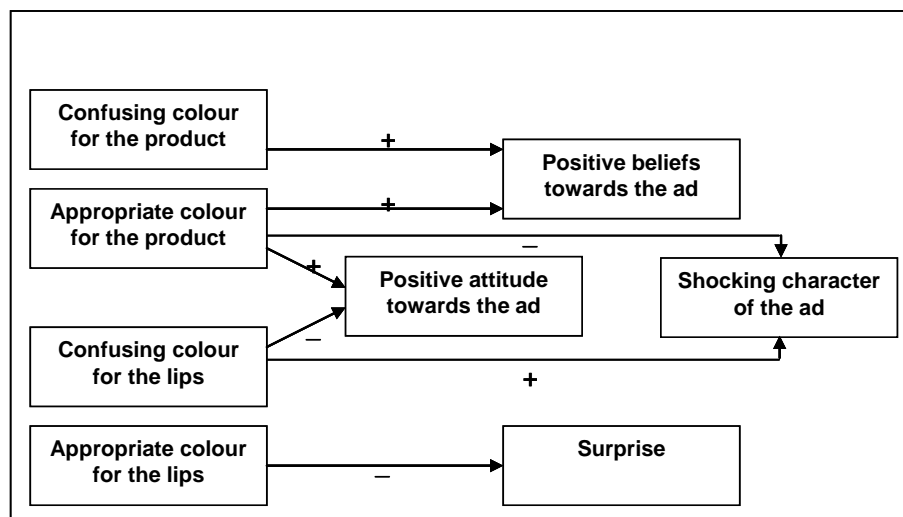
Attitude towards advertising in general

We have an adapted version of the Biel & Bridgewater (1990) scale. The PCA confirms a one-dimensional structure composed of the items: ‘Generally, the mere sight of an ad irritates me’, ‘I generally like looking at ads’, ‘In general, I find advertising informative’, ‘Generally, I find advertising convincing’ (alpha = 0.73).

Results

To test the research hypotheses, we opted for analyses of variance so as to bring out any effects of interaction among the explanatory variables. To conduct these analyses, the explanatory variables were recorded in two categories. For the response variables, the factor scores obtained after the PCAs were used in constituting each variable.

First, to test our hypotheses, we examined the relations one by one. To check the interactions between explanatory variables, a complete factorial model (type III) was used. The ANOVA results tables are in Appendix 2. The following diagram summarises the results we obtained:

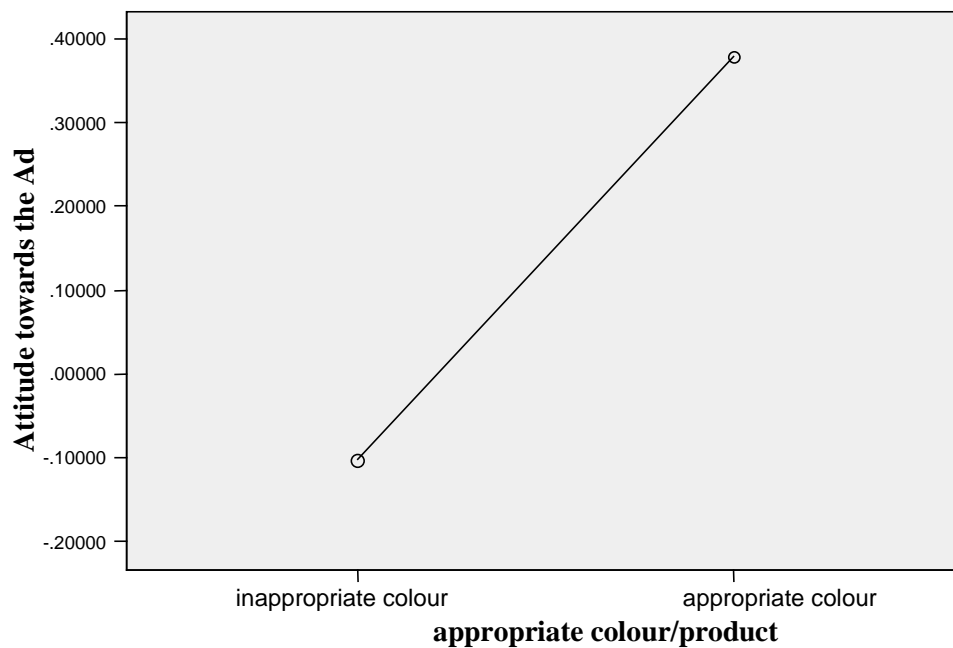


The effects of an incongruous colour on attitude towards the ad

Attitude towards the ad in general was introduced as a covariant of this analysis. This variable clearly has a significant positive effect on attitude towards the ad.

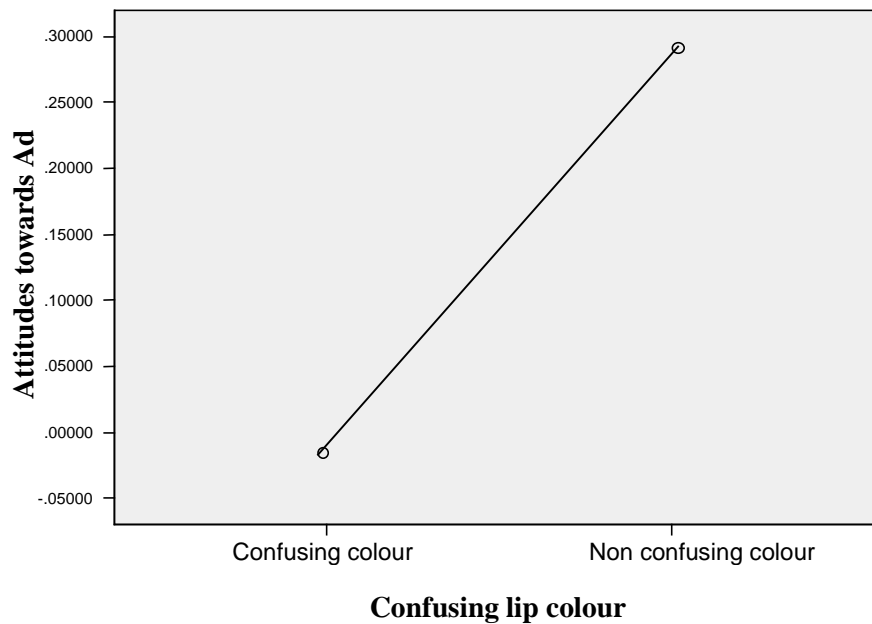
We observe an effect of the inconsistency of colour and product on attitude towards the ad ($p = 0.000$): this is all the more unfavourable when the colour is considered as unsuitable (or inappropriate) for the product (Figure 1 and Table 1 of Appendix 2).

Figure 1 :Effect of appropriate colour/product on attitudes towards the Ad (ANOVA)



Moreover, the 'confusing character' of the incongruous lip colour influences the variable under study ($p = 0.010$): attitude towards the ad is especially unfavourable when the lip colour is considered to be confusing (Figure 2).

Figure 2 : Effect of confusing lip colour on attitudes towards Ad (ANOVA)



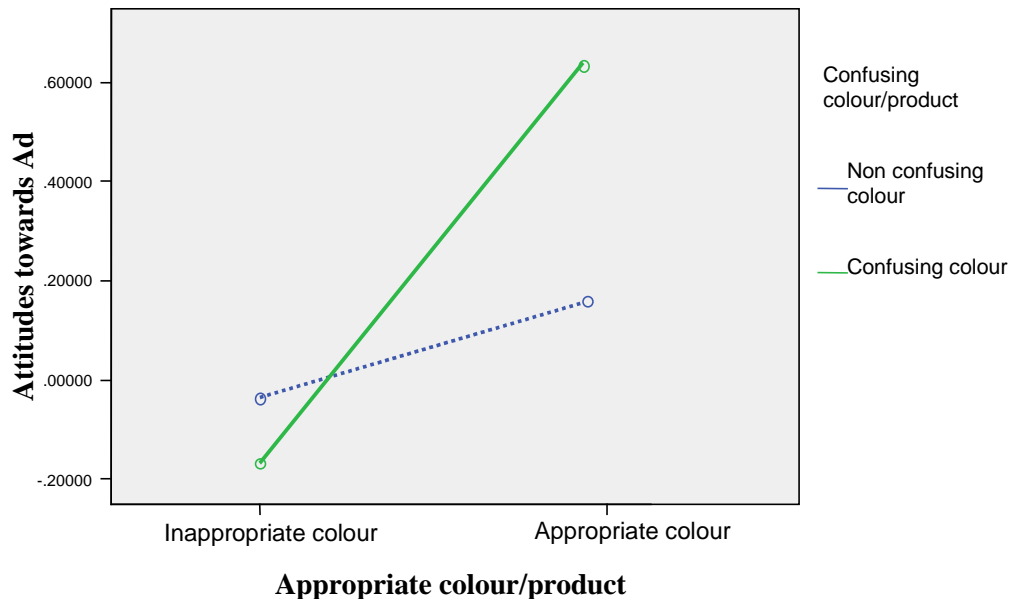
Hypothesis H1.1 postulated a positive relationship between incongruity and an unfavourable attitude towards the ad. As seen, this is borne out for the ‘inappropriate’ dimensions of incongruous colour for the product and for the ‘confusing character’ dimension of incongruous colour for lips.

Our results, then, brought out an interaction effect between the two dimensions of colour/product incongruity ($p = 0.009$).

As Figure 3 shows, attitude towards the ad is more favourable when:

- the colour is considered confusing for the product,
- the colour is appropriate for the product.

Figure 3 : Effect of appropriate lip colour and confusing colour/product on attitudes towards Ad



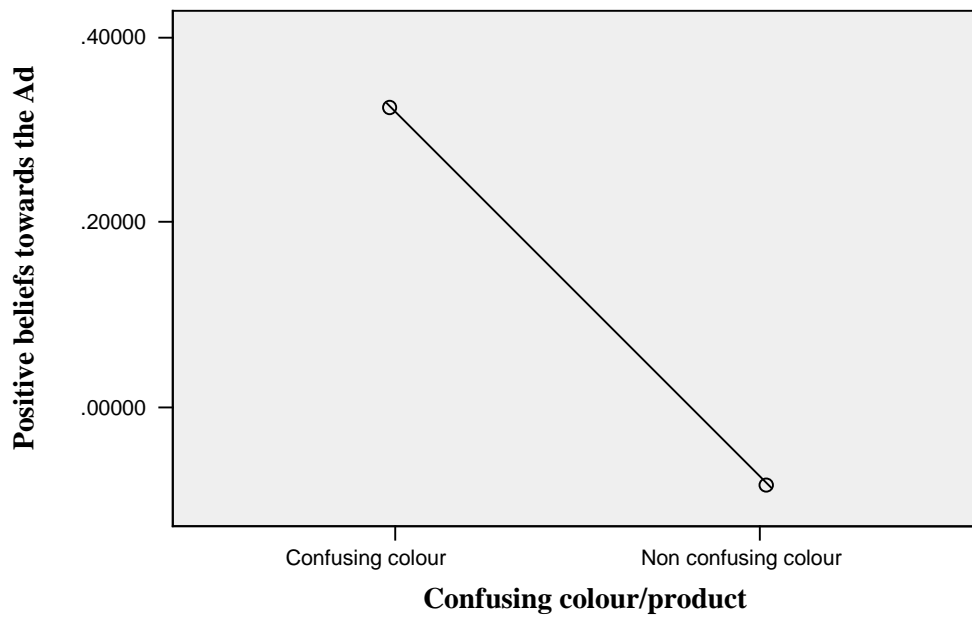
This results seems surprising (especially the connection between the confusing colour and the positive attitude towards the ad). However, some respondents state in open questions that they found the ad original. It may be that the confusing character of the colour for the product was considered to be an advantage and improved attitudes towards the ad.

The effects of colour incongruity on beliefs about the ad

Two dimensions were identified for this variable: positive beliefs and the shocking character. Their relations are studied in succession for the two variables.

The results (Table 2 of Appendix 2) show first a confusing effect of the colour for the product on positive beliefs about the ad ($p = 0.001$): the more confusing the colour is found for the product, the more beliefs about the ad are positive. (Figure 4).

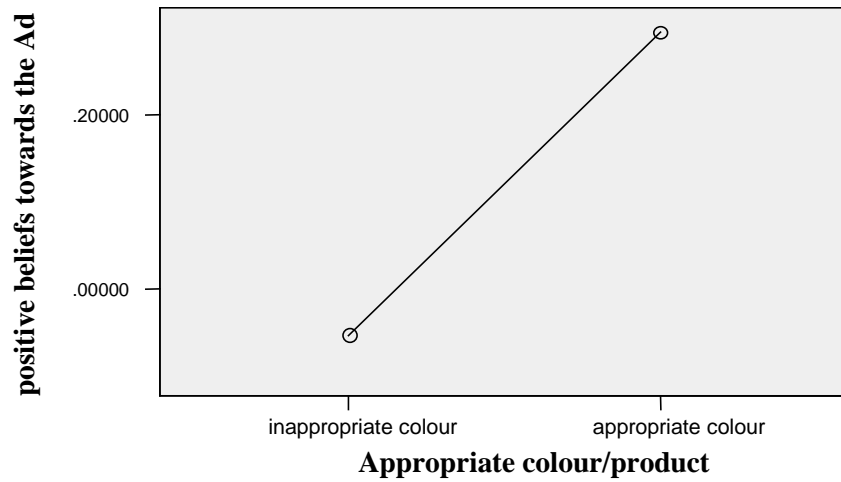
Figure 4 : Effect of confusing colour/product on positive beliefs towards the Ad (ANOVA)



Respondents seem to enjoy the ad more when they feel confused; the results obtained for attitude towards the ad are therefore confirmed.

Conversely, the relationship between the consistency of the colour and the product and this same dependent variable is positive (Figure 5): the more suitable the colour is for the product, the more beliefs about the ad are positive ($p = 0.006$). Respondents therefore prefer the colour to be suitable for the product and hypothesis H1.2 is confirmed for this variable.

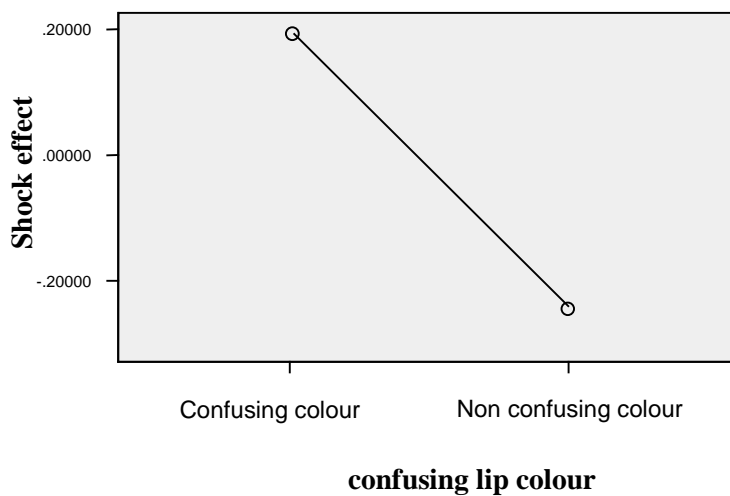
Figure 5 : Effect of appropriate colour/product on positive beliefs towards the Ad (ANOVA)



The effect of an incongruous colour on perceived provocation

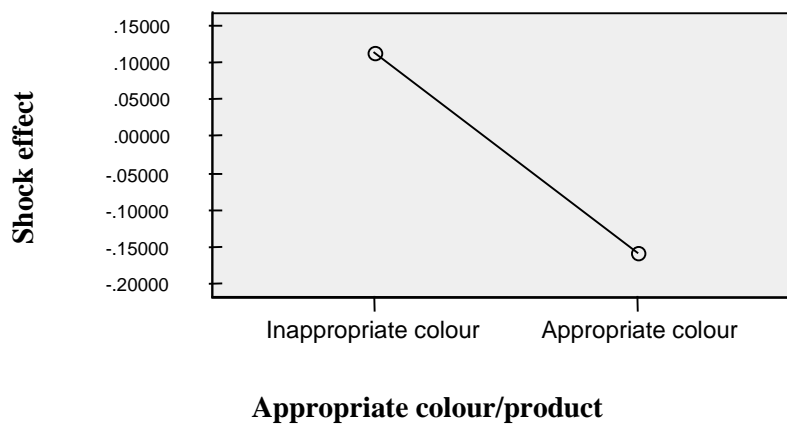
As concerns the effect on perceived provocation (or the shocking character of the ad), our results (Table 3 of Appendix 2) show a direct effect of the confusing character of the colour for lips ($p = 0.000$): the more confusing the colour is thought to be for lips, the more the ad is thought to be shocking (Figure 6), as was expected.

Figure 6 : Shock effect produced by confusing lip colour (ANOVA)



Similarly, the inconsistency between colour and product affects this shocking aspect ($p = 0.027$): the less suitable the colour is for the product, the more shocking it is considered (Figure 7), which may seem logical enough. Hypothesis H1.3 is therefore confirmed for the confusing aspect of colour relative to lips and the inconsistency between colour and the ad.

Figure 7 : Shock effect produced by appropriate colour/product (ANOVA)

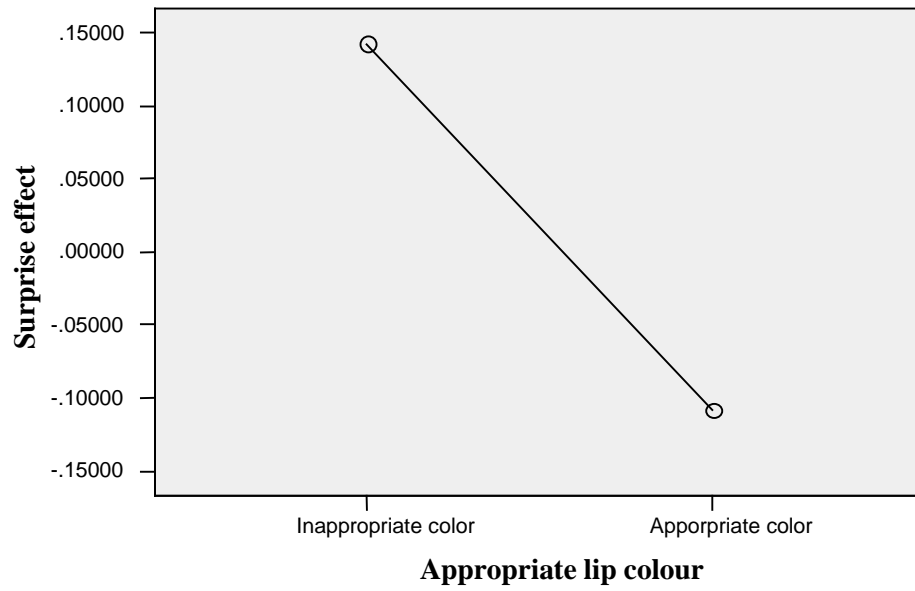


The effects of an incongruous colour on the feeling of surprise

As Figure 8 and Table 4 of Appendix 2 show, the feeling of surprise is stronger when the colour is considered inappropriate for lips ($p = 0.046$). However, the other main effects are not significant. Hypothesis 2 is therefore validated only for the 'inconsistency of colour for lips' variable, measuring a part of the colour incongruity. Mood before exposure to the ads was introduced as a

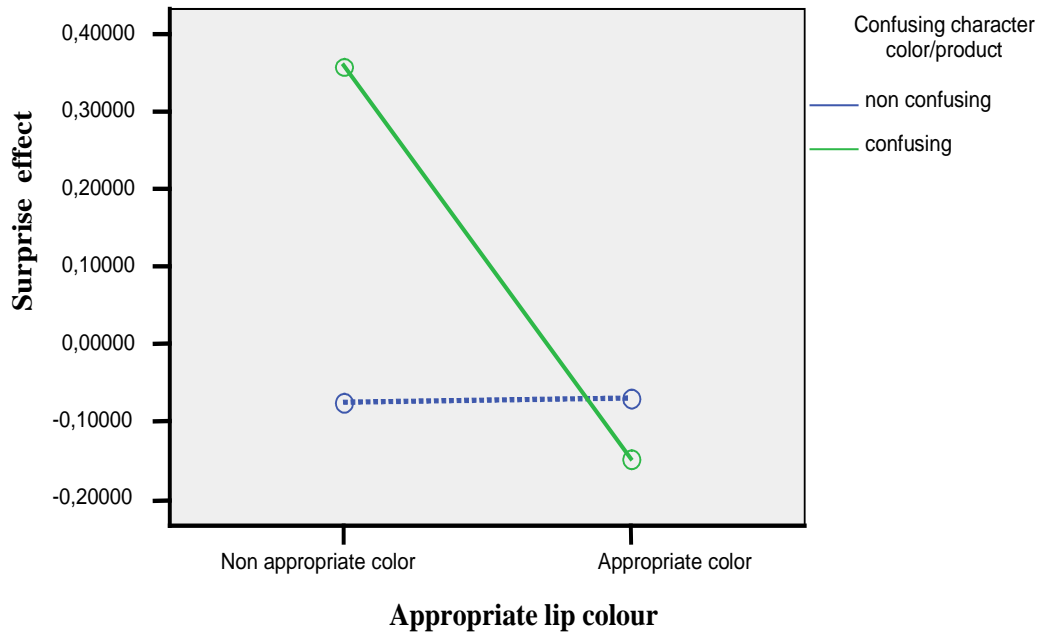
co-variant. No effect was detected on surprise.

Figure 8 : Surprise effect produced by appropriate lip colour (ANOVA)



However, there is an interaction effect between the inappropriateness of the colour for lips and the confusing character of the colour for the product ($p = 0.042$). Figure 9 shows this result.

Figure 9 : Effect of the adequacy color/lips and the confusing character color/product on the surprise (ANOVA)



The feeling of surprise is greater when:

- the colour is considered inappropriate for lips,
- the colour is considered confusing for the product.

There is indeed an effect of incongruity of colour with the person's lips and of colour with the product. This result seems logical, but it was important to test it empirically. Many consumers are well-informed about, indifferent to, or even bored with advertising creation and it might have been that our experiment on incongruity was unable to engender such an emotional reaction.

However, the confusing character of colour for lips had no significant effect on surprise.

We can observe therefore that the two dimensions of 'confusing character' and 'appropriateness' do have an effect. Depending on the dependent variables, the effect observed is caused either by the incongruity of the colour for the product, or by the incongruity of the colour for lips. In particular, the incongruity of the colour for the product influences beliefs and perceived provocation. Conversely, surprise is influenced rather by the incongruity of the colour for lips. It was important therefore to take account of both these aspects.

CONCLUSION

Our objective has been to manipulate the incongruity of the colour of an ad in order to test its influence on advertising as a process of persuasion. We wanted especially to test its effect on attitudes towards and beliefs about an ad and then on a psychological variable, surprise felt.

Our results have confirmed an influence of incongruity of colour on several variables:

- attitude towards the ad: it is influenced by the consistency of the colour and the product and the confusing character of colour for lips;
- beliefs about the ad: these are more positive if the colour is confusing and suitable for the product;
- the shocking character of the ad: it is more intense when the colour is confusing for lips and unsuitable for the product;
- surprise: there is a positive influence of the appropriateness between colour and the ad and the confusing interaction of the colour for the product and appropriateness of the colour for lips.

In accordance with the principles of persuasion in advertising, incongruity engenders negative attitudes and beliefs about ads and so rather negative reactions towards the brand and

purchasing it. However, while it engenders surprise and a form of perceived provocation, the confusing character of incongruity does not engender any negative belief towards the ad.

This research makes several contributions to theory. The first is to have studied what the effects of incongruity of colour with an ad can be. Although the influence of colour in advertising has been the subject of research (Gorn *et al.*, 1997; Lichtlé, 2007), the consequences of incongruity had not so far been clearly studied.

The second contribution to theory is to have related this variable with new variables in the persuasion process: surprise and perceived provocation. That had not been done until now and it was important to check it empirically.

It was important to determine to what extent the incongruity of colour can influence the attitude of individuals and whether negative effects can be identified.

In terms of method, we have proposed a new way of measuring incongruity of colour. Moreover, the experimental choice has allowed us to control the variables under study and the exogenous variables. Lastly, the use of Internet allowed us to recruit a large sample and above all not to restrict the survey to students.

In managerial terms, creators often handle colour intuitively. In a context of many commercial offers of all sorts, advertisers may be tempted to try to surprise consumers, especially by using incongruous colours. This study has allowed us to show that the colour incongruity may have considerable effects, the impact of which is sometimes difficult to evaluate. If the advertisers' aim is to surprise or shock consumers, they must take care to use a colour that is congruous with the ad or the product. For even if our experiment has not shown it, it may be that more intense

incongruity, coupled with great surprise may elicit manifestations of resistance. The results of such a campaign would therefore be contrary to the objectives and the brand might lose market share.

This study does have limits, though, that point the direction future research might take. First, we chose to give priority to internal validity and we worked exclusively on a fixed visual ad, without mentioning the product (brand advertising) or semantic elements (slogan, argument). Introducing such elements would be a step closer to the real advertising environment but would require a more complex experimental approach to control the effect of exogenous factors on the processes involved. Moreover, other media, especially movement and sound, lead to other deciphering processes. We are aware, then, that we have only addressed a tiny part of what goes under the name of advertising.

Secondly, we have taken account only of the incongruity of colour. Other incongruous features might have been envisaged, such as visual incongruity with the brand or the product.

Thirdly, we have only tested hypotheses about attitudes towards and beliefs about the ad. Other variables dependent on the advertising process could have been introduced, such as attitudes towards and beliefs about the brand.

Lastly, it would be interesting to be able to use structural equation models. These would enable us to compare several models and to analyse the order of relations between the incongruity of colour, surprise, and the shocking character of the visual ad.

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Appendix 1: Random ads used



Appendix 2: analysis of covariance results

Table 1: Incongruity effect on attitudes towards Ad

Dependent variable: attitudes towards Ad

Source of variation	Sum of squares TIII	df	Mean square	F ratio	p
Corrected model	76.217	16	4764	5.585	.000
Constant	4.311	1	4.311	5.055	.025
Aad in general	23.839	1	23.839	27.952	.000
Confusing/lips (CL)	5.654	1	5.654	6.630	.010
Appropriate/lips (AL)	.614	1	.614	.720	.397
Appropriate /product (AP)	13.932	1	13.932	16.336	.000
Confusing/product (CP)	1.990	1	1.990	2.333	.127
CL * AL	.811	1	.811	.951	.330
CL * AP	.036	1	.036	.042	.837
AL * AP	.916	1	.916	1.074	.301
CL * AL * AP	.938	1	.938	1.100	.295
CL * CP	2.769	1	2.769	3.247	.072
AL * CP	.081	1	.081	.095	.758
CL * AL * CP	2.368	1	2.368	2.777	.096
AP * CP	5.916	1	5.916	6.937	.009
CL * AP * CP	.099	1	.099	.116	.733
AL * AP * CP	.218	1	.218	.256	.613
CL * AL * AP * CP	.148	1	.148	.173	.678
Error	349.670	410	.853		
Total	425.888	427			
Corrected Total	425.886	426			

Table 2: Incongruity effect on the beliefs towards the Ad

Dependent variable: positives beliefs

Source of variation	Sum of squares TIII	df	Mean square	F ratio	p
Corrected model	34.433	15	2.296	2.411	.002
Constant	3.555	1	3.555	3.733	.054
Confusing/lips (CL)	.086	1	.086	.091	.763
Appropriate /lips (AL)	.004	1	.004	.004	.950
Appropriate /product (AP)	7.221	1	7.221	7.583	.006
Confusing/product (CP)	9.994	1	9.994	10.496	.001
CL * AL	.018	1	.018	.019	.890
CL * AP	.745	1	.745	.783	.377
AL * AP	.098	1	.098	.103	.748
CL * AL * AP	2.894	1	2.894	3.039	.082
CL * CP	1.318	1	1.318	1.384	.240
AL * CP	.433	1	.433	.455	.501
CL * AL * CP	.713	1	.713	.749	.387
AP * CP	2.798	1	2.798	2.939	.087
CL * AP * CP	.291	1	.291	.305	.581
AL * AP * CP	1.865	1	1.865	1.958	.162
CL * AL * AP * CP	.402	1	.402	.422	.516
Error	391.355	411	.952		
Total	425.792	427			
Corrected Total	425.788	426			

Table 3: Incongruity effect on perceived provocation

Dependent variable: shocking character of the Ad

Source of variation	Sum of squares TIII	df	Mean square	F ratio	p
Corrected model	53.828	15	3.589	3.947	.000
Constant	.124	1	.124	.136	.713
Confusing/lips (CL)	11.502	1	11.502	12.650	.000
Appropriate /lips (AL)	3.238	1	3.238	3.561	.060
Appropriate /product (AP)	4.465	1	4.465	4.911	.027
Confusing/product (CP)	.997	1	.997	1.097	.296
CL * AL	.051	1	.051	.056	.813
CL * AP	.525	1	.525	.577	.448
AL * AP	.544	1	.544	.598	.440
CL * AL * AP	.138	1	.138	.152	.697
CL * CP	.193	1	.193	.212	.645
AL * CP	1.276	1	1.276	1.404	.237
CL * AL * CP	.003	1	.003	.003	.953
AP * CP	.135	1	.135	.149	.700
CL * AP * CP	1.579	1	1.579	1.737	.188
AL * AP * CP	.097	1	.097	.107	.744
CL * AL * AP * CP	.055	1	.055	.061	.805
Error	373.697	411	.909		
Total	427.526	427			
Corrected Total	427.525	426			

Table 4: Incongruity effect on surprise

Dependent variable: surprise

Source of variation	Sum of squares TIII	df	Mean square	F ratio	p
Corrected model	37.013	16	2.313	2.445	.002
Constant	.073	1	.073	.077	.782
Mood	1.643	1	1.643	1.736	.188
Confusing/lips (CL)	1.508	1	1.508	1.594	.207
Appropriate /lips (AL)	3.776	1	3.776	3.991	.046
Appropriate /product (AP)	.602	1	.602	.636	.426
Confusing/product (CP)	1.889	1	1.889	1.997	.158
CL * AL	.199	1	.199	.210	.647
CL * AP	.543	1	.543	.574	.449
AL * AP	1.007	1	1.007	1.065	.303
CL * AL * AP	2.557	1	2.557	2.702	.101
CL * CP	.068	1	.068	.072	.788
AL * CP	.928	1	.928	4.152	.042
CL * AL * CP	1.928	1	1.928	2.038	.154
AP * CP	.054	1	.054	.057	.811
CL * AP * CP	3.610	1	3.610	3.815	.051
AL * AP * CP	.089	1	.089	.094	.759
CL * AL * AP * CP	1.893	412	1.893	2.001	.158
Error	389.789	429	.946		
Total	426.849	428			
Corrected Total	426.802				