Advertising overload

A quantitative study on the impact of the perceived intrusiveness of online advertising on the purchase intention

Author:     Océane Chéoux-Damas
            Marius Le Floch
Supervisor: Galina Biedenbach
ABSTRACT

The main purpose of our thesis is to examine the impact of the perceived online advertising intrusiveness on the purchase intention among the French students of the millennial generation. The aim is to make a theoretical contribution to the expending field of research that is the one of the online advertising. Only few studies have been made with the purchase intention as outcome of predictors in an online advertising setting. To fill this gap, we developed a main conceptual model supported by another model. It aims at assessing the direct impact of the perceived intrusiveness on the purchase intention, but also its indirect impact through ad irritation, ad avoidance and the attitude toward the advertising format. We conducted our thesis with the following research question as guideline:

What kind of impact the perceived intrusiveness of online advertising has on attitudes and purchase intention of net surfers?

Our research design is explanatory, which means that we wanted to assess the behavior of French net surfers through the determination of causal relationships. We conducted a quantitative study from a positivist and objectivist perspective. We used a convenience sampling from the two business school we are from in France and obtained 291 responses. Students were asked to respond to an online questionnaire that was composed of sets of questions about their general perception and experience of online advertising. The study focused on two types of online advertising: interstitials (highly intrusive), and banners (little intrusive). We used the statistical analysis program SPSS to analyze our data. Specifically, we calculated the Cronbach’s alpha for all our constructs, generated descriptive statistics, correlations, regressions and a T-test. The results we obtained enabled us to test our conceptual models.

We found that the perceived intrusiveness of online advertising has a direct and indirect impact on the purchase intention. The concept has a direct positive impact on the purchase intention but a negative one through the ad irritation, one of its main consequences. The ad irritation impacts negatively the attitude toward the advertising format which influences positively the purchase intention. But the feeling of irritation also acts directly on the purchase intention through a negative causal relation. Overall, we found that the impact of the perceived intrusiveness on the purchase intention was negative. Through our comparative study of interstitials and banners, we found different results which was expected given their respective perception of intrusiveness, but also revealed some limitations. We also evaluated the impact of the attitude toward online advertising on the purchase intention, as an independent variable with no correlation with the perceived intrusiveness. The concept has a positive impact on the purchase intention.

First our findings informed practitioners of the importance of the format on the perceived intrusiveness of the advertising. Then, they are now aware of the overall negative impact of the perceived intrusiveness on the purchase intention. Based on our outcomes, to reduce its influence, they have to act on the feeling of irritation provoked by the intrusiveness by compensating with other aspects of the advertising. The attitude toward the online advertising appeared to also be a possible counterbalance to the negative impact of the perceived intrusiveness on the purchase intention. Further researches could focus on other formats or on another context.
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All of their contributions were highly appreciated and permitted us to conduct a thesis that gave us the opportunity to deepen and broaden our marketing knowledge in many ways. Moreover, writing a thesis is a complex exercise, which demands rigor and methodology. It helped us improving our accuracy, precision and our logic in our argumentation.

Océane Chéoux-Damas

Marius Le Floch
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1. INTRODUCTION

*In this part, we will explain the choice of research subject and its background. Then, we will define the problem statement and explain the purpose of this study through and the theoretical gap that we found in this field after our literature review. We will summarize the delimitations of our research and finish with the definitions of the relevant concepts that we will used along the study.*

1.1. CHOICE OF SUBJECT

We are two students from Kedges Business School and ICN Business School, two French business schools. We are now conducting a master thesis for our double degree in marketing at Umea University. As we both plan to work later in the marketing field, we chose to write our thesis in relation with this area of study. We agreed to focus more on the advertising and its impacts on consumers. None of us know if (s)he will work in the advertising department but it is an issue that almost every company has to face at a time and we, as consumers, are also particularly interested in increasing our knowledge of advertising. For both reasons, this field was of particular interest for us. Furthermore, we were also particularly interested to work on the internet advertising as it is a field in which much remains to do (Ha, 2008, p. 32). We are also part of the internet generation, using the web in any circumstances: research, working, entertainment, leisure time etc. (Rodgers & Thorson, 2000, p. 45). We are highly connected through our computers and Smartphones in our everyday life, constantly exposing ourselves to online advertisings. Acknowledging that, we were curious on how these ads impacted our attitudes and behaviors as consumers especially since we often felt upset by their intrusion. Through our preliminary research, we found that one of the main issues of the online advertising is its intrusiveness (Milward Brown, 1999; Edward et al., 2002; Cho & Cheon, 2004; Chaterjee, 2008; McCoy, 2008; Truong & Simmons, 2010). Indeed most of the net surfers have been exposed to an unwilling advertising during their use of the internet (Elliott & Speck, 1998, p. 36). For instance, on well-known French websites such as www.tf1.fr – a national TV channel website – or allocine.fr – a website that provides information about cinema movies - there are ads every time you load a new page. With the development of the online ads (IAB online Advertising Revenue Report, 2012), users are over-exposed leading to critical situations (Ha, 1996, p. 76) and companies are fighting more and more to differentiate and distinguish their ads from the others (Rejon-Guardia & Martinez-Lopez, 2014, p. 567). Thus, we decided to investigate the impact of online advertising intrusiveness on customers’ purchase intention.

As active users of the web, we are familiar with the main online advertising formats – such as banners, interstitials, pop-ups, skyscrapers etc. (Baltas, 2003, p. 505) – and their use by advertisers. For our purpose we decided to study banners and interstitials as they are at the both end of the level of advertising intrusiveness (Rodgers & Thorson, 2000, p. 49; Edward et al., 2002, p. 84; Palanisamy, 2004, p.47), banners being perceived as less intrusive than interstitials. Indeed, an advertising displayed on the page of the website content is less disrupting than one taking the entire screen between every webpage and interrupting the surfing flow. Comparing the impacts of both types of online advertising on users’ attitudes and purchases intentions, will allow us to evaluate the real and concrete effect of intrusiveness. Our common situation, nationality and knowledge on well-known French websites where intrusive ads were displayed, led us to focus on French students’ net surfers, a group we belong to.
1.2. PROBLEM BACKGROUND

In only four years, fifty millions of people worldwide were using the internet, while it took thirty-eight years for the radio and thirteen for the TV to reach this number (Gabay, 2000, cited in Hannemyr, 2003, p. 111). In 2014, according to an Internet Live Stats estimation (2014), almost three billion of web surfers use the internet, which represents 40.4% of the worldwide population. This quick adoption leads marketers and companies to consider the internet as a new and complementary advertising channel from conventional media – TV, Radio, Magazines – which are saturating consumers by the quantity of ads they present (Elliott & Speck, 1998, p. 36). Arguments concerning traditional media are relevant for the web, but due to its unique characteristics such as interactivity and the possibility to easily personalize advertisements (Hoffman & Novak, 1996, p. 65), the internet generates new challenges and opportunities (Rodgers & Thorson, 2000, p. 42-45). For instance, at its beginning, the internet was said to be less intrusive than television commercials as it offers more interactions (Rust & Varki, 1996, p. 173). Some researchers also argue among other things for a higher level of induced purchase intention than for print advertisement (Kimelfeld & Watt, 2001, p. 153). Thus, companies are progressively transferring advertising funds from conventional media to the Internet (Nielsen, 2012, cited in Rejon-Guardia and Martinez-Lopez, 2014, p. 565). In 2012, internet advertising in the US reached $36.57 billion, an increase of 15% compared to the previous year (IAB online Advertising Revenue Report, 2012), and was still in progress at the end of 2013 (IAB, 2013). But according to Lancot (2002, cited in Cho & Cheon, 2004, p. 89), marketers are more and more skeptical concerning the internet effectiveness, which means that results are below what marketers expected regarding the level of expenditures. Thus it seems to be of high importance to measure what kind of impact this media has on the net surfers to optimize its use for the future.

There are several reasons that explain why the internet did not meet marketers’ expectations as an advertising channel. First of all, there is still a lack of research studies concerning the online advertising effectiveness (Baltas, 2003, p. 512) which leads to a low performance of companies in this field (Jensen, 2007, p. 520). As a consequence, internet advertising was of poor quality in the early age of advertising, and was even considered as disturbing by web surfers (Reed, 1999, cited in Li et al., 2013, p. 37), and as “nonsensical, uninformative, unfocused, forgettable and ineffective” by some researchers (Bulik, 2000, cited in McCoy et al., 2008, p. 673). Then, from the consumers’ side, technologies have enable them to protect themselves from several online advertisement format such as pop-up, blocked by anti-pop-up software (Chatterjee, 2008, p. 59), that will automatically prevent any new windows to open when non-authorized by the user. This technology has become common and is generally built-in in most web browsers (e.g. Mozilla Firefox and Internet Explorer). Finally, some advertisement formats are said to be roughly avoided by internet users, such as banners that face the phenomenon of banner blindness (Kim et al., 2013, p. 93). This avoidance can be due to annoyance toward the format (Benway, 1999, cited in Kim et al., 2013, p. 93), the lack of interest toward the product (Pagendarm & Schaumburg, 2006), its position on the website or also to the user’s habituation (Kim & Wogalter, 2009, p. 1615).

To understand how to improve online advertisement effects, it is important to analyze why web surfers are not favorable to it. This ambivalence leads the practitioners to a
dilemma: should they design intrusive ads or not? Indeed, what is the real overall impact of the intrusiveness on the effectiveness of the ads?

1.3. THEORETICAL BACKGROUND AND KNOWLEDGE GAPS

The concept of advertising intrusiveness has been widely studied in relation to magazines (Ha, 1996), television (Aaker & Bruzzone, 1985) and to a lesser extent the internet (Gao et al., 2004; Edwards et al., 2002; Ying et al., 2009) for the past few years. The main topics of analysis were on the causes of the perceived intrusiveness, how to reduce it for a better advertising effectiveness (Edwards et al., 2002, p. 90; Ying et al., 2009, p. 631) and on the consequences of this perception (Ha, 1996, p. 83; Milward Brown Interactive, 1999, pp. 7-11; Edwards et al., 2002, p. 90; McCoy et al., 2008, p. 687; Chatterjee, 2008, pp. 57-58) on exposed people. According to several researches (Ha, 1996, p. 83; Milward Brown Interactive, 1999, pp. 7-11; Edwards et al., 2002, p. 90; McCoy et al., 2008, p. 687; Chatterjee, 2008, pp. 57-58), there are both positive and negative impacts on people. Intrusiveness creates a forced exposure to the ads which will result in an involuntary processing and thus increases the memorization of the ad content (Chatterjee, 2008, p. 53; McCoy et al., 2008, p. 690) which may lead to higher purchase intentions. But forced exposure can also result in negative attitudes (Ha, 1996, p. 83) such as ad-avoidance (Edwards et al. 2002, p. 90). It also creates a feeling of irritation (Edwards et al. 2002, p. 90; McCoy et al., 2008, p. 688). All of these negatives attitudes can reduce the effectiveness of the advertising (Aaker & Bruzzone, 1985, p. 47-48; Lutz & MacKenzie, 1989). Despite these studies, we did not find any recent evidence on which intrusiveness’ consequences – positive or negative – have the most impact on the purchasing intention and the process underlying – attitude toward the advertising. In the 90s, Milward Brown Interactive (1999) did a study on the efficiency of the interstitials and the banners on purchase intentions. It revealed that interstitials, which are much more intrusive than banners, had a higher positive impact on the awareness, recall and purchase intention (Milward Brown Interactive, 1999, p. 12). It also stated that the negative impact of this high intrusiveness – irritation – was overlapped by the positive impacts on the exposed people. But this study can be questioned as nowadays internet users are overexposed to online advertising resulting in a need to re-evaluate the past analyses (Ha and McCann, 2008, p. 569). Indeed, overexposure may increase the negative impacts of the intrusiveness – after exceeding the limit of acceptance of the online users, high negative attitudes are resulting (Ha, 1996, p. 82). Therefore, we see a theoretical gap to fulfill in measuring the overall impact of the intrusiveness on online users’ purchase intention. We will study the impact of intrusiveness in general and then the impact of its consequences, irritation and ad avoidance, on the purchase intention but also on the attitude toward the ad, an antecedent of purchase intention.

Moreover, most of the studies are evaluating the impact of intrusiveness on attitudes, awareness and behavior on the short- and medium-term (Chatterjee, 2008, p. 51) through experiments and questions right after the experiment or through the click-through rate (CTR) – which is not constantly a relevant measure as online surfers are not always familiar with how the advertisement works and thus click on it to try to close it (Edwards et al., 2002, p. 83). Chatterjee (2008) studied the immediate and delayed impacts, in a medium-term, of the online advertising through their size and through the level of intrusiveness – comparing banners and pop-ups advertising. We think that there is a theoretical gap that our thesis can fulfill. Indeed, we want to evaluate the impact of the
intrusiveness in general, which seems to be a good way to apprehend its real effect. We will ask the respondents about past intrusive ads experience.

We see another theoretical gap in the method used to evaluate the impact of the intrusiveness. Most of the studied used an experimental methodology (Milward Brown Interactive, 1999, p. 5; Edwards et al., 2002, p. 87; Chatterjee, 2008, p. 55). We prefer to use a non-experimental method and to concentrate on how the respondents experience the intrusiveness in general. Even if experimental studies enable researchers to explore numerous variables in contrast with non-experimental one, they can be considered as context-specific and consequently may bias the generalizability of the results (Bryman & Bell, 2011, p. 47). Concerning specifically the intrusiveness, the context is very influential whether in terms of interest toward a given product, mood, or in terms of goal of use of the internet (e.g. entertainment, information search, work). On top of that, we will ask for the respondents’ evaluation of the intrusiveness with hindsight which is much closer to the reality of the purchase behavior than just after exposition – in fact, in reality, there is a delay between the exposition and the purchase decision (Chatterjee, 2008, p. 51).

We can thus say that our thesis will contribute in filling some theoretical gaps through its subject and methodology, leading us to the definition of our research question and its purpose.

1.4. RESEARCH QUESTION

Based on our previous analysis of the theoretical background and gaps, our master thesis aims to answer to the following question:

**What kind of impact the perceived intrusiveness of online advertising has on attitudes and purchase intention of net surfers?**

1.5. PURPOSE OF THE STUDY

*The purpose of the study is the intention(s) which the study hopes to realize at the end of the attempt to contribute a solution to the problem at hand* (Nenty, 2009, p. 22).

The main purpose of this master thesis is to assess the impact of the perceived intrusiveness of online advertising on the purchase intention and on the attitude toward the ad among the French students of the millennial generation. This choice is due to the fact that the internet has become a major media for advertisers and that we perceive that there is a real inefficacy of online advertising that must be addressed.

To do so, we will first investigate the variables of ad irritation and ad avoidance as direct consequences of the perceived intrusiveness. For a better analysis we will also study the direct and indirect – through the ad irritation – impacts of the perceived intrusiveness on the attitude toward the advertising, also a measure of advertising efficiency which may influence the purchase intention. The aim is to evaluate the overall impact of the perceived intrusiveness on the purchase intention. Finally, we will add the concepts of attitude toward online advertising in general as antecedents of ads’ performance.

The point of bringing this knowledge on the millennial generation and particularly in France comes from the importance of this generation for the present and future incomes.
of companies. Moreover, only few studies on this topic have been conducted on the French population.

The study fills some theoretical gaps through its topic and method, and underlines the importance of managing the intrusiveness on the web. The findings will also help companies to have advanced knowledge about the real impact of interstitials and banners on the exposed people through the risks and opportunities encountered with the intrusiveness underlying each type of ad. They will be able to make better choices for their advertising campaigns on the web for an improved efficiency.

The following points summarize the different purposes of the thesis:

- Measuring the direct impact of online ad intrusiveness and its indirect impact – ad irritation and ad avoidance – on users’ attitude toward the ads.
- Examining the direct impact of perceived online ad intrusiveness and its indirect impact – ad irritation and attitude toward the ads – on users’ purchase intentions.
- Evaluating the effect of the variable of attitude toward online advertising in general on attitudes and purchase intentions when facing ad’s intrusiveness.

1.6. DELIMITATIONS

Through the introduction, we shaped the limits of our study. But for a better understanding, we will summarize them in this part. First, we will limit our study of the intrusiveness to two of its components:

- The physical attributes: features and type of the ad (Edwards et al., 2002, p. 87, Ha and McCann 2008, p. 180)
- The frequency – information overload of the ads (Ha and McCann 2008, p. 180)

We will not measure them in our study, but as they are dependent of the perception of intrusiveness, respondents will unconsciously take them into account when answering our survey. In other words, as we will question our respondents on their general perception of intrusiveness through two types of online advertisements, they will naturally take into account the type of ad (the one we proposed to them) but also their general features and their frequency. They are inseparable to their overall evaluation.

Then, we will focus on the impact of the intrusiveness on the attitude toward advertising and on the purchase intention of net surfers. Attitude toward advertising and purchase intention are both measures of ads’ effectiveness (Fishbein & Ajzen, 1975; McMillan et al., 2003, p. 400). Studying the outcomes of the perceived intrusiveness on them, will allow us to see if the concept is harmful for the advertising or not.

For a better analysis, we chose to illustrate the online ad intrusiveness by only two types of ads, interstitials and banners, with different level of intrusiveness to be able to compare the results. Banners are perceived as less intrusive because they are “generally displayed on the periphery. They do not interrupt the activity of Web-viewers.” (Edwards et al., 2002, p. 84). Even if, interstitials do not interrupt the editorial content of the web page like pop-ups (Rodgers and Thorson, 2000, p. 49), they create intrusiveness through the impossibility to avoid them totally and through their execution between two pages.

We preferred to focus on the French students market for several reasons. First as we are French, we had already in mind well-known interstitials and banners advertising for famous brands. We did not know about the Swedish students’ exposition. Then, French
people are known to be among the most advertising skeptical in the world (Truong & Simmons, 2010, p. 253), which supposedly should lead to stronger differences between the results obtained for both advertising formats. At last we want to provide an overall insight of the subject based on what respondents remember to have experienced and how they evaluate it.

1.7. DEFINITIONS OF THE CONCEPTS

To really understand the research question and to interpret it in the same way, it is necessary to define the main concepts used in it.

**Ad avoidance:** When the consumers consciously avoid cognitively or physically the interrupting advertising (Speck & Elliott, 1997, p. 31; Abernethy, 1990, p. 61; Chatterjee, 2008, p.52).

**Attitude toward advertising:** “Predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion” (Lutz & MacKenzie, 1989, p. 49).

**Attitude toward advertising in general:** “The attitude toward the category (advertising) as a whole”. (Jin & Lutz, 2013, p. 343)

**Banners:** “Banner ads are those rectangular-shaped graphics, usually located at the top or bottom of a web page” (Zeff & Aronson, 1997, cited in Rodgers & Thorson, 2000, p. 49).

**Intrusiveness:** “The degree to which advertisements in a media vehicle interrupts the flow of an editorial unit” (Ha, 1996, p. 77). Or “the degree to which a person deems the presentation of information as contrary to his or her goals” (Edwards et al., 2002, p. 85)

**Interstitials:** “Interstitials are usually full-screen ads that run in their entirety between two content pages […] users have to wait until the entire ad has run.” (Rodgers & Thorson, 2000, p. 49).

**Irritating Advertising:** “One that is provoking, causing displeasure and momentary impatience” (Aaker & Bruzzone, 1985, p. 48)

**Millennial Generation or Generation Y:** The generation born between 1981 and 2000 (Wolburg & Pokrywczynsk, 2001, p. 33; Weston, 2006).

**Purchase intention:** the “likelihood of a buyer to purchase a product” or service (Dodd et al., 1991, p. 318)

**Net surfers:** someone aged two years or older who went online in the past 30 days (Aguiar et al., 2010, p. 7)
1.8. CHAPTERS OUTLINE
This section provides an overview of the chapters we will develop in this thesis:

2. **Scientific method**: this chapter will offer a picture of the authors’ pre-understanding of the research topic, and further the philosophy of research as well as the literature selection

3. **Literature review**: chapter that aims at deepening the understanding of the topics of interest based on the literature

4. **Practical method**: this part aims to describe precisely the method we followed to reach our findings and conclusions.

5. **Empirical findings**: this chapter will provide information about our sample, the internal reliability of the constructs we used and the results of the descriptive statistics we generated.

6. **Analysis**: chapter in which we will analyze the results obtained from our study

7. **Discussion**: this chapter examines our findings. We will discuss all our hypotheses following the argumentation of our theoretical framework.

8. **Conclusion**: chapter that will loop the loop from the introduction to the findings

9. **Truth criteria**: chapter that will assess the quality of the research method and provide a critical perspective of this thesis

10. **Limitations and future researches**: the thesis’s limitations are highlighted in order to acknowledge points that could be developed in this field and consequently suggest some tracks for further researches
2. SCIENTIFIC METHOD

This section aims at providing an understanding of the philosophical assumptions that we made during this research in order to help readers to comprehend our choice of methodology and the view we adopted to treat our topic. We will introduce our preconceptions, then our ontological considerations, and continue with the epistemological ones. Afterwards we will explain why we chose a quantitative method and finally describe and justify our literature selection.

2.1. PRECONCEPTIONS

First of all, it is important to take into consideration the background of both authors because as Bryman & Bell (2011, pp. 30-31) state, it is not feasible to completely eradicate the values authors have when writing their research. Even if we try to be objective and to avoid any biases inherent to our background, it will necessary have an impact on several facets of the thesis (e.g. choice of research area, choice of methods, and interpretation of the results). Hence, this section is dedicated to provide an understanding of the authors’ preconceptions.

We are both French students actually in a master program in marketing in Umea School of Business and Economics. Consequently we are likely to contextualise our thesis in a French framework and also to consider the topic only from the marketing point of view, even if we tried not only marketing literature for our research but rather social sciences articles in a broad sense. The cultural aspect of our background is important specifically for our topic as French people are considered as among the most advertising sceptical people in the world (Truong & Simmons, 2010, p. 253). It is therefore possible that our perception of advertising intrusiveness is higher than for people from other countries.

Beside this common background, we also have differences that have been complementary and enabled us to consider our topic from different viewpoints. First of all, we come from different business schools in France which induce different courses and perspectives on marketing-related topics. But more important, we do not use internet in the same way, in terms of time spent online or purpose of the internet browsing. As we will see in our literature review, both of these variables can have an impact on the perception of the advertising intrusiveness as well as on its consequences. Consequently, we both had a different initial perception of the intrusiveness and our ways to react to it were different. We also have a different skill level with computers and internet which results in an unequal exposition to online advertising (the higher the skill level, the lower the exposition). Then, we do not have the same experience when it comes to purchasing. Indeed we are influenced by different factors and do not consider this act in the same way. Finally, as we do not have the same interests, we browse different websites and are consequently exposed to different kind of advertisements. Hence, we have been exposed to different advertising formats in different context.

Overall, we are aware of the fact that both of our backgrounds have an impact on the way we conducted our research and on our perception of the different variables involved in our topic. Nevertheless, because of different prior experiences with the internet, we think that we managed to take advantage of the possibility offered by the university to work in pair. Therefore, we hope that the following study of the perceived intrusiveness of online advertising will be complete and as objective as possible.
2.2. PHILOSOPHY OF RESEARCH

2.2.1. ONTOLOGY

In this section, we will discuss our ontological perspective for this research, or in other words our point of view concerning the nature of social entities (Bryman & Bell, 2011, p. 20). There are two ontological positions that differ according to the relation between social actors and social entities: objectivism and constructionism (Saunders et al., 2009, p. 110). The main question is to know if social entities can be considered as objective entities, external to social actors, or not (Bryman & Bell, 2011, p. 20). Nevertheless, we think that the ontological stance is not only either objectivism or constructivism, but rather a spectrum on which these two perspectives represent the extreme, and that a single topic can be approached from different viewpoints (Terhart, 2003, p. 41). We will consequently state the stance that is the closest to our view and also argue for the interest of other viewpoints for this topic.

The objectivists state that social entities are independent from social actors (Saunders et al., 2009, p. 110). From this perspective, individuals have no impact on the reality and cannot change it, but are rather influenced by this reality following its rules and regulations (Saunders et al., 2009, p. 110). Furthermore, only one reality exists. For the purpose of our research, we are aiming at generating general observations which is typical for objectivists. The reality in our case is the online advertising system and the social actors are the internet surfers. Our goal is to see if some characteristics of these advertisements have an impact on the net surfer, especially on their purchase intention. The fact that we want to observe the impact of reality on social actors is representative of our affiliations with the objectivist stance. That being said, we reckon the relevance of adopting another ontological view especially as it enables the research community to go deeper into the understanding of this topic.

At the other side of the continuum of the ontology is the constructionism, in which “social phenomena are created from the perceptions and consequent actions of social actors” (Saunders et al., 2009, p. 111). In this perspective, the social actors generate the social phenomena through social interactions, and consequently these social phenomena are subject to a perpetual evolution.

For us, and based on the previous arguments, the objectivist stance is the closest to our point of view.

2.2.2. EPISTEMOLOGY

In this part we will state our epistemological orientation, which is how we consider the social world in relation to the natural sciences (Bryman & Bell 2011, p. 15), or in other words what we consider as acceptable knowledge (Saunders et al., 2009, p. 112). There are three philosophical positions: interpretivism, realism and positivism (Bryman & Bell 2011, pp. 15-20) that we will develop bellow in order to identify to which one our view is the closer. But from a general perspective, we can say that the three positions differ according to whether or not natural sciences are considered to be applicable to understand the social phenomena (Saunders et al., 2009, p. 113).
The first epistemological approach, the interpretivism, states that the social world of business is too complex to be analysed with the laws of natural sciences (Saunders et al., 2009, p. 115). Since individuals are unique, think and behave on their own way, classical natural sciences are not applicable, or will provide, according to the interpretivists, a reduced or limited understanding of social phenomena (Saunders et al., 2009, p. 116). In order to capture the logic that individuals follow in a given phenomenon, researchers have to adopt an empathetic attitude toward the social actors being observed, which means that they need to consider this phenomenon from the subject’s point of view (Saunders et al., 2009, p. 116). For these reasons, qualitative studies are more adapted to this approach. As our thesis clearly aims at finding general patterns including variables such as perceived advertising intrusiveness and online purchase intention, we see that we do not have an interpretivist view. Nevertheless, we reckon that this approach could be used in further researches that do not want to obtain any generalizations in order to discover surprising findings (Bryman & Bell 2011, p. 19) that could be exploited later on in a more general way.

The second approach is realism which states that “what the senses show us as reality is the truth” (Saunders et al., 2009, p. 114) and that consequently objects being observed are independent from the human mind. With this stance, natural sciences are used to analyse phenomena (Bryman & Bell 2011, p. 17). There is two kind of realism: direct realism and critical realism. While both approaches base their analysis on the senses, the former one consider that there is a direct link between senses and reality (Saunders et al., 2009, p. 114), while the second one view what we sense as only an image of the reality (Saunders et al., 2009, p. 115). Hence we can say that the difference between these two approaches lies in the degree of process of the information our senses gather. This epistemological stance does not match with our view of what knowledge can be consider as acceptable and examined.

Finally, the last epistemological approach is the positivism, often said to be at the opposite from the interpretivism. Positivist researchers generally proceed quantitative studies (Saunders et al., 2009, p. 114). The aim in this stance is to test theories and develop laws (Bryman & Bell 2011, p. 15). The reality is considered as independent of the observer which enables researchers to rely upon natural sciences to analyse phenomena (Saunders et al., 2009, p. 113). Finally, researchers adopting this epistemology are looking for objective researches (Bryman & Bell 2011, p. 15) which require being value-free. As seen in the preconception section, we highlighted some elements that could influence us in our research. We are certainly not able to take into consideration every element that could have an impact on the research but we are willing to conduct an objective thesis and hence try to limit any bias inherent to us. As we aim to verify previous studies and develop a law-like model, we will follow the positivist epistemology.

2.2.3. RESEARCH APPROACH AND RESEARCH METHOD

As we said before, we identified ourselves as ontologically objectivists, which means that we believe in phenomena or truths that are external to the social actors (Bryman & Bell, 2011, p. 21). Logically, we also adopt an epistemological method based on natural sciences – positivism in this case – to understand the truth (Bryman & Bell, 2011, p.15). The Sciences analyse the environment as something objective, where the truth can be found thanks to a rigorous method and tools. Then it seems legitimate to use a deductive approach – from the theory to the data, from the scientific tools to the truth of the social
reality (Bryman & Bell, 2011, p. 11). It is what we refer to when we think about scientific research (Saunders et al., 2009, p. 124) where laws present the basis of explanation, allow the anticipation and the prediction of the occurrence of phenomena and consequently permit them to be controlled (Collis & Hussey, 2003, cited in Saunders et al., 2009, p. 124). The characteristics of a deductive approach are: the search for causal relationships, the collection of quantitative data, a structured methodology (for the replication), consider only operationalised concepts (quantitatively measurable), problems are simplified to be understood (reductionism) and finally the aim of this approach is to generate generalizable findings. On the other hand, induction is concerned with the context, deal with small samples and generally seek to obtain qualitative data (Saunders et al., 2009, p. 126).

Based on those assumptions, we can consistently say that we will use a quantitative research strategy to conduct our thesis (Bryman & Bell, 2011, p. 150). There are four main concerns when dealing with a quantitative study: measurement, causality, generalization and replication (Bryman & Bell, 2011, pp. 163, 164, 165). Measurement helps to define and differentiate people and behaviours in categories with consistency over time and with others studies (Bryman & Bell, 2011, pp. 154). Moreover, it allows to produce correlations between variables and to understand their relationships (Bryman & Bell, 2011, p. 154) and thus to establish causal relationships between variables. Causality is an important concept in quantitative research as this type of research is mostly based on dependent and independent variables that translate causal-effect relationships between concepts (Bryman & Bell, 2011, p. 154). For our study, we proposed a theoretical model based on dependent and independent variables and causal relationships between our concepts. We want to understand the level of impact of our variables on each other and mostly the one of the intrusiveness on the purchase intention, to be able to propose solutions for a better effectiveness of online advertising. The third preoccupation, the generalization of the study is a cornerstone of the quantitative research. Indeed, the real purpose of a quantitative method is to generalize its findings to improve the existing theoretical knowledge (Bryman & Bell, 2011, p. 164). But as we will see later when discussing on our sampling methodology, there are limits in generalizing. Finally, replication is also a preoccupation as it is the proof of the validity of the study (Bryman & Bell, 2011, p. 165).

Despite its many advantages, the quantitative research has been criticized mostly by qualitative researchers (Bryman & Bell, 2011, p. 167). First of all, the ontological and epistemological stances are put into questions as, according to these researchers, the scientific methodology cannot be applied to all phenomena (Bryman & Bell, 2011, pp. 167, 168). For our study, we will consider that as a limit but according to our philosophy of research, this choice is the more consistent. They also question the measurement precision and the capacity to measure the reality of the concepts (Bryman & Bell, 2011, p. 168). According to them, there are different understandings of the key terms reducing the quality of the measurement. To avoid this issue, we chose to base our concept measurements on past measures approved by the scientific comity. The qualitative researchers question the ecological validity – the application of the findings in everyday or natural settings (Bryman & Bell, 2011, p. 168). Indeed, as the study is conducted in a structured environment and specific situations, one can suspect a distortion of the reality. In our study, we do not examine people in a specific situation but how they generally analyse their experiences of the advertising. This can lead to an ecological invalidity as most of the time people do not reflect consciously on the present experience. But on the
other hand, it may help us avoid the invalidity as people are not focusing on a specific situation but on an overall feeling.

The qualitative approach is more concerned with words than quantifications and consider the individuals as actors of a consistently evolving social reality (Bryman & Bell, 2011, p. 27).

In spite of the criticisms, we believe that the pros of the quantitative method are enough to enable us to follow this research strategy.

The following table (1) summarizes our philosophy of research:

<table>
<thead>
<tr>
<th>Ontology</th>
<th>• Objectivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epistemology</td>
<td>• Positivism</td>
</tr>
<tr>
<td>Research approach</td>
<td>• Quantitative • Deductive</td>
</tr>
</tbody>
</table>

Table 1 Philosophy of research, (Bryman & Bell, 2011)

2.3. LITERATURE SELECTION AND CRITICISM

In this section we will explain how we did our research and scrutinise our sources. We will start with our main sources of information, then continue with the keywords we used and finally expose our critic of the secondary sources we collected.

For our research, we used several secondary sources of information. Secondary sources are data collected for another purpose and that already exist, at the opposite of primary data are collected for the purpose of a specific study (Kotler & Keller, 2012, p. 101). To access them, we used mostly the Umea University Library portal to find relevant literature for our topic, but expand it when needed to Google Scholar and, to a little extent, books. We used mainly peer-reviewed articles from three general topics: marketing (e.g. Journal of Marketing, International Journal of Advertising Research), advertising (e.g. Journal of Advertising, Journal of Advertising Research), and computer/internet (e.g. Computer in Human Behaviour, Journal of Interactive Marketing, Journal of Interactive Advertising). Because of this variety of sources, we have been able to read about our topic from different viewpoints and consequently obtain a full picture of advertising intrusiveness and its process by consumers. Moreover, as far as possible, we used references that were not too outdated since internet advertising is a recent and evolving area. Nevertheless, some main contributions concerning the concepts of intrusiveness, attitudes and behaviours that we referred to in our development may seem a bit old, but are still relevant as they constitute the foundations for the theories that are of interest in this topic.
When searching for relevant information, it is important to first define what the principals keywords are (Bryman & Bell 2011, p. 108). Hence we discussed about this point after reading some main articles and referring to some business dictionaries. We identified our main keywords and tried to seek for synonyms that could be used in the literature. This work was essential as there is no consensus about the terms used for some concept. For instance, advertising can also be referred to as ads, advertisements and commercials; or online communications as e-branding, e-marketing or interactive marketing (Jensen & Jepsen, 2006, p. 21). Without taking into consideration these synonyms in the following list, the main keywords were: advertising AND intrusiveness, online advertising, perceived intrusiveness, online communications, purchase intention, online AND purchase intention, behavioural intention, attitude toward AND online advertising, attitude toward the ad and reactance theory.

As a result, we obtained a large amount of articles from which we draw a clear picture of the topic of interest. Nevertheless, all the collected information was not always usable. In order to determine which sources were more likely to be used, we first tried to rely only on academic articles that are said to be the most suitable because they are evaluated by academic peers (Saunders et al., 2009, p. 70). However, some references are not and are consequently less suitable, but we tried to limit the use of this kind of sources. We also used Google Scholar to see how many times one source has been cited. Hence we were able to see which of them contributed the more to the literature. Then in order to reduce the use of invalid information or wrongly interpret them, we checked the main references used in the articles we were using. It also enabled us to expand our review to sources that did not come up through our process of literature search. Finally, we were not always able to access references used in relevant articles while they seemed to be relevant for our research. Consequently, even if we were willing to limit their use, we were forced to use some secondary sources.

As a conclusion, we tried to methodically select the sources to use in our research that were relevant and suitable. Nonetheless, we found in some practical cases information that seemed important to us but that did not correspond to our selection criteria. In order to not downgrade the quality of our work, we tried to keep the use of these sources at its minimum.
3. LITERATURE REVIEW

This chapter aims to review the literature and the main topics that will be used in our study. We start with a discussion about the integrated marketing communications as it is the frame in which we will conduct our study. This section is important as it outlines the relevance and the necessity of addressing this topic. Then after describing the type of online advertising that we will analyse during our study, we will follow a logical argumentation depicting the apparition of the concept of intrusiveness and its consequences on the attitude toward advertising and the purchase intention, two concepts measuring the ad effectiveness. We will finally explicate in which population and context we will examine the relations between these variables and the reasons of this choice.

3.1. FROM INTEGRATED MARKETING COMMUNICATIONS TO ONLINE MARKETING COMMUNICATIONS

The technics in marketing are closely related to the product/consumer orientation of companies (Reid et al., 2005, p. 15). For a long-time, most firms focused on the products and not on the customers as most of their products met an inherent demand (Schultz, 1996, p. 140). Companies were more concerned about the production efficiency of their plants rather than on who will buy their products; it is what Kotler & Keller (2012, p.18) call the production concept. In this context, given that all products were identical (no personalisation), consumers were assumed to be also identical (Schultz, 1996, p. 140). Furthermore, marketers had only little information about their customers because of inexistent technologies (Schultz, 1993, p. 20). Hence, it made sense at this time to create a single commercial message addressed to all the population for a single-version product (Schultz, 1996, p. 140). This general approach of the market is called equally mass-marketing or undifferentiated marketing. Kotler (1967, cited in Wright & Esslemont, 1994, p. 13) defines it as a marketing strategy that “treats the market as an aggregate, focusing on what is common in the needs rather than on what is different”, which imply “a marketing mix aimed at the broadest segment of the market”. While this mass-marketing has been the focus of advertisers for a long time, they operated a shift toward a more customized or at least targeted marketing (Schultz, 1999, cited in Peltier et al., 2003, p. 94). Indeed, new technologies such as scanners or electronic capture of purchase data enabled companies to have a better knowledge of their customers (Schultz, 1993, p. 20). As main outcome, marketers will be able to identify categories or segments that require a specific product offering and communication (Kotler & Levy, 1969, p. 14; Kitchen et al., 2004, p. 20). Companies will consequently communicate to some customers and ignore the others (Schultz, 1993, p. 20).

To reach their targets, practitioners will use marketing communications that are referred to as “the means by which firms attempt to inform, persuade, and remind consumers about the products and brands they sell” (Kotler & Keller, 2012, p.476). The challenge here for practitioners is to reach efficiently the different market segments through several marketing communications without creating inconsistent brand image (Kitchen et al., 2004, p. 20; Peltier et al., 2003, p. 108). In other words they have to integrate the marketing communications. This is the basic principle of integrated marketing communications (hereinafter referred as IMC) that we can also find in the following definition: “a concept of marketing communication planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communication disciplines e.g. general advertising, direct responses, sales promotion and
public relations... and combines these disciplines to provide clarity, consistency and maximum communication impact” (Caywood, 1991, cited in Schultz & Schultz, 1998, p. 18).

IMC as a field of research appeared in the 1980’s at the instigation of Schultz (Cook, 2004, p. 1). Other researchers claim that this field is more recent and appeared around 1995 (Kim et al., 2004, p. 31). This disagreement among researchers is not significant as such, but we found it to be representative of the general lack of consensus that considers IMC as a controversial field of study (Kitchen et al., 2004, p. 24; Kim et al., 2004, p. 33; Gould, 2004, p. 66). Through our literature review we found several reasons that we will develop bellow that explain the controversy for this topic.

First of all, there is a definitional issue because a lot of grey areas and ramifications remain unclear around the concept of IMC (Kliatchko, 2008, p. 134; Schultz & Schultz, 1998, p. 17; Cornelissen & Lock, 2000, p. 10). As this is a major concern in this field, we will start with an overview of the definition of IMC. Most researches used the definition developed by Caywood (Schultz & Schultz, 1998, p. 18) previously quoted. Additional definitions clearly attempted to clarify the previous one. We can refer to several others that are among the most used by researchers. The first of them defines IMC as “a strategic business process used to plan, develop, execute and evaluate coordinated, measurable, persuasive brand communication programmes over time with consumers, customers, prospects and other targeted, relevant external and internal audiences” (Schultz and Schultz, 1998, p. 18). This refined definition incorporates the notion of evaluation of the IMC, element that has been source of critics in the early ages of the concept (Schultz and Schultz, 1998, p. 18). Nevertheless, we will use another definition that is simpler because we find it important to have a clear understanding, even if simplified, of what IMC is. This choice is also a result of our agreement with what Reitman (1994, p. 30) wrote about the definition of IMC: the fact that there is no general definition but rather a multitude based on one’s personal perspective. The definition we will base our work on is as follow: “IMC is a concept of marketing communication planning that recognises the added value of using a comprehensive plan to evaluate the strategic roles of a variety of communication disciplines” (Peltier et al., 2003, p. 93). Kliatchko (2005, p. 21) provides a clear overview of how the definition of IMC has evolve from the dawn of the concept (Table 2).
Second, practitioners are interested by this “new” concept and use it increasingly (Peltier et al., 2003, p. 94), but implement it poorly because of some specific issues (Kliatchko, 2008, p. 137). Logically, apart from the definitional issue, the second main research topic regarding IMC is to understand why practitioners have difficulties to implement it in their companies (Kliatchko, 2008, p. 139). According to Gronstedt & Thorson (1996, p. 49), there are three main organisational barriers to the implementation of IMC: the marketing decisions are lower-level line functions (lack of power of the marketing concerns), the vertical structure of companies complicated the cooperation between the different units of the firm, and finally the practice of a functional specialisation (which divide the operations of each department of the firm).

Third, researchers also explored other research topics like the use of IMC in different countries, measurement issues, and application of the concept to specific marketing tools (Kliatchko, 2008, p. 139), but we already previously addressed the main ones. Before the next section, another important contribution is that of Cornelissen & Lock (2000). In this article, IMC is said to be a management fashion or fad (Cornelissen & Lock, 2000, p. 13) because of a lack of academic rigor, which is mainly linked with the definition issue previously explained but also with the oversimplification across researches, including the lack of measures (Cornelissen & Lock, 2000, p. 10; Ewing, 2009, p. 103). They also question the relevance of the adoption of the IMC by practitioners as they see it as a simple management fad. Even if these critics may affect how practitioners perceive the concept and consequently their willingness to adopt it, researchers consider it as a constructive effort. Indeed the fact that IMC is not only improved but also strongly criticised enables researchers to see which points need to be discussed in further researches (Gould, 2000, p. 22; Kitchen et al., 2004, p. 24).

Consequently, researchers had deepened this field in order to facilitate the practitioners’ implementation and finally take benefit of the IMC. Furthermore, IMC remains an evolving concept (Kitchen et al., 2004, p. 25; Jensen & Jepsen, 2006, p. 33) and new information technologies challenge this concept for several years and require companies
to transition from a classical to an adapted marketing programme (Schultz & Schultz, 1998, p. 14-15). Indeed the internet as a medium for advertisers differs from classical media – television, radio and magazines - mainly because of its interactivity that leads basic marketing applications (many-to-many communications) to be unusable (Hoffman & Novak, 1996, p. 65). This shift is essential for those companies willing to exploit in the best way all the possibilities the internet offers (Peltier et al., 2003, p. 95; Jensen & Jepsen, 2006, p. 31). This adapted IMC is referred in the literature to Online Marketing Communications (OMC), but online communications are also referred for instance to e-branding, e-media, e-marketing or interactive marketing (Jensen & Jepsen, 2006, p. 21). These different terms underline the existence of various definitions across the literature, even if they are quite similar. The essence of these definitions is “communications where the user, via a computer, is connected to and served by a computer network” (Jensen & Jepsen, 2006, p. 21). New information technologies create a shift from a segment-based IMC to an individual-based one (Peltier et al., 2003, p. 95). While traditional IMC aims to create consistent communication themes, OMC also aims to achieve this consistency but using at the same time the possibility to personalise communications (Peltier et al., 2003, p. 108). Because of the ability to collect and store consumer’s data, but also the possibility for marketers to use them in an efficient way with developing user-friendly technologies (Schultz & Schultz, 1998, p. 13), practitioners and researchers are facing a very challenging and exciting time (Lavidge, 1999, p. 70).

Another discussion in the literature related to OMC is to know if internet communications should be integrated in the classical IMC structure or if this new form of communication requires a separated structure (Jensen & Jepsen, 2006, p. 22). To that extent, we can relate to a classification of communications proposed by Borderwijk & Van Kaam (1986, p. 580) that take into account the user’s control of distribution of the communication and the extent to which the communication is produced by the marketer or the user. The resulting outcome of this classification is a matrix in which we can range the traditional media. For instance, the radio and TV as communication media are controlled and produced by marketers. But when it comes to online communications, we cannot range it into one single part of the matrix (Jensen & Jepsen, 2006, p. 24). Indeed, a lot of new communication tools appeared with the internet and there are still innovations in this field. For instance, social media such as Facebook, founded in 2004, gave birth to multiple commercial uses that has not received a high attention from researchers (Okazaki & Taylor, 2013, p. 57). In order to illustrate how online communication tools can by classified, we can refer to the following matrix (Table 3) proposed by Jensen & Jepsen (2006, p. 23):

<table>
<thead>
<tr>
<th>Communication produced by marketer</th>
<th>Communication produced by user</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distribution of communication controlled by marketer</strong></td>
<td><strong>Transmission</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Display advertising</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Search Engine Marketing</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Microsites</strong></td>
</tr>
<tr>
<td><strong>Distribution of communication controlled by user</strong></td>
<td><strong>Consultation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Websites, e-mail, viral marketing</strong></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

*Table 3 OMC classification, from Jensen & Jepsen, 2006*
This table proposes to classify the communication tools depending on the source of the communication (production) and who control the distribution, as suggested by Bordewijk & Van Kaam (1986, p. 580). Numerous researchers based their researches on this model as it enables to easily range all kind of communication tools.

As said before, while traditional media can be ranged into a single square of the matrix, it is not the case with online communications. Consequently, instead of trying to fit them into the traditional IMC structure, it appears more consistent to consider online communications as apart from offline ones (Jensen & Jepsen, 2006, p. 32) and therefore marketers should split marketing communications into offline and online tools, and then find the right balance (Lace, 2004, p. 241). Offline communication tools, at the opposite of online communication, consist of all kind of communication that does not use the internet as a communication channel.

The previous paragraphs highlights the reasons why OMC has become a field of research during this last decade. Its development is based on the literature concerning IMC but differs also for several reasons previously cited. In spite of this academic interest for OMC, there is still a long way before companies fully achieve to take advantage of the internet (Peltier et al., 2003, p. 95). Hence this specific field of research is relevant with regard to practitioners’ needs. For our purpose, we will narrow down the scope of internet communications to online advertising. In the following section, we will address online advertising and set a focus on two specific advertising formats that will be used in this study.

3.2. ONLINE ADVERTISING AND PERCEIVED INTRUSIVENESS

Online advertising can be defined as “any form of commercial content available on the Internet, delivered by any channel, in any form, designed to inform customers about a product or service at any degree of depth” (Harker, 2008, p. 299, based on Schlosser et al., 1999, p. 36). Across the literature, three types of online advertising have been identified: search engine optimisation (called SEO), affiliate programs and display advertising (Jensen, 2008, p. 504-507).

SEO is defined as a set of techniques used to improve the internet referencing of a website in search engines like Google.com in order to increase the likelihood a customer will visit this website (JVCM, 2006, p. 39). Affiliate programs are hyperlinks that sponsors place for their businesses at another website (Papatla & Bhatnagar, 2002, p. 69). The last type of online advertising, display advertising, is defined as all forms of advertisements that appear next to a website content (Beuscart & Mellet, 2013, p. 403). It is considered as the type of online advertising that generate the most outcomes for online media and represents one third of online advertising in France (Beuscart & Mellet, 2013, p. 403). For this reason, we decided to focus on this specific type of advertisement in our thesis.

Most of the time, display advertisers target users depending on two main factors:

- Congruence of the displayed ad with the website content (Svensen et al., 2011, p. 1). Indeed, if one is navigating on a cooking website, one will be more interesting by food ads than garden ads for instance. Svensen et al. (2011, p.1) name this type of advertising, “contextual advertising”.
- Collected data across external websites visited by the user (Svensen et al., 2011, p. 1). Through the user online activity, advertisers can evaluate the net surfer interests and thus adapt their ads to them despite the website content. Svensen et
al. (2011, p. 1) name this type of advertising, “Behavioural targeting”.

There are many existing types of display advertising. Rodgers and Thorson (2000, p. 49) propose a non-exhaustive list including banners, interstitials, pop-up, ad words ad etc. According to the authors, the main differences between the various types of display ads are based on their format. They define an ad format as “the manner in which it [the ad] appears” (Rodgers and Thorson, 2000, p. 49). Indeed, if we concentrate on the three main types of display advertising that we named, we will see that each of them appear differently. First, the banner is a “rectangular-shaped graphics, usually located at the top or bottom of a web page” (Zeff & Aronson, 1997, cited in Rodgers & Thorson, 2000, p. 49). It is the most common format of online advertising (Briggs & Hollis, 1996, p. 33). Second, interstitials are advertisement pages that are displayed “before the intended destination page loads” (Goldfarb & Tucker, 2011, p. 392). Finally, pop-ups advertising are advertisings that “appear in a separate window on top of content that is already on the user’s screen” (Rodgers & Thorson, 2000, p. 49). We see that all of them appear differently on the users screen and thus will have different impacts on net surfers (Cho & Cheon, 2004, p. 94; Chatterjee, 2008, p. 51; Rejon-Guardia & Martinez-Lopez, 2014, p. 571).

For our purpose, we chose to focus only on two types of display advertising: banners and interstitials; and their impacts on net surfers. We decided to not choose pop-ups as its use is declining, especially since users are able to block them automatically (Anderson, 2005, p. 13).

When surfing on the web, users are automatically exposed to unwilling online advertising (Elliott & Speck, 1998, p. 36). Indeed, advertisers try to attract net surfers’ attention to their ads by interrupting them during their activities, forcing them “to react to unrequested commercial messages” (Edward et al., 2002, p. 84). Depending on the format of the ads, the level of interruption will be different (Edward et al., 2002, p. 84). As banners are located around the website content, they do not interrupt the content of the net surfer (Zeff & Aronson, 1997, cited in Rodgers & Thorson, 2000, p. 49). They draw the attention on the periphery of the website without preventing the user from continuing its activities or from forcing him/her to look at the advertising (Kim et al., 2013, p. 93; Chatterjee, 2008, p. 53). But some users may consider banners as interrupting as they are still trying to attract consumers’ attention from their activities (Goldfarb & Tucker, 2011, p. 390). On the other hand, interstitials do interrupt the net surfer activities by forcing the user to watch the ad before he or she can continue its activity (Edwards, Hairong & Lee, 2002, p. 84).

Forced exposure to advertising is a two-edge sword (Edward et al., 2002, p. 84; Chatterjee, 2008, p. 59). On one side, it will increase attention, recall and click-through rate. According to Milward Brown Interactive study (1999), interstitials are creating higher awareness, recall and purchase intention than banners which are less interrupting. But on the other side, it will create a perception of intrusiveness which induces negative outcomes (Abernethy, 1990, p. 61; Edward et al., 2002, p.84, 87, 90; Chatterjee, 2008, p. 59).

For our purpose, we will develop more on the perception of intrusiveness by the net surfers and its consequences. The advertising intrusiveness is part (and the main component) of the advertising clutter (Rejon-Guardia & Martinez-Lopez, 2014, p. 569).
Advertising clutter refers to the density (in terms of quantity and space) of advertising present in a given media (Ha, 1996, p. 76). It depends on three dimensions: overload (quantity), intrusiveness (reactance) and competitiveness (interference) (Ha, 1996, p. 77). The concern for this concept has increased for several decades due to a rise of a global negative attitude toward advertising and a decrease of its effectiveness (Elliott & Speck, 1998, p. 29). Some authors argue that advertising clutter has always been a source of complaints among consumers toward advertising, whatever the media (Li et al., 2002, p. 37), which is also a reason that explains this ever growing concern. The reason behind the increasing perceived advertising clutter is that advertisers have to compete with a growing number of ads on a same medium and consequently struggle to grab customer’s attention (Rejon-Guardia & Martinez-Lopez, 2014, p. 567).

Intrusiveness seems to be the dimension to which most researchers refer when they use the concept of advertising clutter, or is at least its main component (Rejon-Guardia & Martinez-Lopez, 2014, p. 569). For instance, advertising clutter has been defined as dependent of the degree of intrusiveness and frequency of advertising in a media (Ha & McCann, 2008, p. 570). Intrusiveness is defined as “the degree to which advertisements in a media vehicle interrupt the flow of an editorial unit” (Ha, 1996, p. 77). In spite of this definition widely acknowledged, intrusiveness has been studied from an extended viewpoint by some researchers who added to the previous definition the degree of customisation of the ad (Van Doorn & Hoekstra, 2013, p. 339). These studies refer specifically to online advertising and the authors found that the higher the personalisation, the more intrusive the ad is perceived (Van Doorn & Hoekstra, 2013, p. 348). While the first definition focuses on the format of advertising, the extended one refers also to its content. Nevertheless, as no general scale has been developed to measure the perceived intrusiveness related to the degree of personalisation, we will base our study on the first definition previously mentioned. But even for this important concept in its basic form, there was no standard measurement of intrusiveness either for a long time (Li et al., 2002, p. 37). In 2002 however, Li et al. (2002) proposed a general scale to measure the advertising intrusiveness which has then been used by most researchers when evaluating intrusiveness. It enables researchers to compare with a standard measure the perceived intrusiveness of different advertisements, advertising format and advertising media (Li et al., 2002, p. 43), and also to observe evolutions of this perception over time. Thus, we will use this scale in our own survey when measuring the perceived intrusiveness of banners and interstitials.

Our literature review enables us to say that the perception of intrusiveness is not equal for all of the media and for all advertising formats. As internet is attracting advertising investment at the expense of other media (Rejon-Guardia & Martinez-Lopez, 2014, p. 565), we will only focus on this medium. In spite of some authors like Rusk & Varki (1996, p. 173) that predicted a reduced intrusiveness in online advertising because of the possible interactivity, perceived intrusiveness is higher than in other media (Li et al., 2002, p. 37). Indeed, when compared with classical media (radio, TV, magazines…), internet advertising is generally perceived as more intrusive because of the ability for advertisers to use advertising formats that are larger and more intrusive (Ying et al., 2009, p. 624) and also because users can have different goals when surfing on the internet (Li et al. 2002, p. 38). Compared to traditional media such as the television, the internet offers a diversity of use. From an audience to users, people can have different motives when surfing on the web such as “goal-directed or playful consumption” (Ha & McCann, 2008,
p. 572). Then it seems more difficult to understand the net surfer motivation of use for a better adaptation of the ads. Furthermore while practitioners are becoming disenchanted with this media (Lanctot, 2002, cited in Cho & Cheon, 2004, p. 89; Edwards et al., 2002, p. 83), they are looking for alternatives that are often more intrusive in order to eventually increase their results (Goldfarb and Tucker, 2011, p. 389). For instance, they try to create congruence between the ad and website content or to create campaigns that stand out and are much more intrusive (Goldfarb and Tucker, 2011, p. 389).

As several advertising formats co-exist on the internet with different physical characteristics, their level of intrusiveness vary (McCoy et al., 2008, p. 674; Rejon-Guardia & Martinez-Lopez, 2014, p. 571). Banners are recognised to be less intrusive than interstitials since they do not obstruct the website content (Rejon-Guardia & Martinez-Lopez, 2014, p. 571). Hence, in order to evaluate the impact of intrusiveness on several variables, we can compare the perception of these two advertising formats and their effectiveness in terms of attitude toward the ad and purchase intention.

Like forced exposure, intrusiveness will increase attention, recall and click-through rate, but also lower brand attitudes and positively affects ad avoidance (Chatterjee, 2008, p. 59). Hence it is relevant for researchers as well as for practitioners to understand how consumers perceive intrusiveness in order to eventually be able to take benefit of its advantages and reduce its drawbacks. Some researches focused on how to reduce the perceived intrusiveness (Edward et al., 2002) to prevent from the reactance theory (Brehm, 1966, 1972; cited in Koslow, 2000, p. 246). Ads’ characteristics such as the ad congruence, its informativeness or its level of entertainment, are seen as factors reducing the perceived intrusiveness (Edward et al., 2002, p. 90).

Based on this argumentation, we can say that there is a significant difference regarding the perceived intrusiveness between banners and interstitials. We will nevertheless test this difference in order to be sure that our research is consistent with the literature on this point.

3.3. REACTANCE THEORY: AD IRRITATION AND AVOIDANCE

The reactance theory was first developed by Brehm (1966, 1972; cited in Koslow, 2000, p. 246). It theorizes how people psychologically react to the threat of their freedom (Clee & Wicklund, 1980, p. 389). People’s freedom can be defined as “behavioural and attitudinal freedoms that people act upon in everyday life” (Clee & Wicklund, 1980, p. 390). In our case, net surfers’ freedom would be to navigate online without being unwillingly exposed to a specific advertising. Intrusive advertisings, as its definition says, do not let the choice to the exposed online users. Thus, they can be perceived as a threat to users’ freedom. According to the theory, individuals that feel their freedom threatened will react at the same level of the threat and will most of the time react against/oppositely of the source of the threat (Clee & Wicklund, 1980, p. 390). Based on this principle, people should react badly to the intrusiveness of the ads, which may overlap their positive impact – the creation of a high awareness and recall – putting into question their use and real consequences. The potential negative responses – attitudes and behaviours – toward the threat of intrusive ads are mainly irritation (Edwards et al., 2002, p.84, 87, 90) and/or avoiding the ad (Abernethy, 1990, p. 61; Edwards et al., 2002, p. 84, 90).

Aaker & Bruzzone (1985, p. 48) define an irritating ad as “one that is provoking, causing
displeasure and momentary impatience”. According to Edwards et al. (2002, p. 84), ad irritation is often due to the content, the level of stimulation or/and the level of perceived intrusiveness – by its interruption of the action of the online user (Ha, 1996, p. 77). In our study, we will mainly focus on the perceived intrusiveness as the cause of irritation but as we measure a general evaluation of the intrusiveness and irritation, respondents may take indirectly into account the other potential causes when answering.

Edwards et al. (2002, p. 84) also highlight the effect of the feeling of irritation on individuals’ behaviour. Indeed, it may lead to ad avoidance. Ad avoidance occurs when the consumers consciously avoid cognitively or physically the interrupting advertising (Speck & Elliott, 1997, p. 31; Abernethy, 1990, p. 61; Chatterjee, 2008, p.52).

Chatterjee (2008, p. 52) defines the cognitive ad avoidance as the “consumers avoiding fixating on ads in their visual field”. According to Bellman et al. (2010, p. 68) the cognitive ad avoidance will lead to “residual effects” on the awareness and recall of the exposed individuals. This type of avoidance has higher positive impacts than the physical avoidance (Bellman et al., 2010, p. 68).

The physical ad avoidance can be described as the fact that “consumers consciously use mechanical devices to avoid ads (zapping ads on TV, closing pop-up ads on Web)” (Chatterjee, 2008, p. 52). Abernethy (1990, p. 61) adds some precisions by separating physical and mechanical avoidance. For him, the physical avoidance happens when the exposed individual leaves the room of exposition and the mechanical avoidance, when individual uses mechanical devices (1990, p. 61).

The aim of our study is to examine the impact of the perceived intrusiveness on the advertising efficiency. Thus, we will now develop on the two main concepts measuring the performance of an ad: attitude toward the ad and the purchase intention.

3.4. ATTITUDE TOWARD THE AD

Based on the theory of the advertising-hierarchy-of-effects (Bruner & Kumar, 2000, p. 35), the attitude toward the ad is seen by most researchers and practitioners as a measure of advertising effectiveness (McMillan et al., 2003, p. 400). The attitude toward the ad is a determinant of purchase intention (McMillan et al., 2003, p. 400). Through the theory of the advertising-hierarchy-of-effects, Bruner & Kumar (2000, p. 35) describe the connection between the attitude toward the ad and the purchase intention. Researchers proved that the attitude toward the ad has an influence on the attitude toward the brand which will have an impact on the purchase intention. Thus, attitude toward the ad and purchase intention are connected. Bruner & Kumar (2000, p. 35) also underline that this relation is a positive connection. The attitude toward the ad is defined as a “predisposition to respond in a favourable or unfavourable manner to a particular advertising stimulus during a particular exposure occasion” (Lutz & MacKenzie, 1989, p. 49). Three different feelings can arise from an advertisement: upbeat feelings, warm feelings and negative feelings (based on Burke & Edell, 1986, p. 117). The fact that these feelings explain to some extent how a person react to a given advertisement proves the importance of understanding how attitudes are built and how practitioners can have an influence on them.

Petty & Cacioppo (1983) developed the Elaboration Likelyhood Model of persuasion,
explaining how attitudes are formed and changed. In this model, two routes of communications used to influence customers are identified: central processing and peripheral processing (1981, cited in Lutz & MacKenzie, 1989, p. 49). The former route is taken when the audience perceive the information as being relevant or interesting (Petty, Cacioppo & Schumann, 1983, p. 138). They will then analyse the message and address a cognitive response to the arguments (Petty, Cacioppo & Schumann, 1983, p. 138). For this audience, it is important to provide facts and anticipate counterarguments. The second route can be considered as a low-involvement one, through which the audience will not perceive the information as relevant for them and will consequently mainly focus on the peripheral cues of the message such as the credibility or physical attractiveness of the ad endorser (Petty, Cacioppo & Schumann, 1983, p. 138). Depending on these cues, the audience will or will not process further the message (Gregory et al., 2013, p. 1952). This distinction into two routes has been widely used by researchers to develop improved models of attitude toward the advertisement and more precisely of its antecedents like Lutz et al. (1983) that proposed a model in which the central processing was composed of ad credibility and ad perceptions, while the peripheral processing was composed of the attitude toward advertiser, the attitude toward advertising and the mood (cited in Lutz & MacKenzie, 1989, p. 50). Ha and McCann (2008, p. 574) add the advertising execution – advertising format and level of intrusiveness for instance – as a really important peripheral cue. But practitioners cannot predict for sure on which routes net surfers will process. They have to take into account both possibilities when displaying their ads. As these peripheral cues are determinant constituents of the effectiveness of the ads (Ha, 1999, cited in Ha and McCann, 2008, p. 574), the perceived intrusiveness and its consequences will have an important influence on the attitude toward the ad. But as several studies state, the perceived intrusiveness will have a negative impact (Li et al., 2002, p. 37). So we can hypothesize:

**H1: The perceived intrusiveness has a negative impact on the attitude toward the advertising**

As irritation is a consequence of the perceived intrusiveness, and based on the findings of Stayman & Aaker (1988, p. 371), the irritation will have a heavy impact on the attitude toward the ad. This feeling is a negative feeling inducing logically negative outcomes toward the ad. We can thus say:

**H2: The ad irritation has a negative impact on the attitude toward the ad**

On the other hand, ad avoidance is a consequence of the attitude toward the ad (Kim, 2013, p. 100; Jin & Villegas, 2007, p. 259). Hence, we will not study the opposite relation even if we think it could be interesting.

The attitude is a much discussed concept by researchers who face difficulties to agree on one measurement. According to Fishbein & Ajzen (1972, p. 492), in 1972, more than 500 technics existed to measure this variable. This diversity limits the possibility of comparing the different studies. Indeed, according to them, when using a different measure of the attitude in a same research, different findings are resulting (Fishbein & Ajzen, 1972, p. 493). We chose to base our measure on Ha's (1996) for many reasons. First, Ha is one of the first and main authors searching on the topic of the intrusiveness of advertising. Second, she used a measure of the global judgement of the users. It is a scale using bipolar items such as pleasant/unpleasant and useful/not useful. Using a global
measure allow us to evaluate the global perception of the respondents without precising which routes of persuasion they processed. In fact, we do not concentrate only on one advertising but on an average of ads using the same format.

Now, we will concentrate on the attitude toward online advertising in general. Jin & Lutz (2013, p. 343) define it as “the attitude toward the category (advertising) as a whole”. It is an important construct for researchers and practitioners as it positively influences the advertising effectiveness (Mehta, 2000, p. 67) through different ways. One of the main reasons would be according to Jin & Lutz (2013, p. 343) that the attitude in general will “predict consumers’ level of involvement or engagement with ads during exposure”. We will not study the attitude toward the overall advertising but only toward online advertising. It differs on several points from what we know about advertising in general (Schlosser, Shavitt & Kanfer, 1999, p. 35). Indeed the internet changes the relation between companies and customers because of the control users have on what they are exposed to (Schlosser, Shavitt & Kanfer, 1999, p. 35). Nevertheless, researches in this field are not abundant and are mostly outdated. Hence we can say that:

Based on our review, internet users perceive online advertising as valuable, informative and entertaining, but also irritating (Ducoffe, 1996, p. 29; Schlosser, Shavitt & Kanfer, 1999, p. 37), which consequently explain the attitude toward online advertising. The resulting attitude will vary across individuals which enables companies to classify them into three categories: pro, ambivalent and critics, from positive overall attitude to negative attitude (Karson et al., 2006, p. 88). More precisely, these three clusters differ on four attributes: information search (according to which pros are more involved than the two other categories), Computer and Internet use and buying (same observation), web as hedonic and/or utilitarian (Pros and ambivalent perceived Internet as more functional and hedonic, at the contrary of the critics) and security and privacy (where ambivalents are more sensitive than the two others) (Karson et al., 2006, pp. 85-86). This concept is important as it is one of the determinants of the attitude toward the ad (Lutz & MacKenzie, 1989, p. 54). The attitude toward advertising in general will define to which extent one likes to look at advertisings— for pleasure or for information on the market place – which will determine one’s level of attention toward the ads (Mehta & Purvis, 1995, p. 5).

Then we can say that:

\[ H3: \text{The attitude toward online advertising in general has a positive impact on the attitude toward the ad} \]

For our purpose, we will study only two online advertising formats: banners and interstitials. We will analyse the attitude toward each of both formats and also the attitude toward online advertising in general. Both the general and the specific attitude toward the ad are relevant and intertwined. As these attitudes have an impact on advertising effectiveness, we will then discuss the purchase intention, the ultimate proof of this effectiveness.

3.5. PURCHASE INTENTION

To evaluate effectiveness of an advertising campaign, practitioners focus on a short-term or long-term view (Brown & Moe, 2013, p. 755). Immediate measurement would be the level of click through just after the exposition to the ad (Chatterjee, 2008, p. 51; Braun & Moe, 2013, p. 755) and long term measurement would be the purchase intention of the
user. But most of the time, there is a delay between the exposition and the real purchase during which change can happen (Chatterjee, 2008, p. 51; Braun & Moe, 2013, p. 755). Hence, the level of click through may be considered as inaccurate when measuring the real performance of the advertisements. Moreover, according to Schlosser et al. (1999, p. 36), clicking on a link may be the result of an accident of the user when trying to close the ad for instance. We will thus concentrate on the purchase intention measure.

Marketers are using the concept of behavioural intention because of its capacity to predict potential consumers’ behaviours (Fishbein & Ajzen, 1973, p. 42). Fishbein & Ajzen (1975) developed the theory of reasoned action defining the relation between believes, attitudes, norms, intention and behaviour. According to them, the action of an individual is determined by his intention to perform it. They defined the behavioural intention as “the subjective probability that one will perform some behaviour” (Fishbein & Ajzen, 1975, p. 288). There are two components predicting the behavioural intention of someone: one’s attitude and one’s subjective norm – the social approval of the potential action (Fishbein & Ajzen, 1972, p. 530). The authors also recall that there are many factors that can intervene between the intention and the behaviour reducing the accuracy of the measure of the behaviours through intentions (1972, p. 530). First of all, to be accurate, there is an assumption that one’s intention is under one’s total control (Fishbein & Ajzen, 1972, p. 530). Moreover, the longer the time between the intended behaviour and the actual behaviour, the weaker the causal link between them (Fishbein & Ajzen, 1975, p.370). This change can be due to new advertising or word of mouth for instance taking place between the intention and the act (Chintagunta & Lee, 2012, p. 138). But, despite these limits, the act or behaviour will be predicted by the intention to realize this act (Fishbein, 1971, cited in Douglas & Yoram, 971, p. 331-343).

The main concept that marketers try to evaluate through the behaviour is the purchase behaviour. Based on our past argumentation, we can say that to predict the purchase behaviour, we will measure the purchase intention (Fishbein & Ajzen, 1975; Chintagunta & Lee, 2012, p.153). Adding to the previous research, Douglas and Yoram (1971, p. 331-343), stress the role of predictor of behaviour of the purchase intention. Dodds et al. (1991, p. 318) defined the purchase intention as the “likelihood of a buyer to purchase a product” or a service. Kimelfeld & Watt (2001, p. 153) stressed in their study that the web in itself as a medium, is increasing the purchase intention of the users due to the fact that consumers can interact with the medium (Kimelfeld & Watt, 2001, p.140 - 141). Thus it seems even more important to study the impact of the intrusive ads on net surfers’ purchase intention as it may be different from the results in magazines or TV media.

The attitude toward the ad is a determinant of purchase intention (McMillan et al., 2003, p. 400). Through the theory of the advertising-hierarchy-of-effects, Bruner & Kumar (2000, p. 35) describe the connection between the attitude toward the ad and the purchase intention. Researches proved that the attitude toward the ad has an influence on the attitude toward the brand which will have an impact on the purchase intention. Thus, attitude toward the ad and purchase intention are connected. Bruner & Kumar (2000, p. 35) also underline that this relation is a positive connection. Then, we can say that:

\[ H4: \text{The attitude toward the ad has a positive impact on the purchase intention} \]

The attitude toward advertising in general has also been identified to have an impact on the advertising effectiveness (Metha, 2000, p. 70), which can be measured through the
purchase intention (Fishbein & Ajzen, 1975; McMillan et al., 2003, p. 400). Hence we are willing to test the following hypothesis:

**H5: The attitude toward online advertising in general has a positive impact on the purchase intention**

We hypothesized before that the intrusiveness will have an impact on the attitude toward the advertising which will also have an impact on the purchase intention. But according to Stayman & Aaker (1988, p. 371), the attitude toward the ad does not always reflect all the variables that can have an impact on the ad effectiveness. So we can suppose that the perceived intrusiveness will also have a direct impact on the purchase intention. Millward Brown (1999) underlined that the advertising effectiveness, and thus the purchase intention, is dependent on the advertising format. That is why we chose to compare two types of online ads, banners and interstitials, which, as highlighted before, have different levels of intrusiveness, to assess the impact of this variable on the purchase intention. Based on our past argumentation, we saw that intrusiveness can induce positives and negatives effects on the purchase intention. However, we believe that the negatives impacts will be more important due to the overload of online advertisings (Ha, 1996, p. 76) and the rise of advertising intrusiveness – to gain more visibility campaign are more and more intrusive (Goldfarb and Tucker, 2011, p. 389). We can thus say that:

**H6: The perceived intrusiveness has a negative impact on purchase intention**

The perceived intrusiveness may also have an impact on the purchase intention according to the reactance theory (Brehm, 1966, 1972; cited in Koslow, 2000, p. 246). A feeling of irritation leads to negative impact on the efficiency of the ad (Aaker & Bruzzone, 1985, p. 47, 57; Stayman & Aaker, 1988, p. 369) and thus the potential purchase intention of the exposed online users. Thus,

**H7: The ad irritation has a negative impact on the purchase intention**

Avoiding an intrusive ad can have positive and negative impacts. Actively avoiding the ad can lead to recall it and to process it thanks to the partial ad exposition of the individual (Greene, 1988; cited in Bellman et al., 2010, p. 68). But as ad-avoidance generates limited exposure or no exposure at all to the ad compare to a real exposition, this phenomenon will reduce ad’s efficiency (Stout & Burda, 1989, p. 28; Abernethy, 1990, p. 62). Stout & Burda (1989, p. 30) underlines in their study that ad avoidance interact with the exposed people’s faculties to process the ad. It may lead to a perception of the ad or the brand that is distant from the image conveyed by the ad (Stout & Burda, 1989, p. 30). Thus, even with some little positives outcomes of ad avoidance on recall, the behaviour will in fine have mostly negatives impact.

**H8: The ad avoidance has a negative impact on the purchase intention**

For the purpose of our study, we also want to integrate the effect of the variable of the net surfers’ experience of internet on the efficiency of the ads (Drèze & Husssherr, 2003, p. 10). According to Drèze & Husssherr (2003, p. 15), expert internet users are much more efficient in avoiding ads without processing them thanks to their experience. So we can say that more time you spend on internet, less ads are efficient on you, lowering their impact on your purchase intention. Thus we can hypothesize:
The different relations that we proved and that we will study soon, are concerning every type of population. But for the purpose of our study, we chose to focus only on a specific type of group. We will now explain it for a better understanding.

3.6. THE FRENCH STUDENTS OF THE MILLENNIAL GENERATION

Biggs (2007, p. 695) defines generation as a concept “used to locate particular birth cohorts in specific historical and cultural circumstances”. Weston (2006) differentiates the generations not only based on their age but also on three main factors: their historical, social, and cultural experiences that they share and make them a unique generation. We will study the existing generations in the western countries as despite some differences, they share a common history. Nowadays, different generations are coexisting creating a heterogeneous market. Practitioners need to understand their specificities and differences to better target them and to understand their needs and expectations.


First we will describe briefly the five generations and then explain why we chose to focus on the generation Millennial.

The Veteran Generation or silent generation (Kaye, 2012, p. 20) is composed of the children born during or after the Second World War II and experienced the great depression (Weston, 2006). Paré (2002) describes them as the builder and traditional generation. They are not comfortable with change and face difficulties with the new technologies (Weston, 2006). That is why, practitioners do not target this generation through their online advertising but more with traditional media such as TV or radio.

The Baby Boomer Generation is born in a prosper economy and put into questions every established rules and orders, such as the women place (Weston, 2006; Kaye, 2012, p. 20). They are the first to experience the television as a media for communication and advertising.

The Generation X is born in a world in change, experiencing more liberty than their parents (Weston, 2006). They undergo the change between the industrial to the knowledge economy. They have a certain ease with technology as they are exposed to it since their childhood and experience its exponential development (Weston, 2006). According to Weston (2006), this generation expects an immediate access to information and gives an important weigh to media such as TV.

The Generation Y is the internet generation. Internet is one of the foundations of this generation development, which can be cognitive or social (Paré, 2002). They are highly connected to their world and to others from their generation. They adapt well to change and on the contrary of past generations, they expect it as a base of their live (Paré, 2002). Paré (2002) also describe them as independent and active seekers of information on
internet. According to Wolburg & Pokrywcynsk (2001, p. 37), this generation has a different behaviour and attitude toward advertising compare to the generation X. Indeed, as they are overwhelmed by advertisings since their childhood and became more aware about advertising in general, they react differently.

The Generation Z is every child born after 2000. They are now children or teenagers who experience high technologies since their birth. Even if teenagers are known to be more and more responsible of their own purchasing or for influencing their parents, we will not focus on them as they still depend on their parents’ household.

For the purpose of our study, we chose to focus on the generation Y or Millennial generation for its specific link with the internet and to advertising. Nowadays, generation Y is composed of the students or the young professionals who will form the economy of the future.

We decided to concentrate on the sub-group of the college students among 18 to 26 years old. According to Russell (1926, cited in Wolburg & Pokrywcynsk, 2001, p. 33) there are many reasons why practitioners should focus on college students. First, the size of the potential market they offer. Indeed, the generation Y is almost the same size as the Baby Boomer Generation, which is much more than the generation X (Wolburg & Pokrywcynsk, 2001, p. 36). Second, practitioners can create preferences and loyalty during this age that will be stable over time. According to Bowde (2011, p. 211), it is found that brands need to create strong relationships with customers to face this more and more competitive environment. And students are the perfect target as they become independent from their parents and start creating their own habits of consumptions. Third, college students are expected to have a quite average or high standard of living. Fourth, they are trend setters and influence their parents.

We also decided to centre on the French college students for a better coherence in our responses. We believe that despite the worldwide trend of homogeneity and mostly for the Generation Y (Paré, 2002), there are still cultural differences that can be important factors for our survey such as different perceptions of advertising. In fact for instance, American consumers are more used to be exposed to advertising on television than French ones even if it is starting to change.

3.7. CONCEPTUAL MODELS

Based on our findings from the literature review, we developed two conceptual models. The first one examines the impact of the perceived intrusiveness, the ad irritation and the attitude toward online advertising in general on the attitude toward the ad which will be in its turn an independent variable in the second model. The second model studies the influence of the perceived intrusiveness and its consequences, the ad irritation and avoidance, and both attitudes toward online advertising in general and toward the ad in specific on the purchase intention. The model 1 is a preliminary stage before the second model as it allows to study in a wider frame the potential outcomes of the perceived intrusiveness on the purchase intention.

All variables have been chosen based on their direct or indirect relation to the perceived intrusiveness excepted for the attitude toward online advertising in general. We chose to add this concept in our study because of its link with the attitude toward the ad and the
purchase intention. We did not see any study examining this concept with the perceived intrusiveness and it seems interesting for us to analyse if its influence was still true when facing an intrusive ad. If our hypotheses about this variable appear to be validated, then we would be able to recommend it as a leverage for practitioners if they want to reduce – if negative – or increase – if positive – the influence of the perceived intrusiveness on the purchase intention.

We establish our study on the fact that the advertising format will have an impact on all the variables of our conceptual models leading us to found our analysis on the comparison between the outcomes of the banners and the interstitials.

We will assess the effects of the models in three steps. First we will examine if our assumptions on the relations between the advertising format and the concepts, and between the perceived intrusiveness, the ad irritation and ad avoidance, thanks to a t-test. Afterwards, two multiple regressions will be used to analyze both models for the interstitials and then for the banners.

Both models can be seen below:
4. PRACTICAL METHOD

This part aims to describe precisely the method we followed to reach our findings and conclusions. First, we explain how we collected the data and our choice of sample. Then we will justify the construction of our survey to ensure a transparency with the readers and other researchers. Finally, we will detail our analysis strategy to support our future findings.

4.1. RESEARCH DESIGN

Sachdeva (2009, p. 77) describes a research design as “the plan and structure of investigation so conceived as to obtain answers to research questions” or in other words, a research design is “a framework for the collection and analysis of data” (Bryman & Bell, 2011, p. 40). It defines the main dimensions to be studied in the research and its overall purpose. Depending on its objectives, the research design can be exploratory, descriptive, explanatory (Saunders et al., 2009, p. 139). An exploratory research has for objective to understand the behavior and its meaning in a particular context (Saunders et al., 2009, p. 139). According to Sachdeva (2009, p. 79), the main purpose of this type of study is to “develop hypotheses or questions for further research”. But as our goal is to answer to hypotheses that we developed thanks to past theories, we will not have an exploratory research. Descriptive studies have for purpose to offer a precise observation of a social phenomenon (Saunders et al., 2009, p. 140). This type of research design is most of the time correlated with an explanatory purpose as an only descriptive study may have no real interest and implications for the theory (Saunders et al., 2009, p. 140). We do not aim at just describing the phenomenon of intrusiveness but to analyze its impacts on the purchase intention through different variables. Thus, this type of study does not seem sufficient for our purpose. Explanatory researches aim to state causal relationships between variables (Sachdeva, 2009, p. 79; Saunders et al., 2009, p. 140). Finally this type of research design meets our goal to understand the impact of the online ad intrusiveness on the consumer process and intentional behavior. Indeed, we plan to analyze the different causal relations between our variables and the purchase intention in order to explain which variables influence the concept and to which extent compare to the others.

Bryman & Bell (2011, pp. 45-63) detail the research design into sub-categories: experimental, cross-sectional, longitudinal, case study or comparative design. We can oppose the cross-sectional and the longitudinal designs. The first one is conducted once and offers an immediate picture of a phenomenon/population at a single point of time (Sachdeva, 2009, p. 79; Bryman & Bell, 2011, p. 53). On the other hand, the second one repeats the data collection at least twice (Sachdeva, 2009, p. 79; Bryman & Bell, 2011, p. 58). The cross-sectional research design seems the best suited for our survey as we will collect our data only one time on a restricted time period. These data will be analyzed to help us examine the causal relation between the perceived intrusiveness and the purchase intention. For the purpose of our study an experimental design could have been chosen as some researches on our topics are using this sub-category (Milward Brown, 1999; Chatterjee, 2008). However, experimental studies are difficult to conduct because of the complexity to fulfill the internal validity requirement (Bryman & Bell, 2011, p. 45). The case study and the comparative design seem also not appropriate for our research. Indeed the first one focuses intensively on a single case (Bryman & Bell, 2011, p. 59), focalizing on a contextual analysis (Sachdeva, 2009, p. 80). And the second one compares two or more cases (Bryman & Bell, 2011, p. 63).
As underlined above, for the purpose of our study, an explanatory and cross-functional design have been chosen which is adapted to our scientific method.

4.2. DATA COLLECTION

During a study, it is possible to collect two types of data: primary data and secondary data (Sachdeva, 2009, p. 109). Using secondary data implies analyzing information that “has already been collected for some other purpose” (Saunders et al., 2009, p. 256). It has many advantages such as reducing the time of collection and thus offering more time for the analysis part of the research (Saunders et al., 2009, p. 268; Sachdeva, 2009, p. 109). According to Saunders et al. (2009, p. 268-269), it may also ensure a better quality than collecting primary data and offer a possibility to compare primary data with secondary data for a deeper analysis. But using this type of data also has drawbacks that are significant. First the data may not totally meet the research needs of information (Sachdeva, 2009, p. 109). The way they were collected may not fit the concepts definition of the study (Saunders et al., 2009, p. 270-271). Moreover, as the researcher has no hold on the collection methodology, ensuring the accuracy of the data is complex (Sachdeva, 2009, p. 109). And last but not least, to use secondary data, one should find updated data before using it for current research (Sachdeva, 2009, p. 109). Due to these limits, we chose to use primary data – collection of new data for our research – as we wanted to focus on the French generation Y (students) about the online advertising, such precise secondary data seemed impossible to find. Finally primary data seemed to be the best way to collect data in order to allow us to test our theoretical model and our hypotheses.

4.2.1. SAMPLING METHOD

As it is not possible to survey a whole population, researchers are using samples to collect their data for their studies (Sachdeva, 2009, p. 141). According to Sachdeva (2009, p. 141), “sampling is the process of selecting units from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen”. Then the sampling method appears to be critical for the validity of the study. It is thus necessary to have a close look at it.

In our study, the population – “the group, you wish to generalize to” (Sachdeva, 2009, p. 141) – consists of the French students among the generation Y. Bryman & Bell (2011, p. 176) define a sample as “the segment of the population that is selected for investigation” then our sample consists of French business school students between the ages of 18 to 26 years old. Choosing the business school students can lead us to some errors in our analysis. Indeed, these students, because of their studies, are more aware of the advertising effects than other types of students. Thus their analysis of the intrusiveness of online ads can be different than the one of the whole population. Moreover, we did not choose a probability sampling, which means that our sample has not been selected randomly (Bryman & Bell, 2011, p. 176), but a convenient sample, easier of access for the researcher (Bryman & Bell, 2011, p. 190). Indeed, we did not have access to all the business schools’ students’ contacts. We used two relevant channels to spread our questionnaire. First, to reach the students, we posted the link to our online survey on several Facebook pages:

- ESC France – the Facebook page of all Business School students in France
- ICN BS and Grenoble Management – the Facebook pages of two business schools.

But not all the students from the schools are members of these pages limiting our access to the whole potential of the sample. To keep having new participants, we had to get on the members of the different groups with new comments or “like” to our publications. Then, we also demanded to our schools to send an e-mail to all the students, asking them to participate in our study. These two methods were really effective as in six days, we collected 291 responses.

According to Bryman & Bell (2011, p. 185), only the probability sampling method allows generalizing the findings to the population. Moreover, it is one of the best ways to ensure a representative sample – “sample that reflects the population accurately” (Bryman & Bell, 2011, p. 176). Despite the reserves in generalizing the results due to the use of a convenient sample (Bryman & Bell, 2011, p. 190), one can argue that thanks to the various backgrounds of business school students and to the cover of the age range – from 18 to 26 years old and to the sex repartition – conclusions can be drawn from our sample with a lot of caution.

Because we chose to launch our survey through Facebook, it is difficult to assert the amount of non-response. Indeed if we base our measure on the number of members in the different Facebook pages, the level of the non-responses rate would be enormous as each page is composed of thousands of members. We can only say that during the first three days, the amount of responses was quite low, but because we kept updating our messages and tried to make them funnier and more alarmist by underlining our real need for responses, it raised a lot to the point that three days after we had exceeded our targeted number of answers. Indeed, we have collected 291 responses and we were aiming for 250. Having this size of sample is needed to ensure the validity and the generalizability of the findings. The better the precision, the lower the sampling error (Bryman & Bell, 2011, p. 187).

4.2.2. QUESTIONNAIRE DESIGN

According to Sachdeva (2009, p. 112) there are two categories of survey: the questionnaire and the interview. We chose the first one as it is completed by the respondents and not by the interviewers (Sachdeva, 2009, p. 112) which is easier and, less time and money consuming for the researchers. Then to choose what type of questionnaire, one has to take into account different factors: bias issues and administrative issues (Sachdeva, 2009, p. 114). Bias issues refer to the social desirability, probing or prompting effects, facing false respondents and reading the survey as a whole (Sachdeva, 2009, p. 114; Bryman & Bell, 2011, p. 233). All of these phenomena can be the cause of distortion of respondents’ answers. A self-completion questionnaire helps avoiding the first three possible biases. Indeed because the respondents answer the questionnaire without the support of an interviewer (Bryman & Bell, 2011, p. 237), they are not influenced by his/her presence. The social desirability refers to the fact that peoples “want to look good in the eyes of others” (Sachdeva, 2009, p. 114). With no interviewer to impress them, respondents will not modify their answers to look better (Sachdeva, 2009, p. 114). Probing or prompting is due to the direct intervention of the interviewer in aim to help the respondents understanding the questions. It influences the respondents in their answers which may lead to inaccurate data. But it also helps avoiding misunderstanding that only a face-to-face or phone questionnaire can provide (Bryman & Bell, 2011, p.
These two type of direct one-on-one questionnaire also help ensuring that the two last biases are not happening. Indeed the interviewer can verify that the identity of the respondents meets the requirement of the study and that they do follow the logic of the survey questions when answering. Administrative issues refer to the cost, facilities, time and personnel, the researchers can use for his or her survey (Sachdeva, 2009, p. 115). The self-completion questionnaire is, compare to live questionnaires, cheaper, quicker and do not need any facilities or personnel. Moreover, from the respondents’ point of view, it offers more liberty of the place and time to answer the survey. Based on the different arguments that we highlighted, a self-completion questionnaire has been chosen to collect our data.

To avoid the misunderstanding bias, we chose to test our survey on 6 French students before sending it to our sample. We asked them to answer our survey and to make comments about it. Thanks to them, we added a question and modified another one for an easier understanding. To prevent the issue of respondents reading the questionnaire as a whole, we chose an online format that forces the students to answer the questions in a pre-defined order. They cannot go from one page to the next one without answering all the questions. Then in order to ensure that only students were answering, we underlined who we were targeting before displaying the web link to our survey. Moreover, we aimed our message to only students from French business school. The last difficulty would be the response rate. Indeed, with self-completion questionnaire, the response rate is known to be lower than with face-to-face questionnaires (Bryman& Bell, 2011, p. 234). To guarantee a certain amount of answers, we sent our survey to many French business school students, and kept sending reminders after the first message.

Our survey is composed of sixty questions divided into three main parts. The questionnaires made of two types of scales: nominal and 7-points Likert scales (See appendix 1). The first part of the survey is a more general part about our population demographics with questions on the gender, the amount of time spend on the internet and the overall attitude toward online advertising. Then, we separated the questions for interstitials and banners. For each, we explained what we define as a banner and interstitials to guarantee a same understanding of the main concepts. For the questions inside these two parts, we chose to ask for the perceived intrusiveness in the end, in order to avoid influencing the respondents on their prior answers.

We utilized mandatory closed questions to first guarantee the full completion of the questionnaires and then because closed questions are easier and quicker to answer (Saunders et al., 2009, p. 375). We are aware that people in general avoid responding to survey. Thus, it seems necessary to propose an easy, quick and not time-consuming survey. Moreover, the use of closed questions facilitates our analysis as there is a limited and already defined set of possible answers (Saunders et al., 2009, p. 375).

As our survey aims the French students, we translated our survey to French as precise as possible. In the appendix 1, one can see the both version of our questionnaire. Criticism can be conceived as some words from English to French have slightly different meanings. To avoid this issue, Saunders et al. (2009, pp. 383-385) underline some points that should be taken into account when translating: the lexical meaning, the idiomatic meaning, the experiential meaning and finally the grammar and syntax. We believe that we took into consideration all these points. According to Saunders et al., there are four possible ways of translating a survey:
• First, a “direct translation” from the original survey – “source questionnaire” – to the translated survey – “target questionnaire” – (Saunders et al., 2009, p. 385). This method is the simplest and quickest method of all but it is also the one with which discordances can arise the most easily (Saunders et al., 2009, p. 385).

• Second, the “back-translation”, from the original survey to the translated one back to the original (Saunders et al., 2009, p. 385). It allows assessing most of the problems but it requires a French native speaker and an English one (Saunders et al., 2009, p. 385). As we are both French, this method was not a possibility for our study.

• Third, the “parallel translation”, two translations of the same survey in a same time for a comparison and then the creation of the best and unique questionnaire based on them (Saunders et al., 2009, p. 385). We chose this technique to ensure the best translation possible. But as Saunders et al. (2009, p. 385) stress, this solution may not avoid some issue with the meaning of the words. Despite that, we believe that our translation was quite precise and close to the original one. Our different backgrounds and understanding allowed us to offer a complete translation.

• The last possible way is a mixed of the past techniques. This is the best solution but it has too many requirements that we cannot fulfill (Saunders et al., 2009, p. 385).

We thus believe that we offered a good French translation for our survey and that all the meanings (lexical, idiomatic and experiential) were respected.

To measure our variables, we based our survey on recognized set of questions used in other surveys. Utilizing existing questions has many advantages. It can permit the comparison of our findings with other studies and guarantee a certain level of reliability (Saunders et al., 2009, p. 374). For our questionnaire, we used the references below:

• **General attitude toward online advertising**, from Mehta (2000)
• **Attitude toward the interstitials and the banners**, adapted from Ha (1996)
• **Purchase intention**, from Lepkowska-White, Brashear & Weinberger (2005)
• **Ad irritation and Ad avoidance**, adapted from Baek & Morimoto (2012)
• **Perceived intrusiveness**, from Li et al. (2002)

Finally, we used the means of Google Drive to create our survey. It seemed for us, the easier way to propose a constructed and clean questionnaire. Furthermore, during the compilation of the data, the interface was adapted to our statistical analysis tool, SPSS.

**4.3. DATA ANALYSIS STRATEGY**

To analyze our data, we used SPSS, which is a commonly used software for quantitative studies (Bryman & Bell, 2011, p. 360). After collecting the data from our Google survey, we imported them into the software, allowing us to order and structure all the information. SPSS permits to examine many types of relationships between the variables – correlation, regression, etc. (Bryman & Bell, 2011, pp. 371-381)

As stated by Bryman & Bell (2011, pp. 334-335), researchers should be aware at the early stages of the study of the kind of analysis that will be possible to make with the collected data. We will consequently introduce in this section the tools we will use to collect and analyse data. In a first time, we will explain how we will assess the internal reliability of our questions sets, in order to ensure that the collected data are exploitable (Bryman &
Bell 2011, p. 162). Once the reliability of our questionnaire has been approved, we will use univariate, bivariate and multivariate analyses to accept, modify or reject the relations from the conceptual model we developed in a first time. We will use the statistical analysis software SPSS to make these analyses based on the data we will have imported from our Google Form.

As the choice of these tools for the analysis depends on the type of variables (Bryman & Bell 2011, p. 334), we will first list those we used in our survey. Bryman & Bell (2011, p. 341) list four types of variables: interval, ordinal, nominal and dichotomous variables. In our questionnaire, we will mainly use interval variables measured with 7-points Likert scales, but also a dichotomous (question 1) and an ordinal one (question 2). In order to use these variables in our research, we will have to translate those that are not numerical, and also the name of the variables.

4.3.1. CRONBACH’S ALPHA

All of our questions sets come from different previous existing studies, which mean that they are supposed to be internally reliable. Furthermore, we tried to select only sets that have been used in several studies. The internal consistency of these sets is crucial as it will determine the robustness of our questionnaire (Saunders et al., 2009, p. 373). Indeed, in order to evaluate items (or variables), we will use sets of questions that need to be consistent between each other and enable us to measure a single variable. In order to measure it, we will calculate the Cronbach’s alpha which is the most frequently used tool among researchers to that purpose (Saunders et al., 2009, p. 374) in SPSS. We will assume, based on Georges & Mallery (2003, p. 231), that an alpha coefficient of 0.8 and above will be the proof of an internal reliability even if some authors argue that 0.7 should be the norm. If one of our sets has an inferior coefficient, we will have to try to delete some questions until the internal reliability is verified. If we do not succeed to obtain a coefficient above 0.8, we will have to reduce the number of items of the construct and test different combinations.

4.3.2. UNIVARIATE ANALYSIS

At the most basic stage of our analysis, we will start by analysing each variable independently using frequency tables, central tendency and dispersion. The frequency table displays the distribution of the sample across the categories of a variable (Bryman & Bell 2011, p. 342). This analysis will be relevant for the gender of our respondents and the time they spend online, as well as for the “attitude toward online advertising” variable because it will provide us a first picture of our sample. Then we will measure two kinds of central tendencies: the mean and the median, for our interval variables. The mean corresponds to the values in a distribution divided by the number of values while the median is the mid-point in a distribution of values (Bryman & Bell 2011, p. 334). This last form of average will reduce the bias of interpretation induce with the mean, that is the influence of the extreme values. We will manly use it in order to compare the results obtained for each variable for the interstitials in one hand and the banners on the other hand. In order to represent the dispersion of our sample on each variable, we will use the standard deviation which is “the extent to which values differs from the mean” (Saunders et al., 2009, p. 447). We will then be able to assess if the means we obtained area significant or not. Finally, in order to have a quick overview on both central tendencies
and dispersion, we will also generate Boxplots (Bryman & Bell, 2011, p. 345) for three variables and make comparisons between genders based on the results.

### 4.3.3. T-TEST

The purpose of the study is to compare the results on our variables for the interstitials and the banners, the former one being, according to our literature review, more intrusive than the second one. Behind this methodology we will be able to draw conclusions on the impacts of the perceived intrusiveness on the different concepts and mainly the purchase intention. To do so, we have to run a paired t-test which allows the comparison between two means from a same population (Saunders et al., 2009, p. 457). It permits to see if the differences between the means are statistically significant or not. To be significant the probability rate to occur by chance should be under 0.05 \( p<0.05 \) (Saunders et al., 2009, p. 456).

### 4.3.4. BIVARIATE ANALYSIS

Our main interest with this study is to identify relations between variables. There is several technics to make this analysis, and the kind of variables we want to analyse will determine which one are usable. As most of the relations we want to analyse are between two interval variables, we will use the Pearson’s \( r \) (Bryman & Bell 2011, p. 347), also referred to as coefficient of correlation. This coefficient will have a value between -1 and 1. The closer this coefficient is to 1 or -1, the stronger the relationship. The sign (+ or -) of the coefficient indicates the direction of the relationship (Bryman & Bell 2011, p. 342). But this coefficient will only tell us if there is a relationship between two variables, and does not enable us to see if one variable explain the other. To obtain such information, we will use multiple regressions as all our models show one dependent variable supposedly explained by several independent variables.

### 4.3.5. MULTIVARIATE ANALYSIS

In order to see how individually and collectively a group of variables predict another variable, we will use multiple regression (Saunders et al. 2009, p. 462). We will interpret mainly two outcomes of this analysis: the beta and the \( p \)-value. The beta is comprised between -1 and 1 and helped to understand how an independent variable predicts the depend one and to which extent compare to the other independent variables (Saunders et al., 2009, p. 463). The \( p \)-value (sig.) is the significance of the coefficient of multiple determination, which is the probability that the coefficient of determination occurs by chance alone (Saunders et al., 2009, p. 462), which is the case for a value superior to 0.05.

### 4.4. ETHICAL CONSIDERATIONS

When conducting a research, it is of importance to respect some ethics. Indeed, ethical considerations help promote the aims of the research and ensure a certain level of responsibility toward the public. But as the ethic is very personal and dependent of people interiority, it is difficult to agree on a universal stance of ethic in research. Four types of ethical principles have been underlined as essential when conducting a study to avoid some slips that can be very harmful to the public, such as the Haney, Banks and Zimbardo’s experiment (Bryman & Bell, 2011, p. 128).
The first ethical principle is to ensure no harm – physical or psychological – to the participants (Bryman & Bell, 2011, pp. 128, 129). Our study will not have any effect on the respondents as we do not force them and they are not put in danger for their physical, psychological or professional health. The second principle is to guarantee that the respondents consent in participating in our research is based on total and clear information (Bryman & Bell, 2011, p. 132). It is hard to ascertain that the participants have all the possible information. To be as transparent as possible, we explained before the survey, what was the purpose of our study, how long it will take to answer it and who we are. But we had to limit our explanations about the real aim of our study – the intrusiveness of online advertising, comparing banners and interstitials – to avoid influencing the respondents when answering. The third principle underlines the importance of respecting one’s privacy (Bryman & Bell, 2011, p. 136). As our study does not concern intimate aspects of people life, we are not concern with this issue. Moreover, we chose to keep the survey anonymous which is reinforced by the use of an online survey. Finally, the last point is to avoid deception (Bryman & Bell, 2011, pp. 136, 137). According to Bryman & Bell (2011, p. 136), deception is when the researchers are representing their study as something different than what it is in reality. We are not concerned by this point at all, as we were clear about our aims and our study since the beginning. Thus, we believe that the way we conducted our survey respects almost completely the four principles of ethic in research.
5. EMPIRICAL FINDINGS

This chapter will provide information about our sample, the internal reliability of the constructs we used and the results of the descriptive statistics we generated.

5.1. CRONBACH’S ALPHA

To the purpose of analysing the internal reliability of our constructs, we used the Cronbach’s Alpha test (Bryman & Bell, 2011, p. 159). For all except one of our constructs, the coefficient was really high (Table 4), above 0.8, which is the commonly accepted level of internal reliability (Bryman & Bell, 2011, p. 159).

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude toward online advertising</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Attitude toward interstitials</td>
<td>0.923</td>
<td>5</td>
</tr>
<tr>
<td>Purchase intention interstitials</td>
<td>0.894</td>
<td>3</td>
</tr>
<tr>
<td>Ad irritation interstitials</td>
<td>0.935</td>
<td>8</td>
</tr>
<tr>
<td>Ad avoidance interstitials</td>
<td>0.842</td>
<td>3</td>
</tr>
<tr>
<td>Perceived intrusiveness interstitials</td>
<td>0.888</td>
<td>7</td>
</tr>
<tr>
<td>Attitude toward banners</td>
<td>0.936</td>
<td>5</td>
</tr>
<tr>
<td>Purchase intention banners</td>
<td>0.963</td>
<td>3</td>
</tr>
<tr>
<td>Ad irritation banners</td>
<td>0.956</td>
<td>8</td>
</tr>
<tr>
<td>Ad avoidance banners</td>
<td>0.878</td>
<td>3</td>
</tr>
<tr>
<td>Perceived intrusiveness banners</td>
<td>0.909</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 4 Cronbach’s Alpha

Nevertheless, the first construct of the table, Attitude toward online advertising, had a Cronbach’s Alpha far below (0.64) which means that the coherence of this set of items is questioned in our study. Hence we had to identify, if any, the item(s) that we should remove in order to increase the coefficient. To that extent, we used in SPSS the option “scale if item deleted” to visualise if one item was at the origin of this issue. As it was not the case, we tried all the different combinations of items (from 4 to 2 items) in order to find a usable one for this variable. However, we did not manage to get a suitable Cronbach’s Alpha for this construct, thus we decided to reduce to one the number of items, choosing the one that was the most representative of the construct for us: question 7 “I like to look at advertising” (Appendix 1). One reason that could explain this situation could be a misunderstanding from the respondents for this set of questions, in spite of our pre-test that did not notice or reveal such issue. But as it is surprising to have such a low coefficient with this number of items, we looked at other researches that used this scale. Nevertheless all of those we found had a higher Cronbach’s Alpha than ours.

5.2. DESCRIPTIVE STATISTICS

The first part of our survey was designed to provide a first insight on some characteristics of the population we studied. First, we did not have any question concerning the age of the respondents as we selected only students from French business schools that are generally between eighteen and twenty-six years old. The use of the Facebook pages composed of the students of the business schools only, ensured our choice. Hence, as we planned to focus only on the generation Y previously described, all of the respondents were supposed to correspond to our age target. Our sample is composed of 291 students
and four characteristics were of interest for us: their gender, the time they spend in average online per week, their overall attitude toward online advertising, and finally their estimated online advertising exposure.

Concerning the gender, nearly 60% of the respondents are females (175) and 40% males (116). According to a study conducted by the INSEE (2013), the repartition between females and males among the French generation Y (18-26) is almost even (females: 49.4%; males 50.6%). Hence, our sample is not totally representative in terms of gender. In spite of that, we were willing to analyse if there were any significant differences between males and females regarding several variables. To that extent, we compared means of both genders on the three other variables on graph 1.

As we can see on this graph, there are no significant differences between the means obtained for the three variables depending on the gender. We will nevertheless continue to compare results for men and women for the other variables, at least to verify if there is no impact at all of the gender on our further analyses, and notify it if significant.

For the sample presentation, as both genders are quite similar on these three variables, we can characterise our sample independently of gender considerations, and consequently focus on the means we obtained on the total sample. We allowed ourselves to do so as the boxplots in Appendix 2 show a quite similar dispersion of the data, except for the advertising exposure on which males are represented as feeling less exposed than females.

Based on these results, our sample spend around 30 hours per week on the Internet, which is a bit higher than the results found in a study from the global conversation agency We Are Social (2014, p. 31) of 28.7 hours (over all the French internet users). This is logical with the fact that we found in our literature review that the generation Y spend more time on the Internet than the generations before. Concerning the exposure to online advertising, the respondents consider that they are quite exposed (4.70/7). Finally, their attitude toward online advertising is very low (1.67/7) which induce that the generation Y is not neutral (negative) when it comes to online advertising.
Both of us found these results consistent with our own preconception of the online advertising and therefore we think that this sample is well representative of our generation’s behaviour toward online advertising.

As stated in the practical method, we will also proceed univariate analyses in order to have a synthetic view of our data and also to undertake comparisons between the results we obtained for the interstitials and the banners. We first computed the means, the medians and the standard deviations as displayed in table 5.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advert_Exposure</td>
<td>4.70</td>
<td>5.00</td>
<td>1.673</td>
</tr>
<tr>
<td>Attitude_Toward_Online_Advertising_Reviewed</td>
<td>1.67</td>
<td>1.00</td>
<td>1.047</td>
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<tr>
<td>Attitude_Toward_Interstitials</td>
<td>1.56</td>
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<td>Purchase_Intention_Interstitials</td>
<td>2.90</td>
<td>3.00</td>
<td>1.487</td>
</tr>
<tr>
<td>Ad_Irritation_Interstitials</td>
<td>4.67</td>
<td>4.75</td>
<td>1.624</td>
</tr>
<tr>
<td>Ad_Avoidance_Interstitials</td>
<td>5.99</td>
<td>6.33</td>
<td>1.227</td>
</tr>
<tr>
<td>Perceived_Interstitials_Intrusiveness</td>
<td>5.36</td>
<td>5.71</td>
<td>1.222</td>
</tr>
<tr>
<td>Attitude_Toward_Banners</td>
<td>2.32</td>
<td>2.00</td>
<td>1.273</td>
</tr>
<tr>
<td>Purchase_Intention_Banners</td>
<td>3.00</td>
<td>3.00</td>
<td>1.569</td>
</tr>
<tr>
<td>Ad_Irritation_Banners</td>
<td>4.11</td>
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<td>1.720</td>
</tr>
<tr>
<td>Ad_Avoidance_Banners</td>
<td>5.01</td>
<td>5.33</td>
<td>1.689</td>
</tr>
<tr>
<td>Perceived_Intrusiveness_Banners</td>
<td>4.23</td>
<td>4.29</td>
<td>1.599</td>
</tr>
</tbody>
</table>

*Table 5 Descriptive Statistics*

The first analysis we can make is that for most cases, the mean and the median are relatively closed, which means that the data are fairly evenly located around the mean. Hence, it is relevant to use the mean to make comparisons between the two advertising formats. To that extent, we will use the T-Test in the analysis chapter.

Then it is relevant to analyse the standard deviations as they inform us about the dispersion of the data. Given that all of our scales are 7-points, we reckoned that a standard deviation of 1.5 or below should be enough to consider a mean as really representative. We highlighted in the table 5 the highest standard deviation. We can easily see that the standard deviations are always higher for the constructs concerning the banners than for the interstitials. We interpret it as the fact that there is a greater consensus concerning the interstitials than it is the case for banners.

In the table 5, we can see that the attitude toward interstitials is really low (1.56) which means that net surfers are not likely at all to respond in a favourable manner to this advertising format. It is consistent with the results obtained for ad irritation and ad avoidance that are very high toward this format. The perceived intrusiveness is also important and consistent with the previous means. Finally, the purchase intention is relatively low (2.90) which means that net surfers are not likely to buy a product after having been exposed to an interstitial.
Concerning the banners, the attitude toward the format remains low (2.32) but still higher than the attitude toward online advertising. The ad irritation, ad avoidance and perceived intrusiveness on the other hand are rather high which is surprising regarding our literature review and our own presuppositions, especially with regard to the purchase intention that is not that low.

The last descriptive statistic that we will use is the Pearson correlation for which all the data are gathered in table 6 and 7.

### Correlations - Interstitials

<table>
<thead>
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<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advert_Exposure (1)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude_Toward_Online_Advertising_Reviewed (2)</td>
<td>.055</td>
<td>.370**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude_Toward_Interstitials (3)</td>
<td>.027</td>
<td></td>
<td>.361**</td>
<td>.436**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Purchase_Intention_Interstitials (4)</td>
<td>.089</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad_Irritation_Interstitials (5)</td>
<td>.057</td>
<td>-243**</td>
<td>-395**</td>
<td>-316**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ad_Avoidance_Interstitials (6)</td>
<td>.067</td>
<td>-343**</td>
<td>-536**</td>
<td>-283**</td>
<td>.610**</td>
<td>1</td>
</tr>
<tr>
<td>Perceived_Interstitials_Intrusiveness (7)</td>
<td>.150</td>
<td>-147*</td>
<td>-264**</td>
<td>-014</td>
<td>.513**</td>
<td>.573**</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

*Table 6 Table of correlations - Interstitials*

### Correlations - Banners

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advert_Exposure (1)</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude_Toward_Online_Advertising_Reviewed (2)</td>
<td>.055</td>
<td></td>
<td>.226**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude_Toward_Banners (3)</td>
<td>.072</td>
<td>.278**</td>
<td>.647**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase_Intention_Banners (4)</td>
<td>.088</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad_Irritation_Banners (5)</td>
<td>.005</td>
<td>-166**</td>
<td>-479**</td>
<td>-437**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ad_Avoidance_Banners (6)</td>
<td>-.090</td>
<td>-222**</td>
<td>-564**</td>
<td>-457**</td>
<td>.714**</td>
<td>1</td>
</tr>
<tr>
<td>Perceived_Intrusiveness_Banners (7)</td>
<td>-.001</td>
<td>-077</td>
<td>-363**</td>
<td>-282**</td>
<td>.660**</td>
<td>.698**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).

*Table 7 Table of correlations - Banners*

We color-coded the coefficient based on a rule-of-thumb proposed by Hair et al. (2003, p. 569) in order to visualise quickly the more significant relations. This rule of thumb is as follow:
We can easily see that one construct is not at all correlated to the others: “advertising exposure”, for both advertising formats. Consequently, it is not possible so far to draw any conclusions regarding this variable. It could be due to our choice of using only one item to represent this variable. Beside this construct, the other variables are quite well correlated with most of them being either moderate or strong (above 0.41). Interestingly, we can see that the results of the Pearson’s correlations are not the same for the two advertising formats: all the correlations are stronger for the banners (except for the attitude toward online advertising). It could be due to the difference in terms of standard deviations (distribution) for the variables between interstitials and banners previously evoked. On the other hand, the fact that the directions of the relations are the same for both formats reinforces the idea that the constructs have a reality external to the advertising type and that it will be possible to generalize our findings to other advertising formats. Overall, we can say that the attitude toward advertising is weakly correlated with the other variables even if the relation with the attitude toward the interstitials is almost moderate. Then, the perceived intrusiveness is either way highly positively correlated with the ad avoidance and the ad irritation, as well as the ad irritation with the ad avoidance. Both relations are relevant for the validation of our first model and the regression analysis should enable us to establish a causal effect between these variables. Ad irritation and ad avoidance are also (negatively) correlated with the purchase intention on both advertising format even if this relation is weak. Nevertheless, it is still relevant for our second model. Concerning the relation between the perceived intrusiveness and the purchase intention, there is an important difference between the two formats which means that this relation is not as obvious as we thought after our literature review. But these results could be explained by the research design: respondents were asked to answer the questionnaire in a general way, without specific context or example, which induces that they need to rely on their long-term memory and think backward to analyse their own behaviour or response to past stimuli. Finally, the attitude toward the format is fairly related to the four other variables (Purchase intention, ad irritation, ad avoidance and perceived intrusiveness) which are also relevant for our first model.
6. ANALYSIS

In this part, we will present the results of our survey through several statistical tools. We will first use a paired T-test analysis in order to compare banners’ and interstitials’ means from the same population. Then we will do two multiple regressions, for both interstitials and banners, in aim to identify the causal-effect relationship between several independent variables toward a dependent variable.

6.1. T-TEST ANALYSIS – BANNERS AND INTERSTITIALS

We ran a t-test analysis to compare the means between interstitials and banners. As our data come from a same population, we used a paired T-test (Saunders et al., 2009, p. 457). It permits to evaluate the difference between the variables for each observation.

<table>
<thead>
<tr>
<th>Pair</th>
<th>Paired Differences</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attitude_Toward_Interstitials - Attitude_Toward_Banners</td>
<td>-.758</td>
<td>-9.474</td>
</tr>
<tr>
<td>2</td>
<td>Purchase_Intention_Interstitials - Purchase_Intention_Banners</td>
<td>-.099</td>
<td>-1.270</td>
</tr>
<tr>
<td>3</td>
<td>Ad_Irritation_Interstitials - Ad_Irritation_Banners</td>
<td>.565</td>
<td>5.829</td>
</tr>
<tr>
<td>4</td>
<td>Ad_Avoidance_Interstitials - Ad_Avoidance_Banners</td>
<td>.979</td>
<td>9.882</td>
</tr>
<tr>
<td>5</td>
<td>Perceived_Interstitials Intrusiveness - Perceived_Intrusiveness Banners</td>
<td>1.134</td>
<td>11.737</td>
</tr>
</tbody>
</table>

Table 9 Paired T-Test

For our five main concepts, attitude toward a specific ad, purchase intention, ad irritation, ad avoidance and perceived intrusiveness, there was a difference in the means but not all of them were significant. Indeed the difference between the interstitials’ and the banners’ purchase intention was not significant as p=0.205>0.05 (Saunders et al., 2009, p. 456). This means that except this difference, all the others are not due to chance.

First of all, the attitude toward the format is significantly lower for the interstitials, which a priori means that interstitials are more likely than banners to elicit a negative response (Lutz & MacKenzie, 1989, p. 49). Second, the ad irritation is almost similar for both formats. Third, the ad avoidance is significantly higher for the interstitials than for the banners, meaning that interstitials are more often consciously avoided than banners (Speck & Elliott, 1997, p. 31). Finally, the perceived intrusiveness is significantly higher for the interstitials, which is consistent with our literature review (Rodgers & Thorson,
2000, p. 49; Edward et al., 2002, p. 84; Palanisamy, 2004, p.47) and support the feasibility of our comparative research design.

### 6.2. REGRESSION 1 – ATTITUDE TOWARD INTERSTITIALS

To evaluate the causal relationship between independent variables toward the attitude toward interstitials, we used a multiple regression analysis (Table 10). The independent variables that we study are the ad irritation, perceived interstitials intrusiveness and the attitude toward online advertising in general.

**INTERSTITIALS - Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.140</td>
<td>.226</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Ad Irritation Interstitials</td>
<td>-.149</td>
<td>.032</td>
<td>-.286</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived Interstitials Intrusiveness</td>
<td>-.052</td>
<td>.042</td>
<td>-.075</td>
<td>.215</td>
</tr>
<tr>
<td>Attitude Toward Online Advertising Reviewed</td>
<td>.235</td>
<td>.043</td>
<td>.290</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Attitude_Toward_Interstitials

*Table 10 Regression 1*

According to the probability of occurring by chance, only the relationships with the ad irritation and the attitude toward online advertising in general as independent variables are significant (Respectively: \( p=0.000; \ p=0.00<0.05 \) (Saunders et al., 2009, p. 461). Indeed, the value of the probability to occur by chance of the perceived intrusiveness is too high to be significant as its \( p \) is about 0.215 > 0.05. Between the ad irritation and the attitude toward the online advertising in generals, the second one has the more noticeable impact on the attitude toward interstitials with a \( \beta \) around 0.290. This influence is also a positive one, allowing us to say that the attitude toward the online advertising in general has a positive impact on the attitude toward the interstitials. On the other hand, the ad irritation has a negative influence on our dependent variable as the \( \beta \) of this relation is around - 0.286.

The collinearity is defined as “the extent to which two or more independent variables are correlated with each other” (Saunders et al., 2009, p. 589). In this case we do not face an issue of collinearity as the tolerance is above 0.10 and as the VIF is below 5 (Shiu et al., 2009, p. 591). For the ad irritation, the tolerance is about 0.708 and for the attitude toward the online advertising in general it is about 0.940. Respectively, the VIF is about 1.412 and 1.063.
6.3. REGRESSION 2 – ATTITUDE TOWARD BANNERS

This multiple regression aims to examine the causal relationship between independent variables and the attitude toward banners (Table 11). The independent variables are once again the ad irritation, perceived interstitials intrusiveness and the attitude toward online advertising in general.

**BANNERS - Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude Toward Online Advertising Reviewed</td>
<td>3.506</td>
<td>.230</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Ad Irritation Banners</td>
<td>-.291</td>
<td>.051</td>
<td>-.393</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived Intrusiveness Banners</td>
<td>-.073</td>
<td>.054</td>
<td>-.091</td>
<td>.179</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Attitude_Toward_Banners

*Table 2 Regression 2*

The regressions for the ad irritation and the attitude toward the online advertising in general are significant (Respectively: *p*=0.000; *p*=0.03<0.05) (Saunders et al. 2009, p. 461). On the other hand, the regression for the perceived intrusiveness has no statistical significance (*p*=0.179>0.05). It has a high probability of occurring by chance (Saunders et al. 2009, p. 461). Between the two significant variables, the ad irritation has the highest negative influence on the attitude toward banners with a Beta of -0.393. The attitude toward the online advertising has, for its part, a positive impact on the dependent variable but with a Beta of -0.153. There is no collinearity as the tolerance is above 0.10 and the VIF is below 5 (Shiu et al., 2009, p. 591). For the ad irritation, the tolerance is about 0.551 and about 0.971 for the ad irritation. The VIF is respectively about 1.815 and 1.030.

6.4. REGRESSION 3 – PURCHASE INTENTION (INTERSTITIALS)

To examine the causal relationship between different independent variables and the purchase intention for interstitials, we ran a multiple regression analysis. The independent variables are the attitude toward online advertising in general, the attitude toward interstitials, the ad irritation and avoidance, and the perceived intrusiveness of interstitials.
INTERSTITIALS - Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.287</td>
<td>.575</td>
<td>.026</td>
<td></td>
</tr>
<tr>
<td>Attitude Toward Interstitials</td>
<td>.536</td>
<td>.107</td>
<td>.306</td>
<td>.000</td>
</tr>
<tr>
<td>Ad Irritation Interstitials</td>
<td>-.227</td>
<td>.060</td>
<td>-.248</td>
<td>.000</td>
</tr>
<tr>
<td>Ad Avoidance Interstitials</td>
<td>-.044</td>
<td>.091</td>
<td>-.036</td>
<td>.632</td>
</tr>
<tr>
<td>Perceived Interstitials Intrusiveness</td>
<td>.299</td>
<td>.077</td>
<td>.245</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>.300</td>
<td>.078</td>
<td>.211</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase_Intention_Interstitials

Table 12 Regression 3

Based on the value of the probability to occur by chance, all the regressions are significant except for the one with ad avoidance as its p>0.05 (Saunders et al., 2009, p. 461). The attitude toward the interstitials with a Beta of 0.306, is the most positive impacting variable on the purchase intention for interstitials. The ad irritation is following with a Beta of -0.248, but as the standardized coefficient show, its influence is negative. Then, the perceived intrusiveness impacts the purchase intention with a Beta around 0.245 followed as last by the attitude toward online advertising in general with a Beta of 0.211. Once again, there is no collinearity issue as the lowest tolerance is 0.578>0.10 and as the highest VIF is 2.295<5 (Shiu et al., 2009, p. 591) both for the ad irritation.

6.5. REGRESSION 4 – PURCHASE INTENTION (BANNERS)

To measure the impact of different independent variables on the purchase intention of banners, we conducted a multiple regression analysis. The independent variables are the same as for the regression analysis for the interstitials’ purchase intention: the attitude toward online advertising in general, the attitude toward banners, the ad irritation and avoidance, and the perceived intrusiveness of banners.
### BANNERS - Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.789</td>
<td>.386</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Attitude Toward Online Advertising Reviewed</td>
<td>.183</td>
<td>.068</td>
<td>.122</td>
<td>.007</td>
</tr>
<tr>
<td>Attitude Toward Banners</td>
<td>.654</td>
<td>.066</td>
<td>.531</td>
<td>.000</td>
</tr>
<tr>
<td>Ad Irritation Banners</td>
<td>-.152</td>
<td>.061</td>
<td>-.167</td>
<td>.013</td>
</tr>
<tr>
<td>Ad Avoidance Banners</td>
<td>-.058</td>
<td>.070</td>
<td>-.063</td>
<td>.401</td>
</tr>
<tr>
<td>Perceived Intrusiveness Banners</td>
<td>.073</td>
<td>.064</td>
<td>.075</td>
<td>.253</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase_Intention_Banners

**Table 33 Regression 4**

Two independent variables have not a significant regression (p>0.05) (Saunders et al., 2009, p. 461): the ad avoidance (p=0.401) and the perceived intrusiveness (p=0.253). For the significant regressions, the attitude toward the banners has the most perceptible impact on the purchase intention for banners with a Beta of 0.531. The ad irritation follows with a negative influence reflected through a Beta of -0.167. The attitude toward online advertising in general is last with a Beta of 0.122. Like the past regression analysis, there is no collinearity as the lowest tolerance rate is 0.428 and the highest VIF rate is 2.338 both for the ad irritation (Shiu et al., 2009, p. 591).
7. DISCUSSION

This chapter examines our findings. We will discuss all our hypotheses following the argumentation of our theoretical framework. We will finish by the revision and evaluation of our two models. Based on this discussion, we will be able to draw conclusions and the implications of our findings.

7.1. T-TEST – BANNERS AND INTERSTITIALS

Running a t-test analysis to compare the means between banners and interstitials helped us proved the main assumptions of our study. First, except for the purchase intention, all the differences between the means of banners and interstitials were significant, supporting our initial idea to analyze our two models for each type of formats – interstitials and banners – and then to compare them. Second, this test supports our presupposition that the online advertising formats impacts the perceived intrusiveness of the ads. Moreover, it may also explain why interstitials are seen as more irritating and more avoided than banners. In fact, the perceived intrusiveness impacts positively the feeling of irritation and the ad avoidance. Even if we did not hypothesize the relations between perceived intrusiveness, ad irritation and ad avoidance assuming that their causal relationship was proved enough in the theoretical background, we verified if it was confirmed in our study. With simple linear regressions, we were able to support this causal link (see Appendix 3).

We proved thanks to the t-test, that online formats have different level of intrusiveness due to their way of displaying the content. Banners were found to be perceived as less intrusive than interstitials. This finding is in line with the theory on the intrusiveness of online advertising formats (McCoy et al., 2008, p. 674; Rejon-Guardia & Martinez-Lopez, 2014, p. 571). So, when practitioners chose one specific format, they have to take into account all the possible implications of their choice on the advertising effectiveness. As the purchase intention is one of the main concepts that measures the ad effectiveness (Fishbein & Ajzen, 1975; Chintagunta & Lee, 2012, p.153), it seems then necessary to study the impact of the perceived intrusiveness on the purchase intention.

7.2. REGRESSIONS 1 AND 2 - ATTITUDE TOWARD THE ADVERTISING

Thanks to the first two regressions, we are able to analyze our first model for both the interstitials and banners format. To examine it, we will follow the theoretical argumentation based on the hypotheses 1, 2, and 3, comparing the findings between the two online advertising formats.

H1: The perceived intrusiveness has a negative impact on the attitude toward the advertising
– Not Supported –

For both the interstitials and banners, the relation between the perceived intrusiveness and the attitude toward the ad is not significant as their probability to occur by chance is higher than 0.05 (Saunders et al., 2009, p. 461). This finding goes against the theoretical background on this topic (Ha, 1999, cited in Ha and McCann, 2008, p. 574; Morimoto & Chang, 2009, p.69).

The invalidation of our thesis can be explained through a different interpretation of the theories on perceived intrusiveness. We defined in our literature framework the attitude
toward the ad as a “predisposition to respond in a favourable or unfavourable manner to a particular advertising stimulus during a particular exposure occasion” (Lutz & MacKenzie, 1989, p. 49). We also argue that how a person will react to a given advertisement will depend to an extent to the feelings arose during the exposure. We described three possible feelings: upbeat feelings, warm feelings and negative feelings (based on Burke & Edell, 1986, p. 117). Based on Li et al. (2013, p. 39) statement, we can say that the perceived intrusiveness creates negative feelings toward the advertisement. But this can be interpreted as the perceived intrusiveness impacts negatively the attitude toward the ad or as the perceived intrusiveness will create a negative feeling which is the ad irritation (Li et al., 2013, p. 39) which will have an impact on the attitude. According to our findings, the second explication seems more accurate for our study. On top of that, we can compare our result with McCoy et al. (2008) findings on the impact of the intrusiveness on the attitude toward the website on which the intrusive advertising was display. Indeed, the intrusiveness was indirectly impacting the attitude through the ad irritation. The validation of the hypothesis 2 about the impact of the ad irritation on attitude toward the ad is also another argument in favour of this new interpretation.

\[ H2: \text{The ad irritation has a negative impact on the attitude toward the ad} \]
– Supported –

For both banners and interstitials the relation between the ad irritation and the attitude toward the ad is significant and negative. This outcome is in line with the theoretical knowledge on advertising irritation (Stayman & Aaker, 1988, p. 371; Okazaky, 2004, pp. 443-444; Morimoto & Chang, 2009, p.69) and our standardized coefficients are quite similar to those of Okazaky (2004, p. 443). But the impact is more noticeable for the banners than the interstitials despite the fact that banners are perceived as less irritating. The banners’ irritation mean is 4.11 and 4.67 for interstitials. Through their comparison of the feeling of irritation between spam and postal direct mail, Morimoto & Chang (2006) found that people were experiencing a higher feeling of irritation for spam than for postal direct mail. Then they evaluated (their hypothesis 6a and 6b) the causal relationships between the feelings of irritation caused by both formats and their attitude toward these formats. Both regressions were significant and negative. But when we compare the results, the irritation explains more for the attitude toward postal direct mail \((r=0.89)\) than for the spam \((r=0.84)\). This situation is similar to our situation. They do not offer any reason to this phenomenon, but one could be that as people have a more negative attitude toward interstitials – the mean of attitude toward interstitials is around 1.56 and 2.32 for banners – more irritation would not change much their attitude.

\[ H3: \text{The attitude toward advertising in general has a positive impact on the attitude toward the ad} \]
– Supported –

As this regression is significant, we can say that indeed the attitude toward online advertising in general has a positive impact on the attitude toward both formats. This result supports Lutz & MacKenzie (1989, p. 54) finding. For the purpose of our study, we simplify our variable of attitude toward advertising in general to the value of “I look to like at advertising”. According to Metha & Purvis (1995, p. 5) “those who claimed to like to look at advertising were more persuaded by advertising”, proving that our result despite a simplification is in line with the theory. But the impact is more obvious for the
interstitials than the banners. Once again the reason behind this difference is due to the lower attitude toward interstitials. The mean of the attitude toward online advertising, around 1.67, is higher than the mean of the attitude toward interstitials which is around 1.56.

7.3. REGRESSIONS 3 AND 4 – PURCHASE INTENTION

We will now examine the validity of our model 2 for both formats and compare their outcomes.

**H4: The attitude toward the ad has a positive impact on the purchase intention**

– Supported –

Based on our multiple regression analysis, the attitude toward the ad has a significant positive impact on the purchase intention of internet users for both formats. In both cases, the attitude toward the ad format was the main predictor in the multiple regressions. Our finding are coherent with most of the studies on this relation (Bruner & Kumar, 2000, p. 35; McMillan et al., 2003, p. 400) and our standardized coefficients are in line with Bruner & Kumar study (2000, p.8).

We found a causal relationship that is stronger for the banners than for the interstitials – their Beta are respectively 0.531 and 0.306. This means that the attitude toward the ad is a better predictor of the purchase intention in the case of the banner than in the case of the interstitial. This could be explained by the fact that the purchase intention induced in the case of interstitials is dependent on more variables than in the case of banners, variables that are not taken into account in our study. As both the dependent and independent variables vary according to the advertising format, it is not possible to draw further interpretations on this relation. We can nevertheless refer to Rodgers and Thorson (2000, cited in Burns & Lutz, 2006, p. 61) that state that the advertising format is an important conceptual variable that need to be considered in studies in the online advertising field.

**H5: The attitude toward online advertising in general has a positive impact on the purchase intention**

– Supported –

Based on our analysis, we are able to say that the attitude toward online advertising in general influences positively the purchase intention of net surfers for both formats. These results are in line with Mehta’s (2000, p. 70) even if a bit lower than expected. In an online context, Sun & Wang (2010, p. 135) also found a high impact of the attitude toward online advertising on the persuasion and the purchase intention. Interestingly, we can see that interstitials are more influenced by the attitude than banners, which could be due to the fact that interstitials are more recent and are consequently more likely to be subject to external variations.

**H6: The perceived intrusiveness has a negative impact on purchase intention**

– Not Supported –

According to our multiple regression analysis, the relation between perceived intrusiveness and purchase intention is significant for interstitials but not for banners.
inducing that we cannot generalize the hypothesis for all types of format. On top of that, this relationship is positive, Beta is about 0.245. This positive relation goes against our theoretical framework mainly supported by the use of Ha study (1996, p. 76) and the stress of the overload of intrusive ads (Goldfarb and Tucker, 2011, p. 389) developing more and more negative attitudes and behaviour by the exposed net surfers. The study conducted by Milward Brown (1999) had shown that despite the irritation provoked by interstitials this format had higher positive impacts on the purchase intention than banners thanks to their higher intrusiveness. Indeed, as we said in our literature review, the perceived intrusiveness increase recall and awareness of the advertising (Chatterjee, 2008, p. 59) and thus the product/services in it. According to Chi et al. findings (2009), the awareness has a direct positive impact on the purchase intention. Thus through the invalidation of our theory, we can say that the perceived intrusiveness of interstitials has a positive direct impact on the purchase intention which may induce that the more the ad is intrusive, the higher the positive impact on purchase intention. But it is important to put this finding into perspective with the outcomes of the ad irritation, consequence of the perceived intrusiveness, on the purchase intention.

**H7: The ad irritation has a negative impact on the purchase intention**
- Supported –

Based on our regression analysis, we can say that for both banners and interstitials, the relation between the ad irritation and the purchase intention is significant. It is even for both formats the second highest impacting variable compared to the other independent variables. For both the relation is negative. Based on that, we can say that the ad irritation has a negative impact on the purchase intention which is in line with the theory (Aaker & Bruzone, 1985, p. 47, 57; Stayman & Aaker, 1988, p. 369). The regression coefficients for both formats are different: -0.248 for the interstitials and -0.167 for the banners. We can see that the purchase intention is more affected in the case of the interstitials which could be explained by the fact that this irritation is hardly avoidable for this format.

**H8: The ad avoidance has a negative impact on the purchase intention**
- Not Supported –

After our literature review, we supposed that the ad avoidance should have a negative impact on the purchase intention because it intrinsically means that web surfers will consciously avoid the interrupting advertising (Speck & Elliott, 1997, p. 31), and consequently not being influenced by the ad (Stout & Burda, 1989, p. 28). But on the other hand the voluntary cognitive avoidance can increase the awareness and the recall (Bellman et al., 2010, p. 68). Hence, the presupposed negative impact of ad avoidance on the purchase intention could be weakened by its positive outcomes.

We found a weak negative correlation between both variables which means that when one increases, the other decreases. As such this relation is consistent with our beliefs. We also calculated the regression in order to assess if there was any causal relations between the two variables. But the fact that the p-value was far above 0.05 prevented us to say that the ad avoidance predict the purchase intention (Saunders et al., 2009, p. 461), as well as the very low regression coefficient that, even with an acceptable p-value, will not have been significant enough to draw any conclusions, and that for both formats. Compared with the findings of Zufrieden, Pedrick and Sankaralingam (1993, p. 65) that found in the TV advertising context that zapped (avoided) commercials where significantly more
effective than not-interrupted ones. This gap between previous findings and ours can be explained by our methodology. Indeed, this relation is more likely to be significantly studied in an exploratory study, like most of the researches in this field.

7.4. REVISIONS OF THE MODELS

Based on our findings, we can evaluate and revise our two conceptual models established for the purpose of the examination of our hypotheses.

Model 3 Conceptual Model Attitude - Revised

Our model 1 is partially validated. The perceived intrusiveness was removed from the model as it did not have any significant regression with the attitude toward the ad for both formats.

Model 4 Conceptual Model Purchase Intention - Revised

Our model 2 is also partially validated. For both formats, the ad avoidance has no significant impacts leading us to remove it from our model. We also removed the perceived intrusiveness from the model for banners as they are not intrusive enough to benefit from its direct positive impact.
The aim of our research was to study the impacts of the perceived intrusiveness on the purchase intention. Thanks to our two models we can draw some answers. First, the perceived intrusiveness has a direct positive impact on the purchase intention (Model 2) but only after a certain amount of perception by the net surfers. Second, the intrusiveness also has influences indirectly through its main consequence, the ad irritation. The ad irritation has a negative outcome on the attitude toward the ad (Model 1) which has a strong and positive influence on the purchase intention for both types of formats. Thus we can say that indirectly through the ad irritation, the perceived intrusiveness impacts negatively the purchase intention. It is once again true as the ad irritation has for both formats a direct negative consequence on the purchase intention (Model 2). Thus we can say that the perceived intrusiveness impacts indirectly and negatively the purchase intention.

If we look closer to the weight of the regression of each causal-effect relationships, we will see that the direct positive impact of the perceived intrusiveness is overlapped by its indirect negative impacts. Thus we can say that in overall the perceived intrusiveness has a negative influence on the purchase intention.
8. CONCLUSIONS

This chapter aims at providing a general conclusion based on the findings of this thesis, including the main results and the theoretical contribution, and also answer to our initial research question.

8.1. GENERAL CONCLUSION

The main purpose of this master thesis was to assess the impact of the perceived intrusiveness of online advertising on the purchase intention and on the attitude toward the ad. This choice is due to the fact that the internet has become a major media for advertisers and that we perceived that there was a real inefficacy of online advertising. To that extent, we decided to consider two online advertising formats: banners, fairly not intrusive, and interstitials, one of the most intrusive format (Edward et al., 2002, p. 84). Through our literature review we identified a theoretical gap that we wanted to fill: first, study the impact of intrusiveness on the purchase intention in a general way. This theoretical contribution has been illustrated in our conceptual models that we tested with different statistical tools. This research was conducted with French business schools students, supposedly representative of the French generation Y. The analyses we made enable us to respond to the following research question:

What kind of impact the perceived intrusiveness of online advertising has on attitudes and purchase intention of net surfers?

From a general perspective, our study revealed that the perceived intrusiveness of online advertising has a strong impact on the purchase intention, whether directly or indirectly. The main variables that had a significant impact in our study are the perceived intrusiveness, the ad irritation and the attitude toward the ad. As they were interrelated, we developed three models. The main one, the model 3, shows that the attitude toward the ad is a major determinant of the purchase intention (positive). This attitude has been studied in the model 2 and we found that ad irritation was its main predictor (negative). We studied in turn how the perceived intrusiveness influences ad irritation and ad avoidance and found that it has a significant impact (positive). Through these three models we can say that the perceived intrusiveness has a direct positive and significant impact on the purchase intention, but also a negative indirect one through its influence on the ad irritation and the attitude toward the ad. These three independent variables have been found to have together a significant impact on the purchase intention (tables 10 and 11). Based on the previous general discussion, we found that the perceived intrusiveness has an overall negative impact on the purchase intention. We also have been obliged to eliminate two independent variables from our model 3: ad avoidance and internet experience. The first one has been found to not have a significant influence on the purchase intention (p-value>0.05). The second one has been eliminated earlier because if the low Cronbach’s alpha of the construct.

Through all the study, we compared the results obtained from males and females. Nevertheless as no significant differences have been found between the two groups, we did not include it in our research.

Another objective in this study was to compare the findings obtained with interstitials and banners. First of all, through a T-test, we determined that the perceived intrusiveness was significantly different between the two formats. This led us to continue our researches on
the interstitials and banners in parallel and we observed significant differences in the results we got, but always with the same sign of regression and in a somehow proportional way. Finally, we noticed that the correlations for the banners were systematically higher than those of the interstitials. Even if there is no easy explanation for that, we think that it reveals that interstitials are influenced by other factors that do not concern the banners. For instance, the time of display of the advertising could be significant for the evaluation of the constructs for the interstitials, but not for the banners. Hence, we suppose that intrinsic variables, specific to each single advertising format, may have an impact on our research design.

8.2. THEORETICAL CONTRIBUTIONS

Through our literature review, we identified different theoretical gaps that we wanted to fill based on our research. First, we did not see any study analysing the overall impact of the intrusiveness on the purchase intention, except Milward Brown study (1999) which compares banners and interstitials effectiveness on recall, awareness and purchase intention. But this study does not deepen the direct and indirect relation between the two variables; it mostly describes a phenomenon. Then, with our theoretical models we analysed the relationship between intrusiveness and purchase intention. Furthermore, we were able to conclude on the concrete influence of the purchase intention which was negative despite some direct positive outcomes. This finding goes against Milward Brown results (1999). It is important to underline that their study was conducted in 1999, and that the advertising overload that we experience today (Ha and McCann, 2008, p. 569) may have impacted negatively the past relationship. Indeed, the fact that with interstitials, the perceived intrusiveness has a direct positive impact on purchase intention may imply that maybe more intrusiveness would have a better impact on the purchase intention and thus their study is still valuable but for a higher level of intrusiveness.

Secondly, we used a different methodology to gather our data than the one mostly used to evaluate the intrusiveness of advertising. Most of them are evaluating the intrusiveness in a short-term and with experimental studies (Edwards et al., 2002, p. 87; Chatterjee, 2008, p. 51). Our methodology is close to the one Morimoto & Chang (2009) used to analyse the perceived intrusiveness of unsolicited commercial emails on students. But unlike us, they led their research in a university using in abundance this type of e-mail, putting the students in a common and daily reference context. Then we can say that our methodology is quite unique for this topic and that we fulfilled a theoretical gap. Finally, during the gathering of theoretical knowledge we did not noticed any study on this topic on the French generation Y.

These findings contribute importantly to the theory especially in the way they have been obtained.

8.3. PRACTICAL IMPLICATIONS

This study also provides information that might be useful to marketing practitioners when planning and implementing advertising campaigns. Based on our findings, we first proved that depending on the online advertising format, the perceived intrusiveness will be different and that different outcomes on attitude or purchase intention will happen. Consequently, advertisers should consider carefully the choice of the online advertising format depending on the purpose of their advertising campaign (Burns & Lutz, 2006, p. 61). Moreover, we also showed that the intrusiveness
had an overall negative impact on the advertising effectiveness mainly due to the feeling of irritation. The first implication would be to avoid using intrusive ads but as it seems difficult then to be noticed because of the overload of advertisings (Ha and McCann, 2008, p. 569) one important solution would be to decrease as much as possible the feeling of irritation. Some researchers already studied this topic. For instance as we said in our analysis, Edward et al. (2002, p. 92) found that the variable of “the perception of an ad as entertainment” impacts the feeling of irritation. So, the more the ad is entertaining, the lower the irritation. As for Burns & Lutz (2006, p. 61), they recommend to create entertaining but not annoying ad for an optimal online advertising effectiveness.

We also studied the impact of the attitude toward the online advertising in general on the attitude toward the formats and toward the purchase intention. The influence was positive for both concepts and for both banners and interstitials. This outcome implies that the variable of attitude toward online advertising in general can help compensating the negative impact of the perceived intrusiveness on the purchase intention. But on the contrary of the feeling of irritation, practitioners cannot act directly on this variable. Only an aggregation of the practitioners’ effort to improve the overall online advertising attitude can ameliorate the purchase intention. Another way to analyse this relation for practitioners is that as the causal relation is positive, if the variable decrease a lot, it will have harmful outcomes on the advertising efficiency. Thus they will have to take into account which formats are less impacting by a change in the attitude toward online advertising. In our case, the interstitials would be more touched by the decrease than the banners, as their Beta is higher for this regression, which would damage the purchase intention.
9. TRUTH CRITERIA

In this chapter, we will evaluate the reliability, generalizability, validity and replication of our findings. It should enable future readers to consider our research in a critical way and also evaluate the quality of our research method.

9.1. RELIABILITY

In order to assess if our findings are consistent, it is important to analyse the reliability of our research. Saunders et al. (2009, p. 156) define reliability as the extent to which the data collection and analysis technics used in a study are likely to generate consistent findings. Bryman & Bell (2011, p. 158) state that we can assess the reliability based on three factors: stability, internal reliability and inter-observer consistency.

The stability consists of evaluating how stable our measures are over time (Bryman & Bell, 2011, p. 158). When time and resources are available, a common way of assessing the stability is to repeat the study (Bryman & Bell, 2011, p. 157), which is not possible in our case. In this thesis, as we were willing to explore the topic in a general way, the stability was a major preoccupation. Most of our results were somehow comparable with previous studies which enabled us to see if there were any variations between the results. One issue on this point is that the results are dependent of the advertising format, and hence it is not always possible to rely on previous study to assess the stability. Furthermore, as the Internet is growing, it is likely that these results will change if replicated. As a consequence, we tried to keep a high level of stability through our research method, but the topic and the field of this thesis are not favourable for a strong stability.

The internal reliability aims at evaluating if the items used to measure constructs are actually related and measure the same thing (Bryman & Bell, 2011, p. 158). In this thesis, as we were willing to explore the topic in a general way, the internal reliability was a major preoccupation. Hence, we built our questionnaire based on constructs already developed and evaluated in other researches (see section 4.2.2). We additionally determined the Cronbach’s Alpha for each construct, and found that all were above 0.8 except one. This last was simplify to the most relevant indicator of the construct to ensure the quality of the results. Hence, we can say that the internal reliability is rather high in our case.

The inter-observer consistency relates to the subjectivity possibly induced by the researchers (Bryman & Bell, 2011, p. 158). As stated in our preconception, we tried to take advantage of the fact that we were two to discuss each element of the thesis and therefore increase our objectivity. And as we also used only quantitative methods, we could argue that the inter-observer consistency is high for this thesis.

Based on our arguments above, we can conclude that our research is reliable thanks to the respect of the three main factors involved when evaluating if a measure is reliable.

9.2. GENERALIZABILITY

The research results are generalizable when the findings are applicable to other settings (Saunders et al., 2009, p. 158). In our study, we used a convenience sample, which is not likely to provide generalizable findings according to Saunders et al. (2009, p. 241).
Nevertheless, these authors also argue that this issue will be less important in a population with little variation (2009, p. 241). In our case, the population we wanted to study was the French generation Y. As explained in our description of data, our sample consisted of French business school students. In spite of the fact that the student’s field of study may have an impact on their perception of the online advertising intrusiveness, we think that the variation should not be that important.

Hence, we consider our research results as generalizable in spite of our sampling method.

9.3. VALIDITY

The validity aims at assessing if the findings “are really about what they appear to be about” (Saunders et al., 2009, p. 157) in other words, “whether or not a measure of a concept really measures that concept” (Bryman & Bell, 2011, p. 159). According to Bryman & Bell (2011, p. 42), of a measurement is valid then it is replicable but not the other way around. For instance, if the measure of the purchase intention in our study is consistent over time but does not really measure the concept of purchase intention, the measure is reliable but not valid. Saunders et al. (2009, p. 157) underline that the validity is mainly about the ambiguity of causal directions, which means that if the measurements are not valid, we cannot draw relationships between different concepts.

Bryman & Bell (2011, pp. 160-161) describe five ways of assessing measurement validity. We will use the face validity as our tool for estimating our validity. Face validity refers to whether or not the construct apparently measure the concept (Bryman & Bell, 2011, p. 160). We believe that all our constructs did measure the concept they were intended to evaluate. Indeed, we used measures from other researches aiming to estimate the same constructs as us (Ha, 1996; Mehta, 2000; Li et al., 2002; Lepkowska-White et al., 2005; Baek & Morimoto, 2012). They all ensure their validity in their study. Moreover our findings were found to be in line with the theory ensuring once again the validity of our constructs. Hence we assume the validity of our research to be high.

9.4. REPLICATION

The replication is the extent to which a research can be repeated by other researchers (Bryman & Bell, 2011, p. 165). There are different reasons why researchers will like to replicate a study, to verify the findings or to extent the outcomes to another context (Bryman & Bell, 2011, p. 167). According to Bryman & Bell (2011, p. 165) if a study cannot be replicated, doubts about its validity would be raised. Thus it is of great importance to be explicit about one’s procedures.

As most positivists, we tried to be as clear as possible with our methodology (Saunders et al., 2009, p. 114) in order to facilitate the replication. We also explained our methodological choices so that one could adapt our research method to its specific needs. Moreover, our sampling method is easily replicable. Hence, we can say that our research is highly replicable.
10. LIMITATIONS AND FUTURE RESEARCH

This chapter aims at mentioning the main limitations of our study, explaining how important they are and why we considered them as unavoidable, and finally suggest how to overcome these limitations in future researches.

A first limitation is the choice we made of focusing on the Generation Y, inducing a reduced scope for our findings. We did it because we saw during our literature review that the age has a significant impact on the constructs we studied. We chose this generation as we are part of it which means that we should be more likely to understand why respondents respond that way. Moreover, studying more age classes would have required to reach far more respondents in order to have representative samples for each class. Future researches could replicate this study on another group age in order to compare the findings. The same observations could be made regarding the country of origin of the respondents.

Concerning the sampling method, we chose a convenience approach which does not theoretically permit to make statistical inferences. Because of time constraint, lack of information and resources, this choice was however the best we had. This notwithstanding, one could question that we undertook our study only on business school students. Even if we assumed that no significant differences exist between students’ specialisation, future researches could also conduct a study on a different sample.

We also chose to compare the outcomes of our study depending on two advertising formats, since we knew that they will be significantly different. We had to limit our study to only two formats for time and space constraints. We explained why we selected these two specific formats but it could be interesting to observe these outcomes for others formats, such as advertising on social media, AdWords or In-Stream ads on video contents.

But our main limitation in terms of impact on the study is the fact that we chose to study our constructs in a general way. Most of the researches in the field of online advertising, especially when in relation with the study of behavioural outcomes, are experimental. Hence we were interested in providing general findings. But it was not without implications: first of all we had a limited choice of question sets to measure our constructs, then it was difficult during our thesis to always rely on previous studies to compare their results with ours. We even question our findings in that variables that were not measurable (recall, ability to analyse their own behaviour, etc.) and thus not included in our research, are likely to have impacted the way people answered to the survey. Future researches will be able to use the same constructs’ sets that we used but also refer to the results of our study to make comparisons.
REERENCE LIST


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APPENDIX 1 : Survey and translation

Contact Mail

Dear students,
We are two students from Kedges and Nancy. We are conducting a master thesis for our double degree at Umea University. For this purpose, we want to study the impact of the use of interstitials and banners on the purchase intention of French students. We ask for your help to answer to our survey. It will be easy and fast to answer. It will only take 5 min of your time but will be of great value for our thesis. Of course, your participation in this survey is voluntarily and you will stay anonymous. We hope you will participate. Thank you in advance for your participation and time.
If you have any questions please do not hesitate to contact us.

Please click on this link to participate!
Best regards,
Océane Chéoux-Damas and Marius Le Floch

Survey Introduction

Thank you to participate in our survey, it will only take 5 min of your time.
For a better understanding of the questions and concepts we propose you a definition of the two main concepts of our study: interstitials and banners.
- An **Interstitial** is a full-screen ad that runs in its entirety between two content pages or at the opening of a web page.
- A **Banner** is a rectangular-shaped graphics, usually located at the top or bottom of a web page.

Gender
1. You are:
   - Female
   - Male

Internet experience

Mail

Chers étudiants,
Nous sommes deux étudiants de Kedge et Nancy. Nous écrivons un mémoire pour notre double diplôme à Umea University. Dans ce cadre, nous cherchons à étudier l’impact de l’utilisation d’interstitiels et de bannières sur l’intention d’achat des étudiants français. Nous vous sollicitons pour répondre à notre questionnaire, simple et rapide (5 min) à compléter, mais très important pour notre recherche. Votre participation est volontaire et anonyme. Nous espérons pouvoir compter sur vous. Merci par avance pour votre temps et votre participation.
N’hésitez pas à nous contacter pour toute question.

Merci de cliquer sur le lien pour participer !

Cordialement,
Océane Chéoux-Damas et Marius Le Floch

Introduction

Merci pour votre participation, seules 5 minutes seront nécessaires.
Pour une meilleure compréhension des questions et concepts, merci de lire les deux définitions suivantes concernant les bannières et les interstitiels.

- Un **Interstitial** est une publicité plein écran se diffusant entièrement entre le chargement de deux pages internet.
- Une **Bannière** est une publicité de forme rectangulaire, généralement située en haut ou en bas d’une page internet.

Sexe
1. Vous êtes:
   - Femme
   - Homme

Experience d’internet
2. In average, how long do you spend on the internet per weeks?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>1-9 hours</td>
<td></td>
</tr>
<tr>
<td>10-19 hours</td>
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<tr>
<td>20-29 hours</td>
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<tr>
<td>30-39 hours</td>
<td></td>
</tr>
<tr>
<td>More than 39 hours</td>
<td></td>
</tr>
</tbody>
</table>

**Attitude toward online advertising (on a scale from 1 to 7)**

3. Advertising helps me keep up-to-date about products and services that I need or would like to have
4. Many products perform as well as the ads claim
5. Advertising is more informative than manipulative
6. Few of advertising is way too annoying
7. I like to look at advertising
8. On average, brands that are advertised are better in quality than brands that are not advertised.

**About interstitials**

An **Interstitial** is a full-screen ad that runs in its entirety between two content pages or at the opening of a web page.

**Attitude toward interstitials**

Generally, how do you consider interstitials? (1 to 7 scale)

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>These ads are pleasant/unpleasant</td>
</tr>
<tr>
<td>10</td>
<td>These ads are useful/not useful</td>
</tr>
<tr>
<td>11</td>
<td>These ads are entertaining/not entertaining</td>
</tr>
<tr>
<td>12</td>
<td>These ads are interesting/not interesting</td>
</tr>
<tr>
<td>13</td>
<td>I like/dislike these ads</td>
</tr>
</tbody>
</table>

**Purchase intention (1 to 7 scale)**

14. If I were looking for the type of product in the interstitial, my likelihood of purchasing the product in the ad would be high.
15. If I were to buy the type of product in the interstitial, the probability that I would consider buying the product in the ad would be high.

16. If I had to buy the type of product in the interstitial, my willingness to buy the product in the ad would be high.

Ad irritation
When I am exposed to interstitials, I think it is ... (1 to 7 scale)
- 17. Negative
- 18. Irritating
- 19. Pointless
- 20. Unappealing
- 21. Regressive
- 22. Unattractive
- 23. Vulgar
- 24. Awful

Ad avoidance (1 to 7 scale)
- 25. I intentionally ignore any interstitials
- 26. I hate any interstitials
- 27. It would be better if there were no interstitials

Perceived intrusiveness (1 to 7 scale)
In average, how do you perceive interstitials?
- 28. Distracting
- 29. Disturbing
- 30. Forced
- 31. Interfering
- 32. Intrusive
- 33. Invasive
- 34. Obstrusive

About banners
A Banner is a rectangular-shaped graphics, usually located at the top or bottom of a web page.

Attitude toward banners
Generally, how do you consider banners? (1 to 7 scale)
- 35. These ads are pleasant/unpleasant

Irritation
Lorsque je suis exposé(e) à un interstitiel, je pense que c'est : (échelle 1-7)
- 17. Négatif
- 18. Irritant
- 19. Inutile
- 20. Peu attrayant
- 21. Régressif
- 22. Peu séduisant
- 23. Vulgaire
- 24. Horrible

Evitement (échelle 1-7)
- 25. J'ignore intentionnellement les interstitiels
- 26. Je déteste les interstitiels
- 27. Ce serait mieux si les interstitiels n'existaient pas

Intrusivité perçue (échelle 1-7)
En moyenne, comment percevez-vous les interstitiels ?
- 28. Distrayants
- 29. Gênants
- 30. Forcés
- 31. Interférents
- 32. Intrusifs
- 33. Envahissants
- 34. Obstruants

A propos des bannières
Une Bannière est une publicité de forme rectangulaire, généralement située en haut ou en bas d’une page internet.

Attitude envers les bannières
En moyenne, comment considérez-vous les bannières ? (échelle 1-7)
- 35. Ces pubs sont plaisantes
- 36. Ces pubs sont utiles
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>36.</td>
<td>These ads are useful/not useful</td>
</tr>
<tr>
<td>37.</td>
<td>These ads are entertaining/not entertaining</td>
</tr>
<tr>
<td>38.</td>
<td>These ads are interesting/not interesting</td>
</tr>
<tr>
<td>39.</td>
<td>I like/dislike these ads</td>
</tr>
<tr>
<td>40.</td>
<td>Purchase intention (1 to 7 scale)</td>
</tr>
<tr>
<td>41.</td>
<td>If I were looking for the type of product in the banner, my likelihood of purchasing the product in the ad would be high.</td>
</tr>
<tr>
<td>42.</td>
<td>If I were to buy the type of product in the banner, the probability that I would consider buying the product in the ad would be high.</td>
</tr>
<tr>
<td>43.</td>
<td>If I had to buy the type of product in the banner, my willingness to buy the product in the ad would be high.</td>
</tr>
<tr>
<td></td>
<td>Ad irritation</td>
</tr>
<tr>
<td>43.</td>
<td>When I am exposed to banners, I think it is . . (1 to 7 scale)</td>
</tr>
<tr>
<td>44.</td>
<td>Negative</td>
</tr>
<tr>
<td>45.</td>
<td>Irritating</td>
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<td>46.</td>
<td>Pointless</td>
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<td>47.</td>
<td>Unappealing</td>
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<tr>
<td>48.</td>
<td>Regressive</td>
</tr>
<tr>
<td>49.</td>
<td>Unattractive</td>
</tr>
<tr>
<td>50.</td>
<td>Vulgar</td>
</tr>
<tr>
<td>51.</td>
<td>Awful</td>
</tr>
<tr>
<td></td>
<td>Ad avoidance (1 to 7 scale)</td>
</tr>
<tr>
<td>51.</td>
<td>I intentionally ignore any interstitials</td>
</tr>
<tr>
<td>52.</td>
<td>I hate any interstitials</td>
</tr>
<tr>
<td>53.</td>
<td>It would be better if there were no interstitials</td>
</tr>
<tr>
<td></td>
<td>Perceived intrusiveness(1 to 7 scale)</td>
</tr>
<tr>
<td>54.</td>
<td>Distracting</td>
</tr>
<tr>
<td>55.</td>
<td>Disturbing</td>
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<td>56.</td>
<td>Forced</td>
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<tr>
<td>57.</td>
<td>Interfering</td>
</tr>
<tr>
<td>58.</td>
<td>Intrusive</td>
</tr>
<tr>
<td>59.</td>
<td>Invasive</td>
</tr>
<tr>
<td>60.</td>
<td>Obtrusive</td>
</tr>
<tr>
<td></td>
<td>Intention d’achat (échelle 1-7)</td>
</tr>
<tr>
<td>43.</td>
<td>Si j’étais sur le point d’acheter le type de produit commercialisé dans la bannière, la probabilité que je considère l’achat du produit de la publicité serait élevée</td>
</tr>
<tr>
<td>44.</td>
<td>Si j’étais à la recherche du type de produit commercialisé dans la bannière, la probabilité que j’achète le produit de la publicité serait élevée</td>
</tr>
<tr>
<td>45.</td>
<td>Si je devais acheter le type de produit commercialisé dans la bannière, ma volonté d’acheter le produit de la publicité serait élevée</td>
</tr>
<tr>
<td></td>
<td>Irritation</td>
</tr>
<tr>
<td>43.</td>
<td>Lorsque je suis exposé(e) à une bannière, je pense que c’est : (échelle 1-7)</td>
</tr>
<tr>
<td>44.</td>
<td>Négatif</td>
</tr>
<tr>
<td>45.</td>
<td>Irritant</td>
</tr>
<tr>
<td>46.</td>
<td>Inutile</td>
</tr>
<tr>
<td>47.</td>
<td>Peu attrayant</td>
</tr>
<tr>
<td>48.</td>
<td>Régressif</td>
</tr>
<tr>
<td>49.</td>
<td>Peu séduisant</td>
</tr>
<tr>
<td>50.</td>
<td>Vulgaire</td>
</tr>
<tr>
<td>51.</td>
<td>Horrible</td>
</tr>
<tr>
<td></td>
<td>Evitement (échelle 1-7)</td>
</tr>
<tr>
<td>51.</td>
<td>J’ignore intentionnellement les bannières</td>
</tr>
<tr>
<td>52.</td>
<td>Je déteste les bannières</td>
</tr>
<tr>
<td>53.</td>
<td>Ce serait mieux si les bannières n’existaient pas</td>
</tr>
<tr>
<td></td>
<td>Intrusivité perçue (échelle 1-7)</td>
</tr>
<tr>
<td>54.</td>
<td>Distrayantes</td>
</tr>
<tr>
<td>55.</td>
<td>Gênantes</td>
</tr>
<tr>
<td>56.</td>
<td>Forcé es</td>
</tr>
<tr>
<td>57.</td>
<td>Interférentes</td>
</tr>
<tr>
<td>58.</td>
<td>Intrusives</td>
</tr>
<tr>
<td>59.</td>
<td>Enlahissantes</td>
</tr>
</tbody>
</table>
Thank you for your time and your very helpful participation!

Océane Chéoux-Damas and Marius Le Floch

60. Obstruantes

Merci pour votre temps et votre très appréciée collaboration !

Océane Chéoux-Damas et Marius Le Floch
APPENDIX 3 : REACTANCE THEORY

[Diagram showing relationships between Perceived Intrusiveness and Ad Irritation, Ad Avoidance with associated numbers 0.513, 0.660, 0.573, 0.698, 0.610, 0.714.]

Red: interstitials
Blue: banners

Reactance theory check