

Interactive Television Advertising: A Research Agenda

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Abstract

Digital television and digital video recorders (DVRs) open up new possibilities for interactive television (iTV) advertising. Little is known about whether iTV advertising will be more effective than traditional linear TV advertising and what iTV ad models are more effective than others. This paper summarises the few studies that have been published so far. However, the main contribution of this paper is the development of a conceptual framework for advancing research in this emerging area. The conceptual framework is based on the five elements in a basic model of how iTV ads are processed: (1) viewer characteristics, (2) iTV ad content factors, (3) situational influences on viewing, (4) the sequential steps by which iTV ads are processed, and (5) the communication effects or impacts that result from viewing iTV ads. From these five elements we derive five research questions, and the totality of these questions forms, we believe, a rich and varied research agenda that we hope will act as a launching pad and a guide for future research.

Keywords: advertising, interactive television, conceptual framework, research agenda, viewer characteristics, content factors, situational influences, sequential processing, communication effects, metrics

Introduction

Digital television and digital video recorders (DVRs) open up new possibilities for interactive television (iTV) advertising. In the United Kingdom, a recent survey found that over 40% of marketers agreed that iTV advertising should be a significant part of their marketing mix (Genre-Driven Ads to Steal the Show, 2004). However, little is known about whether iTV advertising will be more effective than traditional linear TV advertising and what iTV ad models are more effective than others. This paper summarises the few studies that have been published so far. However, the main contribution of this paper is the development of a conceptual framework for advancing research in this emerging area.

The few articles that have been published on digital iTV have mainly been case studies of successful applications (e.g., Eronen, 2003; Gunter et al., 2003). Research in this area needs to progress now to the identification of empirical generalisations that apply across individual cases. Advertisers have also conducted proprietary case studies but again these have been largely unguided by theory, and have concentrated on immediate tactical issues (see, e.g., DiMAS, 2003). Both these streams of research have had high external validity, using professionally-produced applications with samples of real consumers. The few studies with high internal validity, that have compared iTV applications against a control, that is, traditional linear television, have had very low external validity. For example, Bezjian-Avery, Calder, and Iacobucci (1998), used student samples, viewing applications on computers in labs, which may be a very different phenomenon to both linear and interactive television viewing in the home (Wichansky, 2000). Future research in this area needs to be high in both internal and external validity. We also believe that that this future research would develop normative guidelines for iTV advertising more rapidly and efficiently if it proceeded more systematically. We outline in this paper our suggestions for an organising framework for

future research in this area, which we believe will provide this systematic guidance because it is grounded in currently accepted theory.

Figure 1: A sequential model of how consumers process interactive television advertising.



Conceptual Framework

We first outline the conceptual framework for our proposed research agenda. The conceptual model is based on the sequential process in which all ads, including iTV ads, are processed (see Figure 1). It is based on a previous conceptual framework developed for research into online advertising (Rossiter and Bellman, 1999) and the “polyarchy of effects” model discussed in Rossiter and Bellman (2005), which attempts to resolve problems with the traditional “hierarchy-of-effects” model (Lavidge and Steiner, 1961; for criticisms of the model see, e.g., Ray 1973; Vakratsas and Ambler, 1999). By using a generic model, we are in effect testing the null hypothesis that our existing knowledge about TV advertising will also generalise to this new space. It is not obvious to us which, if any, of the currently-held empirical generalisations related to broadcast TV advertising will also apply to interactive TV advertising, and therefore we thought testing this overall null hypothesis would be an interesting (Davis, 1971), and indeed a logical place to begin research in this area. Also, our conceptual model is a “narrative,” highlighting the process of interaction which may be uniquely important for interactive ads, in which viewers must navigate their own path through the content of the ad. Our model features a character, the viewer, who goes on a journey that ends up having some impact on their life (e.g., adopting a behaviour, such as buying a new brand, or abandoning a behaviour, such as giving up smoking), or no impact at all. Along the way, the viewer encounters iTV ad content from advertisers, which they view in different situations, and process in series of decisions. For interactive ads, these decisions weigh the benefits of further engagement with an ad against the frictional cost of making an interactive click via the remote control, on top of the usual costs of attention and mental processing. This narrative framework makes it easier, we suggest, to take into account the relationships between the five research questions we are proposing. For example, the effects of content and other downstream areas of the model are conditional on the viewer being favourably inclined to view iTV content in the first place.

Viewer Characteristics

As the ultimate goal of advertising messages, the television viewer, rather than the possibilities offered by technology, should be central to research investigating iTV advertising. Accordingly, viewer characteristics are the topic of our first research question (RQ):

RQ1: What distinguishes heavy and light interactors with iTV ads?

Viewers with a higher propensity to interact may have generally favourable predispositions towards new technology, in other words, they may be innovators in terms of their purchases

from the product category of consumer electronics. Research trialling DVRs with non-innovators has found that not everyone wants one (Kerschbaumer, 2005). Whatever the eventual level of penetration for iTV, individual differences in demographics, psychographics, personality, as well as the uses and gratifications associated with viewing iTV, may be associated with heavy versus light interactivity. A useful model to predict intention to adopt a new technology such as iTV is the Unified Theory of Acceptance and Use of Technology (Venkatesh *et al.* 2003), which combines the Theory of Planned Behaviour (Ajzen, 1991) and the Technology Acceptance Model (Davis, 1989). Predispositions to interact with iTV ads may also be affected by previous experience with similar interactive technologies, and this experience may also be associated with positive and negative knowledge transfer effects (e.g., Gregan-Paxton and John, 1997). More generally, predisposition to interact may depend on enduring or situational product category involvement (Richins and Bloch, 1986), or product category expertise (e.g., Moorthy, Ratchford, and Talukdar, 1997). Low propensity to interact may be associated with various advertising defence strategies. The most devastating defence strategy is ad avoidance, which is made easier by DVRs (Friedman, 2002). For those iTV ads that are not avoided completely, light interactors may employ defence strategies based on cynicism and scepticism about advertising (e.g., Mohr, Eroglu, and Ellen, 1998), or privacy concerns over sharing personal information with networks or advertisers (e.g., Nowak and Phelps, 1997).

Content Factors

The second area of interest in our conceptual model focuses on elements under the control of the advertiser, such as the *content and structure* of the ad itself, and the *scheduling* of the ad across various media options:

RQ2: What are the most effective strategies and tactics for iTV ads?

Identifying the most effective potential iTV *ad models* is the main topic of proprietary research being carried out by advertisers. Current standards in the iTV ad industry include impulse response (banner) ads and variations on dedicated advertiser location (DAL) or “microsite” iTV ads, including iTV games. From a theoretical standpoint, though, the identification of an absolute “best” model seems misguided; it is more likely that different types of iTV model will be appropriate at different stages of the purchase cycle, and some may not be appropriate at all for low-involvement items. Also, brand reputation may enhance expectations for the kind of experience an iTV ad will deliver, with negative consequences if these expectations aren’t met. Within each ad model, advertisers have many degrees of freedom for execution, but very few empirical studies for guidance. An immediate priority is testing how many of the success factors (e.g., Armstrong, 2005; Stewart and Furse, 1986) and planning frameworks (e.g., Rossiter, Percy, and Donovan, 1991) identified for linear TV advertising remain useful for iTV advertising. Many tactics for attracting attention (e.g., ad length) are based on human biology or irrefutable logic, and are likely to apply just as well to this new medium. However, the ability to serve different ads to different households, and offer choices to each interactor, opens new possibilities for persuasion tactics. Advertisers will need to identify a level of personalisation that makes iTV ads more effective (e.g., serving age- or location-appropriate versions) without aggravating consumer concerns about the use of set top box data. Set top box data, and viewer self selection, could be used to modify the argument structure used in iTV ads, for example, acknowledging an initial negative brand attitude, so that these ads are more persuasive. More generally, the ability to choose between different branches of a story may have the potential to make iTV ads more resistant to wearout, as well as more effective than linear ads in one viewing (Murray, 1998).

There are also several issues surrounding the scheduling of iTV ads, and the cost of iTV ad campaigns relative to traditional linear ad campaigns. Although minimum effective frequency (MEF) varies across products and campaigns, iTV ads may have a systematically lower MEF, making them cheaper to run. More generally, the new iTV arena will be characterised by further audience fragmentation, as the number of screen-based entertainment options for the living room continues to increase, and DVRs, which threaten to increase the prevalence of time-shifted viewing, and therefore ad avoidance. Large audience TV shows that are viewed live, and are associated with less ad avoidance, such as the Super Bowl, will probably continue to command multi-million dollar insertion fees (Deloitte, 2005). On the other hand, top-rating serials such as *Desperate Housewives*, which are the programs that are most likely to be time-shifted, may eventually be available only on cable channels where their production costs can be recouped by subscription fees.

Situational Influences

Situational influences affect the experience a particular viewer will have with the content of an iTV ad, temporarily reducing or enhancing either their *motivation* or *ability* to process:

RQ3: What situational influences moderate the effectiveness of iTV ads?

For example, observational studies have highlighted the impact of *social influences* (for recent reviews, see Cialdini and Goldstein, 2004; Kerr and Tindale, 2004), such as the increase in ad avoidance the more people there are in the room (Ritson, 2002). Will iTV ads be viewed with less attention and interactivity when other people are in the room? Furthermore, a co-viewing situation may influence the responses of the interactor (e.g., the interactor may try to impress the noninteractors), and watching someone else interact may be frustrating for bystanders (see, e.g., Walker, 1996). A number of factors could have impacts on individual interactors (for a review of individual persuasion research, see Eagly and Chaiken, 1993). Previous research has highlighted the effects of the cognitive load imposed by navigating information structures (see e.g., Sweller, 1998). A distracting foreground activity, such as an interactive game, will diminish attention to background stimuli, which might be programs or ads (see, e.g., Festinger and Maccoby, 1964). Motivation to process systematically or via short cuts (heuristic cues; see, e.g., Chaiken, 1980) could also vary across situations. For example, time of day (day part, e.g., prime-time vs. late night) may enhance or diminish motivation to process. Similarly, having a particular goal orientation, for example, to avoid all ads, would very likely reduce propensity to interact during ad breaks, although the resources to sustain this goal may deplete over a viewing session (e.g., Muraven, Tice, and Baumeister, 1998). Context effects, in particular, transfer of effects from different genres of program, such as drama shows versus sports, might increase or decrease the rate of interactivity with iTV ads. It is also conceivable that interaction with ads, or with interactive programs such as game shows, might induce fatigue effects that make subsequent interaction less likely.

Sequential Processing

The core actions involved in the sequential processing of iTV ads occur across situational contexts. The first concept central to interactive advertising is the concept of *choice*:

RQ4: How do viewers decide whether to click, and whether to continue clicking?

Investigations into the cost-benefit judgments viewers make in sequential search is still a developing area outside iTV research (see, e.g., Häubl and Dellaert, 2004; Pirolli and Card, 1999; Zwick *et al.* 2003). Processing effects, both affective and cognitive, influence the decision to continue processing or not. With iTV ads, self-selection of highly relevant content may reduce the number of counter-arguing responses generated, increasing persuasiveness,

which should decrease the persuasiveness of spurious arguments. Even when choices are forced or random, there are likely to be post-choice dissonance effects in which options chosen are rated higher than otherwise equal options foregone (for reviews see Brownstein, 2003; Harmon-Jones and Mills, 1999). Counterintuitively, this effect is stronger when smaller incentives are offered. Depending on the speed with which these post-choice rationalisations are made, or the salience of the need to make them, these post-choice effects will feed into subsequent interactive choices in a sequence. Direct marketers frequently take advantage of “foot-in-the-door” sequential techniques, such as requesting that a sticker be placed on the reply coupon, to increase response (see, e.g., Nash, 1986). Response and interactivity with iTV ads might be enhanced in conceptually similar ways.

Impacts

At first glance, iTV provides advertisers with a highly fungible metric: direct response, whether actual sales or qualified leads. Considerable research already exists into the factors that maximize TV direct response (e.g., Danaher and Green, 1997). However, like clickthrough on the Web, direct response represents a small fraction of the favourable impacts that iTV ads could be generating, in terms of brand recall, recognition, attitude, or purchase intention. As described above, a critical research issue is discovering whether iTV ads perform equally or better than linear TV ads on these traditional *ad effectiveness metrics* (see, e.g., Roberts, 1999; Sutherland and Sylvester, 2000). But the ability of set top boxes to track interactivity prior to response (sometimes dismissed as mere “selectivity”) up possibilities for new metrics:

RQ5: What is the best way to measure the impacts of iTV ads?

For example, recent research into measures of interactivity at Web sites (e.g., Sismeiro and Bucklin, 2004) could be adapted to provide proxy measures of ad or brand attitude, as well as identifying premature stopping points where the content could be improved. Interactivity in programs and ad breaks may have beneficial impacts for networks as well in terms of viewing duration and channel loyalty during ad breaks.

Conclusion

This paper presented a research agenda for investigations in the new area of iTV advertising. We proposed five research questions, which we believe take into account the interests and concerns of all the stakeholders in this new landscape: advertisers, of course, but also broadcasters and consumers. We arranged these research questions into a “narrative”, a conceptual framework based on five sequential steps, starting with the viewer and the ad itself, then investigating the situation in which they meet, and finishing with the processing of the ad and the communication effects (or impacts) that result. The differentiation between these five steps is intended to be conceptual only, to clarify our ideas and to open spaces for new ones. Obviously, the best iTV advertising strategies will be those that take into account all these stages simultaneously, crafting ad executions and media schedules that accommodate key influences on the processing of iTV ads by a particular target audience, and appropriately measuring the impact of these ads on this audience. We believe this conceptual framework promotes an intuitive understanding of the relationships between what we feel are the important research issues in this new landscape. However, we accept that this framework is generic and provides only a very weak starting point for future research. We hope that our conceptual model, which we believe is securely grounded in widely-accepted theory, provides at least a launching pad for future research. We also hope that research in this area progresses in an orderly fashion so that more specific models of how interactive TV advertising works can be rapidly developed and tested.

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