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Cross-cultural consumer perceptions of advertising via mobile devices – some evidence from Europe and Japan

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A CROSS-CULTURAL ANALYSIS OF PERCEPTIONS OF MOBILE ADVERTISING – A SURVEY AMONG AUSTRIAN AND JAPANESE STUDENTS

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Abstract

Mobile devices allow constant access to the World Wide Web without time and location barriers and present new challenges for marketers and an array of research questions for marketing researchers. The topic of mobile advertising is of special interest for companies as it enables communication with customers in unprecedented ways. As mobile technologies are being increasingly adopted on a worldwide basis, international m-advertising becomes an issue of growing importance. This paper therefore presents first cross-cultural evidence of individuals' perceptions of mobile advertising. The analysis is based on a survey of business students in two respective markets, Japan and Austria. Findings of this study show that people are still skeptical about mobile advertising. However, there are slight differences in perceptions between Japan and Austria. Japanese respondents perceive m-advertising as more entertaining and valuable. Despite the fact that they are more frequently exposed to mobile advertising messages, they also show a more positive attitude toward it. Implications for practitioners as well as for future research are suggested based on these findings.

Keywords: Mobile advertising, consumer perceptions, cross-cultural consumer behavior.

1 INTRODUCTION

New technological developments allow permanent Internet access via mobile devices like mobile phones or PDAs. They do not only broaden the spectrum of technological applications but also open up new challenges for companies that want to use these technologies for commercial purposes. A key commercial application is marketing. Marketing instruments that use mobile devices (m-marketing) allow innovative forms of customer relationships and interaction and will lead to the development to numerous mobile commerce-based services (Venkatesh et al. 2003). They make the mobile phone a "portable entertainment player, a new marketing tool for retailers and manufacturers, a multi-channel shopping device, a navigation tool, a new type of ticket and money, and a new mobile Intranet device" (Funk 2004; p. 2). At the same time the mobile phone also becomes an attractive channel for transmitting advertising messages to consumers.

In contrast to e-commerce applications accessed by "traditional" desktop computer-based Internet, mobile commerce applications (m-commerce) have been explored to a rather limited extent. This is in particular true for advertising. Except the empirical work by Okazaki (2004) who investigates Japanese consumers' perception of wireless ads (delivered via mobile telecom networks or via fixed line networks), there is little knowledge about how consumers react to advertising via mobile devices. This gap becomes even wider when this issue is addressed on an international basis. By now, there are no findings on cross-country differences in the context of mobile advertising. Also in this respect, there is much more knowledge in the area of desktop computer-based e-commerce. For example,

Web-based research in cross-cultural context revealed that users' cultural background strongly influences their perception of visible advertising design elements and colors (Del Galdo and Neilson 1996, Marcus and Could 2000). World Wide Web advertisers react to this by creating locally oriented Web sites (Cyr and Trevor-Smith 2004). As mobile technologies become a worldwide phenomenon and mobile carriers and content providers perform on a global scale, empirical cross-country research on mobile advertising becomes increasingly relevant. For this reason, the research project at hand has been carried out in order to find answers to the question whether consumers in different cultures perceive mobile advertising in the same way. Among the large variety of mobile devices that can be used for mobile advertising activities, the investigation focuses on push marketing activities in form of text advertising messages sent to Austrian and Japanese consumers.

The paper is organized in the following way. At first, a review of literature in the context of characteristics of mobile advertising and findings on Web-based advertising is presented. As the goal of this study is to present a first investigation on cultural differences in perceptions of m-advertising, a survey among mobile phone users was carried out in Austria and in Japan. These two countries have been selected because they show a high dissimilarity in culture, historical terms but also technological development and usage. On the other hand, both countries experienced a similar economic development and have comparable living standards. Furthermore, Japan and Austria are leading markets for advanced mobile technology in their geographic areas. The next section presents the survey design and research methodology. Then, the results of a MANOVA analysis are presented and discussed. Finally, theoretical and managerial implications as well as considerations on future research are developed.

2 MOBILE ADVERTISING

In general, advertising is defined as "any paid form of non-personal presentation and promotion of ideas, goods or services by an identified sponsor" (Kotler 2003, p. 590). Advertising via mobile devices or mobile advertising (m-advertising) is defined as *the usage of interactive wireless media (such as mobile phones and pagers, cordless telephones, personal digital assistants, two-way radios, baby crib monitors, wireless networking systems, GPS-based locators and maps) to transmit advertising messages to consumers with the overall goal to promote goods and services.* Mobile advertising can be carried out on the basis of a number of technologies. Besides Web-based approaches that apply mobile Internet, messaging based push advertisements can be used. Since the target consumer can be clearly identified by the advertiser, these advertising messages may include time and location sensitive, personalized information that can be transmitted via text messages or via e-mail on the mobile Internet[1]. There are different synonyms for m-advertising, such as wireless advertising (Krishnamurthy 2003) or wireless advertising messaging (Petty 2003). Like classical Web-based advertising, mobile marketing activities allow personalization and interactivity. But m-advertising also has some distinctive features that enhance as well as limit advertising opportunities for marketers and lead to considerable differences compared to Web-based advertising. Besides the different optical appearance of m-advertising messages due to screen size, the linkage between online and offline activities becomes more relevant. The recipient's context serves as an integrative part of the communication as messages can be adapted to the consumer's current location as well as to time.

Location-related information takes into account where the recipient is situated during message transmittal. Consequently, consumers' shopping needs can be accommodated with location-dependent offers and promotions (Stafford and Gillenson 2003). While many Web-specific advertising instruments are limited to desktop computers, m-advertising allows their application in physical stores,

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[1] Mobile Internet can be understood as free access to the Internet via mobile devices by means of mobile telecom operators or wireless devices, but it can also denote limited Internet access that is restricted to selected Web sites supported by the mobile telecom operator. In the paper at hand, mobile Internet is related to free Internet access to any Web sites.

offices, pubs, public transportation and other locations where a personal computer is not available. It takes the consumer's context, e.g. his or her current location into account what allows a considerably improved customization of the advertising message. Under these circumstances, a company can send an advertising message that contains a coupon with a price reduction on a certain product to a consumer who stays in a shop. Similar promotion campaigns have been carried out successfully via Web-based coupons (Madlberger 2004). *Time-related information* is closely linked with the location dimension. An advertising message sent at a certain time of day may be very important but it can be irrelevant some hours later. For example, an office worker can be provided with ideas for lunch by an SMS message sent by a restaurant in the late morning. This information is only useful when the recipient's location is known. It aims to prompt the consumer to move to certain nearby locations.

Although m-advertising offers attractive and innovative opportunities, it also has important *limitations,* which make mobile advertising rather unpractical in its current form. These limitations imply that today's application opportunities are still far away from the above-mentioned scenarios. Many limitations are due to technical attributes of the mobile devices. In order to be portable, mobile devices have limited processing power, low bandwidth, and unfavorable input/output devices today. Most of these limitations can be overcome in the future, except for the screen size (Lee and Benbasat 2003). On the other hand, today's technology is also characterized by capacity limitations (e.g. the short limit of SMS text length) and network operating systems. Design and content of m-advertising messages are therefore restricted to certain constraints concerning data volume and visual presentation.

3 APPLICATION OF MOBILE COMMERCE IN JAPAN AND AUSTRIA

In Japan, mobile phones started to gain popularity among young consumers as early as in the mid-1990s. In 1999, market leader NTT DoCoMo launched its mobile Internet-based i-mode service. i-mode allows mobile phone users constant access to the World Wide Web and enables subscribers to view Web pages via their mobile phones. Furthermore, they can send and receive mobile e-mails and can be directly addressed with advertising messages. As of the end of 2002 the proportion of mobile Internet users among mobile phone owners was 79.2 %. This was the highest percentage worldwide (MPHPT 2003). Mobile phones also have quickly become a new advertising tool for more than 100 Japanese retailers and manufacturers that use mobile Internet as an instrument to target customers with discount coupons, to conduct surveys or offer free samples (Funk 2004).

The Austrian mobile phone market shows one of the largest penetration rates in Europe. In 2002, 6.8 million mobile phone users were registered (83.6%); in March 2004 penetration reached a level of 89.7% (Telekom Austria 2004). GPRS and UMTS (the European pendant to the Japanese mobile Internet) were introduced in 2003 (Merrill Lynch 2002). In March 2004, the number of Austrian GPRS users increased to 840.000 (Telekom Austria 2004). The most popular non-voice-based service, however, is short message service (SMS), which is a part of the older GSM standard. Basic SMS messaging, which counts for almost 10% of mobile telecommunications revenue, is not or to a very small extent related to mobile Internet. The frequent usage of SMS in Austria is mainly due to its usability whereas other services like e-mail download and the usage of mobile Internet applications are considerably less applied. One major reason is consumers' lack of technology knowledge (Gutmann and Sochatzky 2003).

4 PERCEPTIONS OF MOBILE ADVERTISING IN JAPAN AND AUSTRIA

A major issue in advertising research is measurement of the effects of advertising on the recipient. From advertising research we know that success of an advertising campaign strongly depends on how

the customer reacts to a message. Effectiveness of advertising campaigns depends on a number of constructs. The main construct that has been extensively analyzed is attitude toward advertising and attitude toward an advertising message (e.g. Moore and Hutchinson 1983; Gardner 1985; Lutz 1985; MacKenzie et al. 1986; Andrews 1989; MacKenzie and Lutz 1989). On the basis of literature research in empirical results concerning Web-based advertising (Ducoffe 1995 and 1996) we derived four more variables (entertainment, informativeness, irritation, credibility) picturing the effectiveness of m-advertising, which will also be discussed in the following sections.

Entertainment of m-advertising

Individual's feelings of enjoyment associated with advertisements strongly influence their attitude toward the advertisement (Shavitt et al. 1998). Entertainment denotes its full ability to fulfill consumers' needs for "escapism, diversion, aesthetic enjoyment or emotional release" (McQuail 1983), which can be used to involve customers more deeply and make them more familiar with the advertised service or product (Lehmkuhl 2003). Japanese mobile communication providers have very strongly promoted mobile Internet as a means of entertainment right from the start. In contrast, in Europe and the US, mobile Internet-based services are strongly positioned as a convenient service for business professionals and mainly provide business-related information (Funk 2004). In general, advertising in Japan is more fantasy-oriented than advertisements in Western countries. Japanese advertisements avoid logic and are often implicit, intuitive, and rather emotional than logic (Johansson and Nonaka 1996). This is also true for m-advertising. Consequently, Japanese consumers regard their mobile phones not as mere communication tools anymore, but as portable entertainment players (Haghirian et al. 2004). So we assume that Japanese also perceive mobile advertising messages they receive as more entertaining than their Western counterparts.

H1: Japanese perceive m-advertising as more entertaining than Austrians.

Informativeness of m-advertising

Information is considered a very valuable issue in mobile marketing because recipients react very positively to advertising transferring incentives (Varshney 2003). Marketers generally want to convey information via advertising messages (Gordon and De Lima-Turner 1997). In the case of m-advertising, consumers want the message's content to be tailored to their interests (Robins 2003) and prefer to get messages that are relevant for them (Milne and Gordon 1993). In contrast to Europeans, Japanese prefer information to flow freely (Hall and Hall 1987). Information plays an important role in Japanese society. A larger quantity of information is collected and transmitted within the Japanese society than in a Western society. This is largely due to the fact that Japanese are avid information gatherers. Information in Japan refers to all kinds of data, including information that would not be of interest in Western countries (Johansson and Nonaka 1996). One may therefore assume that m-advertising messages are also considered a source of information.

H2: Japanese perceive m-advertising as more informative than Austrians.

Irritation of m-advertising

Mobile advertising may provide an array of information that can confuse the recipient (Stewart and Pavlou 2002) and can be perceived as an intrusion into the mobile user's privacy. If persons feel indignity when being addressed by advertisements, this can largely influence their attitude toward advertising (Shavitt et al. 1998). Feeling irritated by a message, individuals may try to ignore it. Most consumers are still quite uncomfortable with the concept of mobile business and they are skeptical whether these businesses are feasible and secure (Siau and Shen 2003). Consumers can no longer depend on the intuitive sense of place and presence that governs their observable behavior to make sure that they are not being watched or recorded by another individual (Rust et al. 2002). This leads to feelings of insecurity. Privacy concerns differ across cultures. Japanese are generally considered members of a collectivistic culture, where also information about individuals is frequently and openly shared. Austrians on the other hand are members of an individualistic culture where personal information is not freely distributed (Hofstede 1980; Hall and Hall 1987). This results in the conclusion that Austrians are m ore easily irritated by m-advertising messages intruding into their

lives than Japanese consumers are. Accordingly, m-advertising messages may be perceived as less irritating by Japanese.

H3: Japanese perceive m-advertising as less irritating than Austrians.

Credibility of m-advertising

Advertising credibility refers to "consumers' perception of the truthfulness and believability of advertising in general" (MacKenzie and Lutz 1989; p. 51). Credibility of an advertisement is influenced by different factors, especially by the company's credibility and the bearer of the message (Goldsmith et al. 2000; Lafferty et al. 2002). In Japan, companies use social group allegiance to create value-added options for customers. They believe that the best way to perform advertising is a buyer who is satisfied with the product. Thus, they try to establish a mutual supportive relationship between buyer and seller (Johansson and Nonaka 1996). This concept is strongly based on Japanese groupism and collectivistic features of Japanese society. Japanese are therefore more trustful than their Western counterparts (Downes et al. 2002). Companies they buy from are considered trustful partners. We thus conclude that Japanese also perceive m-advertising messages as more credible than Austrians.

H4: Japanese perceive m-advertising as more credible than Austrians.

Perceived Advertising Value

Ducoffe (1995) argues that advertising value is a measure for advertising effectiveness and "may serve as an index of customer satisfaction with the *communication products* of organizations" (p.1). The perceived value of advertising is "a subjective evaluation of the relative worth or utility of advertising to consumers" (Ducoffe 1995; p. 1). Japanese retailers generally try to create value with their mobile advertising messages, mainly because conveying service and product information to consumers readily and on time is a crucial aspect of advertising in Japan (Schneidewind 1998). M-advertising messages contain information about bargains and new products or carry incentives to increase customers' convenience. We thus conclude that Japanese perceive m-advertising as more valuable than Austrians.

H5: Japanese perceive advertising on the mobile Internet as more valuable than Austrians.

Attitude toward m-advertising

Attitudes are "mental states used by individuals to structure the way they perceive their environment and guide the way they respond to it" (Aaker et al. 1995; p. 254). An attitude toward an advertisement is defined as consumers' "learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general" (MacKenzie and Lutz 1989; p. 54). As it is known from Theory of Reasoned Action (Ajzen and Fishbein 1980) and Theory of Planned Behavior (Ajzen 1991), attitudes have a considerable impact on behavior (Churchill and Iacobucci 2002). A major influencing factor on attitude toward an advertisement is the general attitude toward the advertising medium (Larkin 1979). A positive attitude toward mobile phones also reflects on attitude toward m-advertising. In Japan, 45% of mobile consumers state that their mobile phone is "essential in my life" (NTT Docomo 2001). Mobile phones play a very important role in everyday Japanese life. Japanese consumers show an extraordinarily positive attitude toward their mobile phones (Haghirian et al. 2004) and consequently also toward m-advertising. Europeans, on the other hand, use their mobile phones primarily for communication and to a lesser extent for handling content. Mobile phones are, however, also an important part of everyday life. Advertising as a kind of content might be perceived as being related less strongly to mobile phones than for Japanese.

H6: Japanese show a more positive attitude toward m-advertising than Austrians.

5   RESEARCH METHODOLOGY

In the following section the empirical investigation is described. In order to ensure comparability of cross-country results, the study focused on advertising messages received via mobile phone. The study focuses on messaging based push mobile advertisements, such as SMS and MMS. Only mobile phone users were participating in the survey, PDA owners were not included in the sample. Data collection

was carried out in Austria in fall 2003 by investigating 408 undergraduate business students of an Austrian university. Out of 550 questionnaires handed out, 448 were returned. 408 of them provided usable answers for the investigation. In Japan, data collection was conducted in summer 2004. The respondents were undergraduate business students of two different Japanese universities. Out of 450 questionnaires handed out, 420 were returned. 367 of them provided usable answers for this investigation. Table 1 provides an overview of the demographic distribution of the Japanese and Austrian respondents. As data shows, there are differences in the gender and age structure between the responding undergraduates in the two countries.

	Austrian sample (n=408)		Japanese sample (n=367)	
Age of Respondent	**Female**	**Male**	**Female**	**Male**
18-20 years	6.4%	1.00%	16.34%	37.11%
21-25 years	39.0%	34.80%	13.01%	28.26%
older than 26 years	7.2%	11.60%	1.93%	3.32%
Total	**52.6%**	**47.40%**	**31.30%**	**68.70%**

Table 1. Demographic attributes of the investigation samples

In the survey, a standardized questionnaire was first developed in English language and then translated into German and Japanese by native speakers. After a back-translation into English and a comparison of the two English versions, two pre-tests (Austria 30 students, Japan 35 students) were conducted and adaptations were integrated into the questionnaires. The scales for informativeness, entertainment, irritation, and advertising value were derived from the Web-based advertising scales of Ducoffe (Ducoffe 1996). The scale measuring attitude toward m-advertising was based on Alwitt and Prabhacker's (Alwitt and Prabhaker 1994) scale measuring consumer attitudes toward TV ads. The credibility scale based on Mackenzie and Lutz's scale (MacKenzie and Lutz 1989) for measuring advertisement credibility. All measures were assessed via 5-point-Likert-type scales ranging from "strongly agree" (1) to "strongly disagree" (5). Table 2 provides an overview of the reliabilities (Cronbach's alpha) of the investigated items. All variables, except the irritation scale in both samples, show alpha levels above .7.

Scale Name	Japan (n=367)	Austria (n=408)
Entertainment Scale	.86	.84
Informativeness Scale	.78	.88
Irritation Scale	.62	.65
Credibility Scale	.79	.77
Advertising Value Scale	.83	.90
Attitude toward M-advertising Scale	.76	.72

Table 2. Cronbach Alphas of Scale Items

In Table 3, the factor loadings of the scales are presented. The factor analysis was performed by main component analysis with Varimax rotation. Only factors with Eigenvalues < 1 were further used.

Scale Name	Japan (n=367)	Austria (n=408)
Entertainment Scale		
m-advertising…		
…is entertaining	.802	.799
…is enjoyable	.825	.838
…is pleasing	.722	.799
…is fun to use	.789	806
…is exciting	.802	.774

6

Informativeness Scale		
…is a good source of information	.800	.793
…supplies relevant product information	.726	.787
…provides timely information	.783	.533
…is a good source of up-to-date product information	.841	.803
…makes product information immediately accessible	.776	.574
…is a convenient source of product information	.783	.738
…supplies complete product information	.691	.560
Irritation Scale		
…is annoying	.746	.855
…is irritating	.736	.857
…is deceptive	.554	.714
…is confusing	.707	.755
Credibility Scale		
…is convincing	.762	.796
…is unbiased	.730	.682
…is believable	.805	.848
…is credible	.798	.821
Advertising Value Scale		
…is useful	.881	.844
…is valuable	.711	.813
…is important	.829	.835
Attitude toward m-advertising Scale		
…results in better products for the public	.760	.404
…presents a true picture of the product advertised	.725	.730
…you can trust brands advertised by m-advertising more than brands that are not	.802	.745
…helps raise our standard of living	.837	.805
…helps me to find products that match my personality and interest	.825	.786
…helps me to know which brands have the features I am looking for	.817	.518
…helps me buy the best brand for the price	.770	.715
…I am willing to pay more for a product advertised by m-advertising	.718	.702

Table 3. Factor Loadings of Scale Items

6   STUDY RESULTS

On average, Japanese students receive on 16.6 advertising messages on their mobile phones per week whereas Austrian students receive 4.11 messages per week. First, an analysis of correlations was carried out in order to find out whether the defined constructs show significant relationships as assumed in the research model. Tables 4 and 5 show that all correlation coefficients are highly significant ($p < .01$). As expected, irritation is negatively correlated to the other constructs while the other constructs are positively correlated with each other.

	Entertainment	Informativeness	Irritation	Credibility	Attitude	Adv. Value
Entertainment	1					
Informativeness	.821**	1				
Irritation	-.344**	-.357**	1			
Credibility	.674**	.682**	-.350**	1		
Attitude	.636**	.686**	-.358**	.672**	1	
Adv. Value	.687**	.670**	-.356**	.694**	.667**	1

Table 4. Correlations between constructs in the Japanese sample

	Entertainment	Informativeness	Irritation	Credibility	Attitude	Adv. Value
Entertainment	1					
Informativeness	.728**	1				
Irritation	-.446**	-.420**	1			
Credibility	.691**	.671**	-.424**	1		
Attitude	.691**	.614**	-.281**	.623**	1	
Adv. Value	.702**	.709**	-.422**	.710**	.626**	1
** Correlations are significant at the .01 level (2-tailed) in Tables 4 and 5						

Table 5. Correlations between constructs in the Austrian sample

The analysis of the hypotheses developed in the previous section was conducted via MANOVA tests. The following Table 6 summarizes the results of the comparative analysis of the Japanese (JPN) and Austrian (AUT) sample.

	F-Ratio	Mean JPN	Mean AUT	Std.Dev.JPN	Std.Dev.AUT
Entertainment (H1)	20.51***	3.96	4.2	.87	.80
Informativeness (H2)	.86	3.7	3.7	.91	.86
Irritation (H3)	132.2***	2.1	2.9	.84	.92
Credibility (H4)	.355	4.0	3.9	.80	.81
Attitude toward m-advertising (H5)	50.62***	3.8	4.2	.83	.88
Advertising value of m-advertising (H6)	30.03***	3.7	4.1	.93	.85
***p<0.001, 1= Strongly Agree, 5= Strongly Disagree					

Table 6. Hypotheses tests via MANOVA

Entertainment of m-advertising is perceived differently by Austrian and Japanese students. Hypothesis 1 predicting that Japanese perceive m-advertising as more entertaining than their Austrian counterparts is supported by data (F=20.51). Not only mobile phones in general but also advertisements received via them are considered a source of entertainment to a larger extent in Japan. Concerning the informativeness of m-advertising, MANOVA results indicate no differences between Japanese and Austrian students. Hypothesis 2 is therefore rejected (F=.86). The results indicate that despite the fact that Japanese advertisers have increasingly included a high amount of consumer-relevant information into their advertising messages, students do not perceive them as more informative. Hypothesis 3 indicates that Japanese are less irritated by m-advertising messages than Austrians. Austrian and Japanese students differ significantly in their perception of irritativeness (F=132.2). In contrast to Hypothesis 3, Japanese students perceive m-advertising more irritating than Austrian students. Hypothesis 3 is therefore rejected. These outcomes are unanticipated in the light of findings that indicate Japanese as a very group-oriented and collectivistic population (Hofstede 1980), sharing also a high degree of information that would be considered very private by Western standards (Hall and Hall, 1987). One explanation could be the fact that the number of messages received by Japanese students is much higher than by Austrian students. The results also show that Japanese students score slightly lower on credibility. These differences between the two groups are not significant and Hypothesis 4 is therefore not supported as well (F=.355).

Table 6 further shows that Japanese students score higher on value of m-advertising than Austrian consumers (F=30.03). According to the MANOVA analysis, they show a more positive attitude toward m-advertising. M-advertising messages are obviously regarded as more valuable and are therefore being appreciated to a higher extent by Japanese students. Finally, Hypothesis 6 is indicating that Japanese have a more positive attitude toward m-advertising. The hypothesis can therefore also be accepted (F=50.62). This result is consistent with the observation obtained by Haghirian et al. (2004) who are stating that Japanese consumers generally perceive mobile phones and their impact on daily life as very positive. This attitude apparently reflects on the attitude toward m-advertising also.

7 DISCUSSION

This study is a pioneer in investigating cross-cultural differences in perception of m-advertising. The overall results of indicate that students generally do not perceive mobile advertising as very positive. Concerning attitude toward mobile advertising, Japanese students show a mean agreement of 3.8, the Austrian counterpart even shows a mean of 4.2. The difference between these two means is significant at a .01 level. A similar result is achieved for advertising value of m-advertising. Here, Japanese agree with a mean value of 3.7, Austrians with a mean of 4.1. Also this difference is highly significant at a .01 level. M-advertising obviously is not popular among students in both investigated groups.

However, both groups perceive mobile advertising differently in some respects. We observed significant differences in terms of entertainment, irritation, perceived advertising value, and attitude. Japanese students do not only perceive m-advertising as more entertaining than Austrian students do, they also show a more positive attitude toward it and perceive it as more valuable. These differences may be explained by the more advanced stage of mobile technology adoption in Japan. Mobile advertising has become a popular instrument for reaching consumers, whereas it plays a minor role in Austria. In contrast to Austria, user adoption of mobile technologies is extraordinarily high in Japan. Consumers are more technology-oriented and strongly integrate the mobile Internet into their daily activities. Examples are downloading information about train schedules or baseball results and navigating through urban Tokyo on behalf of a mobile Internet map. Thus, mobile Internet and its services are appreciated as a very important and helpful asset.

On the contrary, Austria is in a different stage of development. Mobile technology adoption is at a rather early stage of diffusion. During the period of market introduction their benefits are often nebulous to consumers (Balasubramanian et al. 2002). In addition, in Austria consumers are less educated on the functions and usability of innovative technologies what results in a lower readiness to use these services. Another issue is hardware resources. Austrian mobile phone users stick to their phones for several years. Hence, their devices are often not capable to support innovative, Internet-based technologies. Differences in technology adoption may therefore also lead to differences in attitude toward m-advertising. As the survey in Austria took place several months prior to the study in Japan, the time difference may be an external influencing factor, as time is very critical in the fast-moving mobile communications industry. Austrian students do not differ from Japanese students in their perception of informativeness and credibility. These results are unanticipated as privacy concerns of mobile marketing have long been a point of private and public discussion in Europe. This may explain a more negative attitude toward m-advertising. Finally, the results lead to the conclusion that Japanese students – although or even because – having been addressed by m-advertising messages already for several years are more easily irritated.

8 MANAGERIAL IMPLICATIONS

These results lead to the following managerial implications: Mobile advertising is currently not a popular marketing instrument. Although it allows context-sensitive messages and a high level of customization, it obviously does not deliver much added value to the surveyed students. As this effect is observed in two culturally different countries, this problem seems to be a considerable issue.

The analysis shows, however, that the Japanese sample rates m-advertising significantly better than the Austrian respondents. Hence, we can conclude that for Japanese students there seem to be more favorable conditions for m-advertising than for Austrian students. In Japan, the adoption of mobile technology is by far more advanced and also the number of m-advertising messages received per customer is higher, but perception m-advertising is obviously better. The comparison between the two observed countries shows that Japanese consumers who are in a more advanced stage of m-commerce diffusion, evaluate m-advertising better in some respects. This result could lead to the conclusion that this communication channel will become more popular when people become more familiar with the

underlying technology. But as Japanese are several years ahead of Austrians, this development is supposed to be rather slow. In addition, the antecedents show that the message design is not trivial. If companies decide to send out m-advertising messages, they should be entertaining and informative.

9   CONCLUSIVE REMARKS

The study presented shows limitations facing any cross-cultural research endeavor. This addresses comparability of the investigated samples, cultural differences in interpreting the survey items, possible biases in response styles, and differences in socio-demographic respondent structure. Especially concerning age, there are large differences between the Japanese and the Austrian students. Generally, the investigation of attitudes among undergraduate students raises numerous questions on the external validity of this study. Although today's students are comfortable with the usage of mobile phones and have integrated them into their everyday lives, it is necessary to test the hypotheses on samples that represent the mobile consumers in a better way. The rather negative evaluation of m-advertising might be a result of this sample structure. From a technological point of view, the study is limited in generalizability as only selected technologies and mobile devices have been considered. In order to gain deeper insights into attitudes toward mobile advertising, other technologies, especially Internet-based approaches, should be regarded. The time span between the survey in Austria and Japan might bias the comparison as technological development in mobile communication is very fast. A consequence of these difficulties in directly comparing two countries in different stages of diffusion are potentially different perceptions of the underlying technology. While m-advertising in Austria is still dominated by SMS and its related limitations, Japan is more familiar with html-based mobile Internet. Hence, benefits that can be realized by mobile Internet, but not by SMS, could result in a higher perceived value of m-advertising. An appropriate theoretical basis for addressing this aspect is diffusion theory (Rogers 1995), but also the technology acceptance model (Davis 1989).

There are several issues that were not addressed in the paper, but could play an important role in the cross-cultural study. The study does not control for legal regulation in the two countries (e.g. communication market laws, consumer privacy laws) and the resulting diffusion of the technology. Costs that are related to sending and receiving mobile advertising messages are not controlled for as well. As the dominating fee models differ across the two countries (SMS messages in Austria are paid by the sender, data traffic fee is paid for in Japan by the recipients), this issue may play a key role in attitude toward mobile advertising and may bias the cross-country comparison.

Considering future research, the paper offers several research avenues. First, empirical research should address the role of demographics in attitudes toward mobile advertising. As earlier research in e-commerce and m-commerce has shown, there are considerable differences between men and women and across age groups. E.g., Nysveen et al. (2005) revealed that the relevance of antecedents of the intention to use mobile chat services varies between men and women. Age turned shows a moderating influence on consumers' acceptance of wireless finance services in a study by Kleijnen et al. (2004).

Second, the relevance of informativeness of a mobile advertising message should be revisited. In contrast to Web advertising, advertising via mobile devices can provide very valuable, time and location oriented information for consumers. In this respect, m-advertising considerably differs from "traditional" Web-based advertising activities and allows unprecedented advertising possibilities. Future research also needs to clarify cross cultural perceptions on informativeness of m-advertising and focus on the aspect of information and m-advertising. The next question arising is the "evergreen" discussion of standardization vs. adaptation of global advertising activities. The results show that there are cross cultural differences in the perception of m-advertising. The impact on standardization or adaptation of global m-advertising needs to be further investigated in order to develop normative recommendations for advertisers and international marketing researchers. Finally, the differences between Japan and Austria may also be influenced by the differences in technology maturity. It is mandatory that this aspect is taken into account for further research. A potential contribution to understand this effect is an empirical analysis in the light of the technology acceptance approach.

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