Łukasz P. Wojciechowski
University of Ss. Cyril and Methodius in Trnava
ORCID 0000-0002-8608-6225

Katarína Fichnová
Constantine the Philosopher University in Nitra
ORCID 0000-0002-2024-071X

New technologies and ambient marketing communication

New digital technologies in marketing communication

Markets of products and services are entering the phase of sateness. In our time, the over-abundance of products, services and ideas on the market causes a rising difficulty of catching the attention of a customer for many marketers. Traditional advertisement does not guarantee success of propagational campaigns, since the over-saturation of the advertisement and marketing space is the cause why many marketing messages are ignored almost completely (Scheibe, 2013). These changes require a new adaption in the form of new communication activities that would increase effectivity of presentation of new products and ideas.

Besides bringing descriptions of the new, unconventional forms and technologies of marketing communications, the aim of this article is to offer a specification of their characteristics and to investigate the function of creativity in the ambient marketing communication (with a concretization of the connection between creativity and ambient and marketing communication), while we identify the specifics and their subjective perception by recipients of marketing communication.

When ordering marketing communication from marketing and communication agencies, managers expect actions, by which their marketing campaigns would be distinctive, memorable and effective. It is expected of these campaigns to be free of the limitations classical forms of advertisement have, so these campaigns would attract attention of customers, thus increasing the power of the message, making it more memorable. This leads to searching for more innovative, extravagant marketing tools in communication. This dynamic and diffuse digital communication further drives evolution of trends in technologies, communication and develops the very character of the messages, ideas and products.

It is necessary to motivate communication designers to look for new, creative and effective solutions, without which designing new mass media communication tools would not be possible to create. The specific tools of the new digital communication, for example the tools of visual communication via virtual and augmented realities, are very good examples of these trends. Campaigns utilizing such new tools
become more distinctive, memorable and therefore effective in their endeavors, as they attract more potential clients, they raise awareness and sparkle curiosity, possibly gaining much more attention than their classical counter-parts.

Virtual reality (VR) is a form of interactive software and hardware, which builds immersion for its user, generating a 3D virtual environment – one of the common technological accessories enabling this function is a headset with special oculars, which simulates and stimulates real experiences of an artificially generated space. Ideally, VR could even simulate a fully-built, 360-degree environment for its users to experience. Naturally, the potential and attractiveness of the tech find use in many industries, including the mass media and marketing communication. Users of these inventions are virtually transported to new places, offered new experiences, substituting the traditional requirement of physical travelling. These inventions offer an option of experiencing a film or a videogame in a way that faithfully simulates reality, letting the participants experience the role of the protagonists – like if it was them namely, who live the stories of the films and videogames they choose to play. To mention some other examples of uses for this tech, various companies use this invention to present their products, offering an intense advertisement experience via the virtual reality environment.

Augmented reality (AR) is still a newcomer – it is this novelty that actually helps to surpass press conferences or television advertisements in the element of surprise, offering a new, shocking way to do marketing. As Mikaela Eskenazi (2008) says, AR can attract attention of people for more than 855 seconds, it can increase the amount of interaction by 20% and it can improve the chances of a customer to buy the marketed object by 33%. People will stop and ponder the AR experiences, completely disregarding the overall quality of the marketing campaign. Naturally, since AR as a marketing tool becomes more commonly used every day, in the future it will be necessary to invent new, more sophisticated ways of marketing in order to reach higher effectivity in an environment overly-saturated by competition. The potential of AR is so great that it might eventually become one of the basic tools of the new marketing communication, and therefore it might lose its competitiveness whatsoever. In the recent years, AR has been used as a single part of marketing campaigns, which also utilized more classical forms of communication, including the guerilla marketing approach, which is similar to the viral marketing approach, as it aims to become the most attractive part of the marketing toolset for its recipients and creators. Its base is the propagation of a product, idea or service via unconventional techniques, which would be adequately built for the respective target groups. The innovation of message is reached through gaining the advantage of attention – which tends to be much higher than would be reached by just using the classical means of advertisement.

Specifics of guerilla and ambient marketing communication

In mass media and marketing communication, the guerilla strategies are inspired by the war-time guerilla warfare strategies and bring some of its methods into the media market (Hesková and Štarchoň, 2009). The roots of the term guerilla are
in the army, after all. Main advantages of the guerilla approach in marketing lie in its power to attract more attention of customers and potential customers (Shankar and Horton, 1999). Marketing campaigns focus on creation of shock, using the element of surprise, which their reach by introduction of a new, unconventional idea (Meyer and Niepel, 1994) or by presentation of unexpected, rapid actions (Derbaix and Vanhamme, 2000). To fulfill this objective, creators of marketing campaign focus on activation of the so-called element of surprise, which is reached through creation of a new, untraditional idea (Fichnová, 2013; Franková, 2011; Unctad, 2004; Szobiová, 2004; Csikszentmihalyi, 1996) that catches attention in an amusing way.

The term *guerilla* comes from a Spanish word *guerra*, which could be translated into *partisan warfare*. The term was first presented by Jay Conrad Levinson in 1982 (Levinson, 2009) and since then, it has reemerged in many publications further exploring the topic. Among authors of these publications, we can name Jay Conrad Levinson, David E. Perry (2011), Thomas Patalas (2009) and Marcel Saucet (2015). Another complex, though simplified study was published in a book by Jonathan Margolis and Patrick Garrigan (2008). We highly value the theoretical anchoring by Sandra Luxton and Lachlan Drummond (2000), the research approach by Katharina Hutter and Stefan Hoffmann (2011a) and the popularization and presentation of innovative examples in the online entries of Natália Hatalská (2002).

From the newer publications, it is unavoidable to mention the entries that mapped the topic via chosen aspects and connections, for example the monography of Tomáš Šula (2017), published in an English translation in 2018, titled *Ambient media in advertising – importance of design in ambient media creation*. Another worthy mention would be the publication by Milan Banyár called *Guerilla, Viral, Buzz, Word of Mouth Marketing – implementácia nových foriem marketingovej komunikácie do prostredia slovenskej a českej marketingovej praxe* (2018).

Guerilla marketing is most often used in campaigns connected to social and cultural topics, which is often connected to the low financial resource many of the institutions and smaller organizations posses, but it is not a rule. A growing number of big companies has started using this strategy, and that is the reason why Katharina Hutter and Stefan Hoffmann (2011b) say that one of the main intentions that companies have when implementing this strategy is the presence of advantages coming from the positive results between the initial investments and the final effects.

Through guerilla marketing (respectively through guerilla marketing communication), concrete points of view or life-style choices are propagated or stigmatized. Propagation and stigmatization this way influence specific views, life-style choices, tastes in products and other traits, and it might work even in people who are immune against traditional forms of advertisement marketing that is commonly associated with ambient marketingootnote{The term is used as a shortened version of the term *ambient makerting communication* despite the fact that in the field, the terms *marketing* and *marketing communication* are recognized as different. The *marketing* term is understood in a wider sense (See Gołuchowski, et al., 2014; Světlík, 2016; Pavlů, 2019, et al.).}, besides buzz marketing, viral marketing, marketing games etc. Guerilla marketing is considered a pun, a wordplay, which aims to spark curiosity – including young people. Guerilla marketing is based on original,
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creative actions (Fichnová, 2013), and its main aim so catch attention. It is a form of advertisement which goes to meet the recipient, influence them at a place where they live, play, relax and spend their free time.

Guerilla marketing aims to capture attention of a potential customer without utilization of standard advertisement forms which raise high costs. Ambient marketing, even though it uses unconventional advertisement media, requires significant financial investments – for example to build gigantic props to present – while it also requires standard marketing tools like logos or slogans.

Ambient marketing communication is characterized by advertisement and propagation focused on being innovative and diverse, while its unconventional forms use special public places (Luxton and Durmmond, 2000) and often utilize the most modern technologies (Marchini and Tebutt, 2007). These new technologies are already present in marketing communication and will probably become inseparable from the marketing communication practice in the future.

Placing these messages at unexpected places which are not commonly associated with advertisement brings a factor ingenuity, which is closely related to the very nature of ambient communication. While this attribute is easy to relativize (as strange things become common things after they have been around for long enough), the aspect of novelty is defining for ambient marketing (Luxton and Durmmond, 2000; Bargenda, 2015; Ogonowska and Rosczynialska, 2014a; and others). Authors of ambient marketing communication are constantly looking for new, undiscovered spaces to place their advertisement. Another strong focus is placed in the unconventional methods of realization and into the time these activities would be realized (Luxton and Durmmond, 2000). Francisco Torreblanca Diaz and Francisco J. Lorente Sanjuan, et al. (2012) in their definition also point out the usefulness of transformation of objects usually associated with city life, while they count with a concrete connection to the recipients. Anna Schiebe (2013) uses wording like unconventional and original in form and utilizes the element of surprise when defining marketing. Creativity (which is by consensus understood as a vector of originality and usefulness/relevance – in Runco and Jaeger, 2012; Amabile and Pratt, 2016; Colin, 2017; Walia, 2019; Carruthers and MacLean, 2019; and others) thus becomes necessary for this type of communication. Creativity is an aspect thanks to which ambient communication and guerilla campaign become more successful than classical forms of marketing of communication. This is further proved by several researches, for example the research by Werner Reinartz (2013) concludes that creative advertisement is more memorable and more favored by customers, it creates a better attitude towards the specific advertisement (Ang, Lee and Leong, 2007), gets more attention by recipients (Reinartz and Saffert; 2013, Till, 2005; Pieters, 2002) and it is considered a significant advantage in the market space shared with competitors (Falat, 2004).

Creative advertisements not only improve affecting behavioral reactions, but also cognitive reactions of their recipients (Rawers, Remmelswaal, et al., 2018). The specific way in which these connections work was described by Sara Rosengren, et al. (2020). Based on empirical test of theoretical mechanisms, it was established that strong positive effects caused by creativity (considering both its originality and
appropriateness) were distributed according to these attributes: originality leads to
dissolution of reactions (positive emotions influence later reactions of customers),
while appropriateness leads to signalization (creativity becomes a marketing signal,
which influences the perciipients and their view of the brand) (ibidem).

It is therefore evident that when considering the impact of creativity, it is nec-
essary to consider its other aspects, not only the originality. These other aspects
are investigated by many researchers (for example Besemer and Treffinger, 1981;
Kilgour, 2006; Ogonowska, 2010; and others), who look into the topic, mainly focus-
ing on the creative product – some of the identified aspects of creativity and their
prevalence in ambient and guerilla communication are presented in Table 1. The
information in Table 1 suggests that besides originality as the main aspect of cre-
ativity, ambient and guerilla communication both posses other elements, in which
the most significant are relevance, appropriateness and usefulness. All of these as-
pects are important when influencing the recipient of communication. Originality is
meanwhile defined as infrequented idea (Guilford, 1992), while an extensive analy-
sis of descriptions of creativity by Susan P. Besemer and Donald J. Treffinger (1981)
showed that originality is an aspect of the factor of novelty, as are the facets of trans-
formativeness and impulsiveness. Relevance and appropriateness are connected to
resultativeness and logical usefulness.

Table 1. Significant factors (aspects) of creativity in a comparison of their prevalence
in the characteristics of ambient and guerilla marketing communication

<table>
<thead>
<tr>
<th>Aspects of creativity by various approaches</th>
<th>Marketing communication approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. P. Guilford (1975, 1992)</td>
<td></td>
</tr>
<tr>
<td>M. Kilgour (2006)</td>
<td></td>
</tr>
<tr>
<td>R. E. Smith, et al. (2007)</td>
<td></td>
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</tbody>
</table>
| N. Becattini, et al. (2015), D. K. Simon-
ton (2016), T. Amabile (1982), S. Acar, et
al. (2017) |  |

<table>
<thead>
<tr>
<th>Marketing approaches</th>
<th>Ambient marketing</th>
<th>Guerilla marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Originality</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Elaboration</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Redefinition, reformulation</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Sensibility</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Relevance, appropriateness</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Usefulness</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>The element of surprise</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Complexity</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>
Robert E. Smith, et al. (2007) place originality besides standards and conventions, making it different, unique and non-adherent to habits and stereotypical thinking. A very similar situation is present around the factor of relevance that needs to come together from several different aspects: meaningfulness, appropriateness, usefulness, value and more, while all of these aspects are closely connected to the creativity in marketing and branding.

If they were to be reduced to the most substantial elements, the main aspects of creativity would be originality, usefulness and surprisingness (Grace et al., 2015; Simonton, 2016; Acar, Burnett and Cabra, 2017). This specification of surprisingness as an independent factor is not unique, as the authors Niccolò Becattini, Yuri Borgianni, Gaetano Cascini and Frederico Rotini (2017) mention other two research perspectives when investigating the phenomenon: the element of surprise as a nuance of novelty (meaning an aspect of originality) and the emotional reaction to new products. With other authors (Chiu and Shu, 2012; Koronis, et al., 2019; Zheng and Miller, 2021), we have reached the conclusion that surprisingness is a part of novelty, which indicates the facet of originality. In favor of these hypothesis speak significant correlations of both elements (novelty is strongly correlated to surprise: \( r_s = 0.920^{**} \)), as it was recently discovered in a research by Ji Han, Hanah Forbes, and Dirk Schaefer (2021). The element of surprise contains an aspect of the unexpected, and that is what a customer has to face – a new, unusual, original situation (even though we understand that not every unexpected situation has to be original, but usually, every original situation does contain an aspect of being unexpected). In the following lines, we describe contexts of surprise emotions in guerilla and marketing communication.

**Surprise and emotions as a basic part of communication strategy in guerilla and ambient marketing communication**

The moment of surprise, positive and negative, usually does not leave the recipient cold to the message and its points (Meyer and Niepel, 1994; Derbaix and Vanhamme, 2000). Surprise is the result of a difference between expectations and reality. To reach this end, depiction of the absurd, humor or even shock are commonly used. The element of surprise is reached when the recipient starts to have emotions, which would motivate them to share their personal experiences with other people, which would create the so-called word-of-mouth effect, in which they would become the so-called buzz agents. This diffuse effect is best stimulated
through marketing strategies (Hughes, 2008), which are often included as a part of viral marketing. Their aim is to catch the attention of clients, especially when the message is installed at an unexpected place, has an unusual form, surprises recipients and allows them to experience something, which they have not experienced before.

Another element of the message is the induction of positive emotions, which would create a smile, are innovative and appropriately controversial. The ideal moment for surprise and for the induction of positive emotions is a state of certain passivity of recipients in a given moment (Clow and Baack, 2008; Štrbová, 2012; Vysekalová and Komárková, 2002). The moment, when the reception process of the message is not disturbed by other processes. There is a high probability that recipients will take notice (for example when waiting for a bus, in a car, when stuck in a traffic jam after work, when travelling by metro…). Our everyday environment and surroundings become a space for advertisement. For this reason, anything that can be repeatedly used could theoretically become a viable, unusual propagation medium. In essence, a simple idea could easily resonate and represent information far better than any traditional television advertisements.

Studies of Andree-Ioan Mania and Monica-Maria Zaharie (2014) point out that the originality of guerilla marketing has a direct influence on improvement of communication with target groups. Research show that originality is well-accepted, especially when used in the new media. Guerilla marketing also improves attitudes towards advertisement. As it is firmly established by Nardali Sinan, Pinar Aytekin a Canan Ay (2010), it is important to understand and work with the ethical aspects of advertising (especially when working with advertisements, which focus on inducing fear in their recipients).

Research study
Research aims and research problems

How do respondents aged between 17 years old and 61 years old truly perceive originality of ambient marketing communication (in which we regard resourcefulness, the element of surprise, novelty, unusualness…) compared to the classical creative marketing communication, we tried to answer in the following research study.

We formulated these research problems (RP):

RP 1: Are there significant differences between the subjective perception of the attributes of creativity between classical creative advertisements and ambient advertisements by the target group?
   RP 1.1: the attribute of resourcefulness
   RP 1.2: the attribute of difference
   RP 1.3: the attribute of entertainment
   RP 1.4: the attribute of unusualness

RP 2: Are there significant differences between the subjective perception of the attributes of effectiveness of impact between classical creative advertisements and ambient advertisements by the target group?
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RP 2.1: the attribute of persuasiveness  
RP 2.2: the attribute of attraction  
RP 2.3: the attribute of curiosity  
RP 2.4: the attribute of memorability

RP 3: Is the process of identified profiles of creative ambient advertisement and creative outdoor communication identical?

Material, methods and research file

For our study, we selected four advertisements as our research material. Two of the advertisements could be classified as the classical forms of outdoor advertisement (further labeled as OD) and the other two represented the ambient advertisements (AM), while both of the types belong to the home advertisement category. This selection was deemed appropriate because of the similar conditions, as all of these advertisements were freely visible in public space, which is a typical trait for both ambient and outdoor advertising. These advertisements were chosen from the database Ads of the World, which includes advertising materials from all around the world – in this case it was the insurance industry. We also decided to choose advertisements with an original idea, in this case we found advertisements containing humor, and we also regarded the “popularity” statistics, in which all of these advertisements did relatively well. All of the advertisements chosen for our material were therefore considered creative. We consult the topic material further in Attachment 1 in our paper.

For the identification of subjective perception of attributes we used online modified version of the semantic differential (Osgood, et al., 1967) in the form of the so-called profile of polarity, which sees extensive use in marketing communication. Compared to the semantic differential, it is a simplified process. It uses two of selected relevant bipolar adjectives (not necessarily antonymous adjectives) connected with scaling techniques, while respondents evaluate presented objects – in this case, advertisements.

The presented study is a part of a broadly-built research activities set. For this study, we chose for attributes of creativity: (a) resourcefulness, (b) difference, (c) entertainment, (d) unusualness. We also chose four attributes of effectivity: (a) persuasiveness, (b) attractiveness, (c) curiosity, (d) memorability. We are aware that by choosing some of the attributes, we simplified the problematics into a reduced form and the method does not identify the real effectivity of communication, but only its potential derived from the subjective perception of the respondents. Perception is, however, an important part of every communication process and its importance is underlined in many hierarchic models addressing the effects of marketing communication (for example Preston and Thorson, 1984; Jackson, 2009; Wijaya, 2012; and others).

The attribute selection process was done in accordance with the theoretical basis, but it also took into consideration the results of our previous research activities (for example Wojciechowski, 2019; Fichnová, Wojciechowski and Mikuláš, 2018; and others). The final version of the used method was temporarily named
Evaluation of creativity and impacts of advertisements (EvCrImAd). Distribution of the method was realized in the online space (with respect to the pandemic situation that limited contact with a higher number of people), the Survio service was utilized. Our respondents evaluated four advertisements in a randomized order using eight pairs of bipolar adjectives and a five-points scale. The places in which positive and negative options were positioned in the forms were also randomized for the respondents. For analysis, we used descriptive and inductive statistic methods (AM, sd, t-test, Q-correlation). The results were finalized in tables using MS Excel and SPSS software.

Our research file was made of 300 respondents with the average age of 24.77 years (standard deviation: 8.90), while the youngest respondent was 17.92 years old and the eldest respondent was 61.83 years old. Our respondents were recruited from all regions in Slovakia and from all income groups. We are aware we were not able to build a fully stratified selection, as we faced many limitations – for example, our selection of respondents was limited for only those able to fill the forms in the online space.

We are aware of the limitations of our research and we acknowledged them in the final evaluation and interpretation of data.

Findings – comparation of subjective perception of creative ambient advertisement with creative outdoor communication in our target group

Data analysis showed that ambient advertisements were generally viewed more positively than their classical outdoor counterparts placed in public place. While all of the advertisements we selected offered an original idea, the originality of the classical advertisements was not regarded as significant by our respondents. The values of reached scores prove these points, as resourcefulness, difference, entertainment and unusualness barely surpass 3 points score (OD2), occasionally not even reaching the score of 3 points (advert OD1) (Table 2).

The scores of the ambient advertisement have all surpassed the score of 3 points, while the ambient advert 2 (Am2) even surpassed the score of 4 points in all of the aspects of originality. For data confrontation in statistical sense, we chose an approach in which we regarded two average scores of two types of adverts. All of the differences between outdoor and ambient advertisements in the attributes of originality are statistically significant (this evaluation still stands after Bonferroni’s correction – see Table 2).

For attributes pointed at the factor of effectivity, the results are similar. Classical outdoor adverts reached lower scores, while OD1 reached scores below 3 points twice. OD2 reached better scores, since three of these attributes surpassed the value of 3 points, while its score in curiosity (in the sense of attracting attention) was only at 2.71 points.

Ambient advertisements, on the contrary, reach scores beyond 3 points, whereas Am2 even surpassed 4 points score. The weakest score was reached in the attribute of persuasiveness, in which they reached the scores of 2.71 (Am1) and 3.28 (Am2). Is it important to note, however, that the persuasiveness of the Am2 was still the highest of all four selected adverts.
Table 2. Subjective perception of outdoor advertisements and ambient advertisements in the group of respondents aged from 17 to 61 years old (N=300) and a statistical confrontation of the discovered differences

<table>
<thead>
<tr>
<th>Watched variables</th>
<th>Advertisements</th>
<th>Connected data</th>
<th>Statistical confrontation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OD1</td>
<td>OD2</td>
<td>Am1</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>sd</td>
<td>A</td>
</tr>
<tr>
<td>Originality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resourcefulness</td>
<td>2.73</td>
<td>1.40</td>
<td>3.80</td>
</tr>
<tr>
<td>Difference</td>
<td>2.66</td>
<td>1.27</td>
<td>3.74</td>
</tr>
<tr>
<td>Entertainment</td>
<td>2.64</td>
<td>1.28</td>
<td>3.47</td>
</tr>
<tr>
<td>Unusualness</td>
<td>2.63</td>
<td>1.38</td>
<td>3.65</td>
</tr>
<tr>
<td>Effectivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persuasiveness</td>
<td>2.65</td>
<td>1.20</td>
<td>3.18</td>
</tr>
<tr>
<td>Attraction</td>
<td>2.68</td>
<td>1.37</td>
<td>2.93</td>
</tr>
<tr>
<td>Curiosity</td>
<td>2.50</td>
<td>1.33</td>
<td>3.52</td>
</tr>
<tr>
<td>Memorability</td>
<td>2.36</td>
<td>1.31</td>
<td>3.32</td>
</tr>
</tbody>
</table>

Legend: OD1: outdoor advertisement No. 1; OD2 = outdoor advertisement No. 2; Am1 = ambient advertisement No. 1; Am2 = ambient advertisement No. 2 (see attachment A); ‘Final’ score – average score for both advertisements in a category; A = average value; sd – standard deviation; range: 1–5 points; 1 = minimum score selectable, 5 = maximum score selectable; the number of respondents is N = 300.

Source: Authors’ own research.
Differences in the average scores of all four attributes of effectivity can all be considered statistically significant (even after Bonferroni’s correction).

It is important to take note of a certain dissonance between the answers of our respondents and their perception of the advertisements, as pointed out by standard deviation. They are more significant in case of OD1, but generally with the attributes of resourcefulness and unusualness. The results of outdoor advertisements and of the ambient advertisements reached the range of standard deviation between the values of 0.79 and 0.95.

We confronted our data from the point of specification of the discovered profiles. We used the so-called Q-correlation (Table 3). Data indicates that the evaluations of the single attributes of every advertisement vary significantly, but also the structure of representation of these attributes is not similar in them. Some of the data in Table 3 indicate a certain tendency for mirroring contradiction (negative values of Q-correlations).

Table 3. Values of discovered Q-correlations between watched objects in the whole research file of respondents and values \( p \) for Q-correlations

<table>
<thead>
<tr>
<th></th>
<th>Values of Q-correlations</th>
<th>Values of ( p ) for Q-correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Am1</td>
<td></td>
<td>Am2</td>
</tr>
<tr>
<td>Am1</td>
<td>0.277</td>
<td>0.050</td>
</tr>
<tr>
<td>Am2</td>
<td>0.024</td>
<td>0.475</td>
</tr>
<tr>
<td>OD1</td>
<td>0.332</td>
<td>0.332</td>
</tr>
</tbody>
</table>

Legend: \( Q_r \) (degrees of freedom) = the \( r \) statistic, \( p = p \) value, Degrees of freedom for \( r \) is \( N - 2 \) (the number of data points minus 2).

Source: Authors’ our own research.

While our research brings several suggestions, it is necessary to remain wary when interpreting this data with regard to the limitations of our research (we did not reach a stratified research file, the size of our research file was not sufficient, online gathering of data, which does not completely represent the people who experience tested ambient communication – despite the fact that this type of marketing counts on the use of replicators – persons, who voluntarily capture and share this content online after encountering it in the physical world).

Our data strongly indicates that subjective perception of originality and effectivity of classical outdoor advertisements and ambient advertisements vary significantly, while the ambient advertisements received a much more positive valency.

Valency is important when evaluating objects or deeds, as it can be used for future predictions of behavior (Perloff, 2017; Devos, 2008).

Our discoveries therefore indicate that during the planning phase of marketing communication in public spaces (marketing approach labeled out of home) it is useful to appropriately select creative ambient marketing communication, as it produces better results than the classical forms of outdoor marketing communication, even if both of these could be considered significantly creative.
Non-traditional forms of communication and technologies used in ambient and guerilla marketing communication

Non-traditional ways of propagation of products, services and ideas use unusual expressions and techniques, aiming to create unique surprise and sensation. It also reaches for new technologies, including video-tech, virtual reality and the technology of augmented reality. At the same time, one of the common forms of guerilla marketing are original poster installations (often called stickers), which can contain logo, text or illustrated materials, but especially a QR code, which takes a user to a new digital space. These are often found in public transport, at building entrances, on traffic signs for pedestrians and elsewhere in public space which are known to be frequented by a high number of people daily.

Media, which are the carriers of the message, also use new technology. They act as a middling position and mediate interaction, activating the recipient. Technologies can improve sensory aspects of the message and so deepen the experience. Technologies that interact with environment are used as an integral part of modern communication with environment (Čábyová, 2009). Among these, Bluetooth and other wireless technologies can be counted, but also the technologies that utilize motion sensors and other forms of sensory tech.

A technical example of the combination of digital technology and reality is the beamvertising. Beamvertising is a static or animated message projected on walls using a projector. One of beamvertising forms is called 3D-projecting, which is considered to be one of the most advanced techniques. An animated image is projected on a wall while integrating all aspects of the building’s architecture into it. Thanks to this synergy, the projected message seems to be three-dimensional, as it works with the 3D space it is exposed in.

The same principle is applied in Figure 1, where we see digital mapping of urban buildings, and in the Figure 2, where we can see the water video-mapping technique, which projects messages on a water wall.

The following examples show a case in which video-projection and digital technologies were used in beneficial campaigns and for charity. In a cinema in a German town of Düsseldorf an installation was built, during which the visitors were able to experience the life of a homeless person through their sense.

The air-conditioning in the cinema brought the temperature down to 8°C, effectively mimicking the temperatures commonly experienced on the streets. At the same time, a documentary film displaying everyday lives of the homeless was played in the cinema. Visitors also received blankets with sown-in QR-codes, which served as a financial gateway for donors to use – using the QR-codes from their blankets, watchers of the documentary were able to immediately donate to the cause (Figure 3).
The QR-code technology is connected to the *mobile tagging* practice, which is another form of mobile marketing communication that enables users to access more pre-generated, ideally exclusive content through their own personal devices. Not all of this content needs to be new, since the QR-codes could for example just be gateways to websites domains, in accordance with the aims of the marketer. One of the most spectacular examples of this practice was the first anniversary of the Chinese streaming service BiliBili, which celebrated conclusion of the first year of a popular video-game called *Princess Connect Re: Dive* by sending out more than 1500 drones, which formed a giant QR-code in the sky in Shanghai (Phillips, 2021) (Figure 4).
An example of use of mechatronics in real world and of its resonance in online space can be illustrated with the horror genre. The very nature of the horror genre is dependent on fear and on the element of surprise. Thanks to technology that surpasses limitations of a movie screen, mechatronics can create a sense of closeness to the key aspects of a horror story, as it was seen in movies like *Carrie* (2013) and *Devil’s Due* (2014). In *Carrie*, technical solutions helped to create her telekinetic abilities. Installations on the movie set helped her seemingly move furniture without physically touching it and to seemingly shove other actors away – or slam them to the wall, for example (Figure 5). This kind of scene creates a natural experience of surprise and fear, and this footage was also shared on social media. During the propagation time of the *Devil’s Due* movie, a children’s cart with a mechatronic doll was used. This cart moved on its own around a city center and gained much attention. Bystanders saw a moving cart, in which a doll with terrifying visage sat and gestured rudely (Figure 6).

Augmented reality is a combination of the real world with a computer-generated reality using a software, imagery and a camera of an actually used device. The camera captures a real image of the physical world, the device will afterwards analyze the imagery and cover it up using the augmented reality software, adding new image or video-footage on top of the original coverage of the physical world.
Another form of the augmented reality technology is the digital storefront. A shop’s window looks regularly, until a person walks by or touches the glass. The window will then use an application that enables the bystanders to see themselves playing the guitar, for example. One of the interesting examples would be an advertisement for a soft drink which aimed to present people waiting for public transport to experience something new (Figure 7). In a bus stop glass, the bystanders were able to see improbable events take place, and the events were synchronized with the real imagery of the street the bus stop was placed in.

This kind of campaigns can also have an environmental aspect. An interactive digital project called No more fish in the sea? (Figure 8) can experience an immersive adventure into the underwater scenery right from their streets and they can watch their fish grow and reproduce just after they donate money to the project.

In the aforementioned examples, augmented reality was partially independent from the concrete viewer (flying UFO in the streets or watching fish being added to an aquarium after a viewer’s action). Augmented reality can be moved even further in communication and be enriched by an interactive aspect – a screen can react to a viewer directly, making him an inherent part of the production (Figure 9). Benetton firm’s advertising reacts to concrete viewers, making them a part of the
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screen, displaying them as dressed in the new Benetton collection. The element of surprise is markant for marketing communication via utilizing holograms\(^2\), as most consumers have not yet had this kind of experience before. Hologram communication bears the elements of *experience* and *memorability* (Figure 10). In October 2018 in selected parts of London and Edinburgh, the World Wildlife Fund started a campaign connected to a petition demanding a full stop to illegal trading with wild animals, while also increasing awareness for the problem.\(^3\)

Bluecasting is a controversial example of digital technology and a place where an ambient marketing message is placed. It is a combination of mobile marketing communication with an external media through Bluetooth, which enables transfer of content, advertisement included. The users are therefore able to receive content (even if they do not wish it) like maps, information about cultural sites and more. This technology raises questions connected to ethics and cyber-security. Propagation via bluecasting often happens without knowledge of the user, even though recently regulations for this practice became a bit more severe. Transfer of data without knowledge and consent of users to their devices is called Bluespam (alternatively called *Bluejacking*\(^4\)) (Marchini and Tebbutt, 2007). The Beacon\(^5\) technology can be abused in a similar way to reach same results.

From these examples we can deduce that thanks to the *new technologies*, the *element of surprise* and *novelty* have become necessary traits in ambient marketing communication and they prove creativity of new messages. Besides the first two attributes, new technologies contribute to saturation of *usefulness* and *relevance* as well. (We understand the *element of surprise* as a necessary aspect of creativity – Han, Forbes and Schaefer [2021]). We tried to synthesize and display the relations between all the attributes in the Scheme 1 – this scheme follows up, elaborates on and further develops the ideas of previous authors.

In the past, authors Roger M. Garrett (1987), Albert Rothenberg and Carl R. Hausman (1976) spoke of creativity as a vector of two basic components (aspects): originality (*y* axis), which would reach 45° angle with the highest possible creativity. This attitude was criticized, however, for values nearing 0° could also depict high or maximum creativity. The author therefore offered an alternative, in which the space between the lines was separated into four quadrants – and so creativity was represented only in the last one, where maximum originality meets maximum usefulness. Then again, in the remaining quadrants one or both of the components

\(^2\) According to CAGR (Compound Annual Growth Rate). The holographic display market is expected to grow at 27.3% over the period (2021–2026). Source: shorturlat/gjnMT.

\(^3\) The campaign yielded more than a hundred thousand signatures, raising awareness of trade with wild animals and the intertwined system of organized crime.

\(^4\) Bluejacking is using the Bluetooth technology to send spam – for example contact cards, imagery and other content – to other people’s devices without their knowledge and/or consent. Receivers of these messages are unable to identify who they receive the message from.

\(^5\) Beacons are micro-devices able to connect to smart devices via the Bluetooth Low Energy technology. Within limited range, Beacons are able to send data or activate certain functions in smart devices of other people.
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are underrepresented, and therefore those situations are not considered to be creativity, but rather insignificant displays of failing products – with low originality or/and usefulness. Useful, but not new ideas, would not be considered nor original, nor creative. The same principle would go for bizarre new ideas that do not have any use, despite their novelty.

According to Ji Han, Hanah Forbes, and Dirk Schaefer (2021: 294), these relations could be expressed by the following equation:

\[
\text{Creativity (C)} = \text{Novelty (N)} \times \text{Usefulness (U)}
\]

In other words, if a marketing message does not reach sufficient value in both Novelty (N) and Usefulness (U), it cannot be considered creative.

On a higher level, creative ambient marketing communication uses unusual placement to further deepen its originality and usefulness. If it also uses new technology, it becomes even more developed. These inclusions create new connections in new, well-integrated ambient or guerilla marketing communication (ambitechmac, ev. guertechmac)\(^6\), and thus it reaches new level – the final part of the 3D cubic model of our scheme.

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\(^6\) The term ambient combined with the information about use of new technologies for the needs of marketing and/or marketing communication.
Conclusion

Unconventional communication activities of the out of home type in guerilla and marketing communication form fit in a reality close to their recipients, and therefore require understanding of the selected target group and building an effective communication strategy. The optimal perspective solution is to create a combination of various forms and technologies using ambient marketing communication (and guerilla marketing communication, provided it is financially reasonable).

As we showed, creativity is an immanent component of this communication and unlike the classical forms of marketing communication, which will be a well-prepared creative idea, ambient marketing communication has the advantage of being better-accepted by recipients and target groups.

These principles apply not only to the attributes of the expected novelty, but also to the subjective perception of the recipients – as they become more curious and interested, pay more attention and are more prone to memorize the message. Ambient marketing (and guerilla marketing) communication using the best available technology therefore offers promising new possibilities of a sustainable alternative to the currently weakening forms of the classical marketing communication.

Bibliography


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Appendix – tested advertisement messages

OD1: “People are stealing everything these days. Protect your heritage with Caixa insurance.”

OD2: “Less fun, but just as heavy: 20 cm of snow on the roof. Insure yourself against the consequences of heavy snow.” Allianz.

Am1: Europ Assistance IT


Abstract
This paper introduces unconventional forms and technology of digital communication, which guerrilla and ambient marketing communication utilize to implement strategies of communication with clients. It presents specifics of the mentioned types of communication, pointing out creativity and its remarkable unique attributes (originality, the element of surprise, effectiveness and others). In our selection of 300 respondents, differences in subjective perception of attributes were identified in ambient marketing communication and in classical creative form of marketing communication. Our paper characterizes strategies and visual techniques used in them, and new technologies implementing the element of surprise for creation of positive emotions. With the use of selected examples, we illustrate possibilities for digital communication with implemented communication strategies. At the end, we offer our own synthesized scheme of creativity levels in marketing communication addressing the special importance of creativity, with a regard to the new technologies and with an investigative approach towards the ambient and guerrilla marketing communications using these new technologies at the set levels.

Nowe technologie i ambientowa komunikacja marketingowa

Streszczenie
Artykuł przedstawia niekonwencjonalne formy i technologie komunikacji cyfrowej, które partyzancka i ambientowa komunikacja marketingowa wykorzystuje do realizacji strategii komunikacyjnych klienta. Przedstawia specyfikę tych rodzajów komunikacji, wskazując na kreatywność jako ich immanentny składnik wraz z jej podstawowymi atrybutami (oryginal-
ność, perswazyjność, użyteczność itp.). Na próbie 300 respondentów zidentyfikowano różnice w subiektywnym postrzeganiu atrybutów komunikacji marketingowej typu ambient i klasycznej kreatywnej formy komunikacji marketingowej. W artykule scharakteryzowano strategie i techniki wizualne oraz nowe technologie wykorzystywane w nich do wywołania efektów zaskoczenia i wywoływania pozytywnych emocji. Wybrane przykłady ilustrują możliwości komunikacji cyfrowej w ramach realizacji strategii komunikacyjnej. Proponujemy również własny schemat syntetyzujący poziomy kreatywności komunikacji marketingowej pod względem istotnych składników kreatywności z uwzględnieniem nowych technologii oraz miejsca komunikacji ambientowej i partyzanckiej z wykorzystaniem technologii na tych poziomach.

**Key words:** ambient marketing communication, guerilla marketing, new technologies, creativity, originality, effectivity

**Słowa kluczowe:** ambientowa komunikacja marketingowa, guerilla marketing, nowe technologie, kreatywność, oryginalność, skuteczność

**Doc. Mgr. Łukasz P. Wojciechowski, Ph.D.** – a university pedagogue, Department of Mass Media Communication at the Faculty of Mass Media Communication of the University of Ss. Cyril and Methodius in Trnava (SR). Focuses on guerilla marketing, ambient marketing communication and on new trends, questions in necro-marketing, semiotics and the history of film and photography. Has practical experience with film production as a director assistant and producer assistant at international projects. A laureate of the Grand Prix of theatrical photography and an author of photography expositions, book covers and posters.

**Prof. Mgr. Katarína Fichnová, Ph.D.** – a university pedagogue, Department of Mass Media Communication and Marketing at the Faculty of Arts of the Constantine the Philosopher’s University in Nitra (SR). Long-term researcher focused on the topics of creativity and its effectivity, creative potential of marketing-communication agencies, creative process, social-psychological phenomenon and their application in mass media and marketing, and on new trends in media and marketing communication. A laureate of several accolades (rectors’ honors, deans’ honors, the deans’ bronze medal and others).