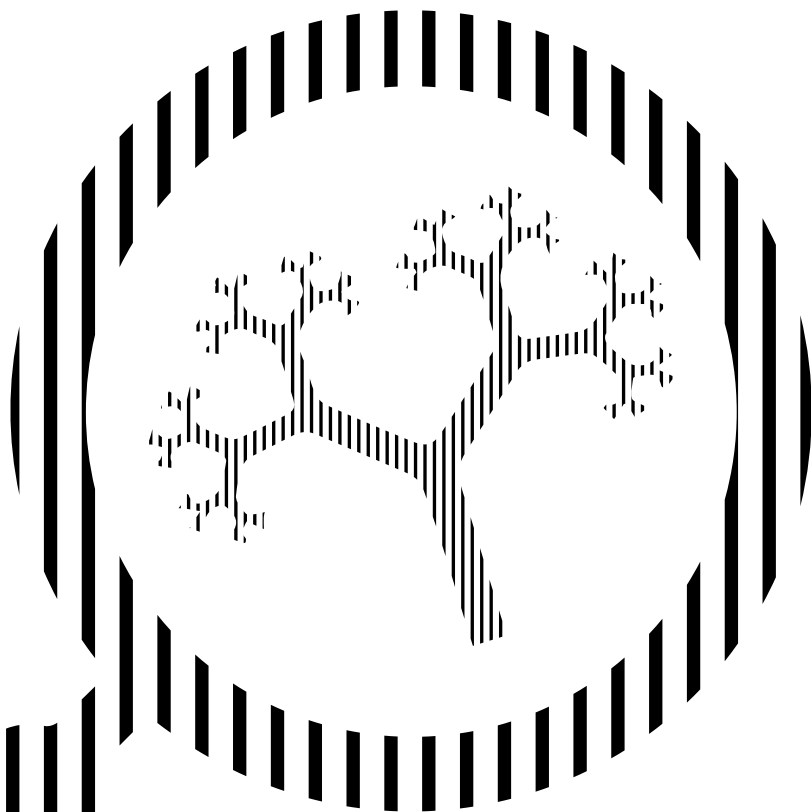


MARKETING SCIENCE & INSPIRATIONS



Marketing Science & Inspirations — Vedecký časopis zameraný na problematiku marketingu a marketingového manažmentu. | *Scientific journal is aimed at the area of marketing and marketing management.*

Ročník XVI, 2021, číslo 4 | Volume XVI, 2021, Number 4

Dátum vydania | Date of Issue — December 2021 / December 2021

ISSN 1338-7944

Registračné číslo MK SR | Registration Number — EV 3360/09

Periodicita: štyri riadne vydania | Periodicity: four periodical issues

Vydavateľ a adresa redakcie | Publisher and Address of Editor — Univerzita Komenského v Bratislave, Fakulta manažmentu, Odbojárov 10, P. O. Box 95, 820 05 Bratislava 25, Slovensko/Slovakia | tel.: **421 (2) 90 21 2003

e-mail: redakcia@mins.sk | www.mins.sk, msijournal.com — Časopis je vydávaný v spolupráci so ŠKODA AUTO VYSOKÁ ŠKOLA o. p. s., Mladá Boleslav, Česká republika | *The journal is published in co-operation with ŠKODA AUTO VYSOKÁ ŠKOLA o. p. s., Mladá Boleslav, Czech Republic*

IČO vydavateľa | Publisher Id Number — 00 397 865

Redakčná rada | Editorial Board — Predseda | Editor-In-Chief: Peter Štarchoň | Členovia | Members: Radim Bačuvčík, Gabriela Pajtíková Bartáková, Viera Cibáková, Bogusława Dobek-Ostrowska, Miroslav Foret, Bernd Hallier, Marie Hesková, Pavel Horňák, László Józsa, Martina Juřiková, Vanda Lieskovská, Štefan Majtán, Theodor Valentin Purcarea, Patricia L. Rees, Magdaléna Samuhelová, Eva Smolková, Jaroslav Světlík, Róbert Štefko, Antónia Štensová, Pavel Štrach, Hans van der Velden

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Sadzba textu | Area composition — SocieDi, s. r. o.

Jazyková úprava | Editing — Miloslav Vojtech & Dagmar Weberová

Tlač | Printer — KO&KA, spol. s r. o.

Hlavný sekretár | Secretary-General — František Olšovský

Cena za číslo | Price Per a Piece — 10,50 EUR

Objednávky a predplatné | Orders and Subscription — redakcia@mins.sk

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OVERVIEW OF CURRENT TRENDS IN MOBILE COMMERCE: GLOBAL PERSPECTIVES

The ever-increasing global interest in mobile commerce signals the urgent need to deepen knowledge on consumer behavior and preferences. A better understanding of the interests and values of the mobile user is crucial for the successful management and development of mobile shopping channels. Using the secondary data collected from reports of research companies and statistical portals, the paper aims at describe the state of mobile commerce and its development trends around the world. Following the analysis of secondary data, the paper we deal with the possibilities of optimizing business strategies in the field of m-commerce.

1 Introduction — Most consumers nowadays cannot do without their mobile phones. It is an indisputable fact that these devices are becoming the most important part of the daily life of the entire population, regardless of age as these devices not only enable people to connect with the outside world, but also to expand their personality and individuality and increase the quality of life by providing endless possibilities of use.

The potential of these mobile technologies has also been greatly influenced by the trade sector. This is because mobile technologies create many opportunities and new revenue possibilities for businesses themselves. Today, many consumers are looking for convenient forms of shopping at any time and in any place. If businesses want to keep up with the pace of change and optimize their business or marketing strategies, the key is to understand the behavior of the mobile consumer.

The aim of this paper is therefore to describe the current state and development trends related to mobile commerce in the world and based on the findings to outline the possibilities of optimizing business strategies in the field of m-commerce. Specifically, we will compare the use of mobile and other devices when making a purchase, the share of transfers and also the conversion rate. The paper also provides an overview of the share of m-commerce in the overall e-commerce market. The secondary data used for the analysis in question were collected from various reports of research companies and statistical portals.

2 Literature review — Smartphones have become a central tool of computing and communication technology for the general public (Alwahaish and Snášel 2013), because we can consider them as the most personal technological equipment of today (Henig-Thurau et al. 2010). In many studies, researchers have found that mobile commerce is a next stage of e-commerce. As m-commerce also uses the Internet via mobile or tablet, researchers have categorized m-commerce as an extension of e-commerce. Both concepts

are similar to each other and share the basic business principles (Fong and Wong 2015). In the field of mobile commerce, according to Turban et al. (2015) there are five unique features that distinguish m-commerce from general e-commerce: ubiquity, convenience, personalization, localization, and accessibility. Mobile commerce is usually understood as the purchase and sale of goods or services, but also includes activities such as mobile banking, brokerage services, shopping, money transfer, mobile ATMs, mobile tickets, mobile vouchers, coupons and loyalty cards, mobile auctions, etc. (Endre 2009).

Some authors point to the many available sub-tools of m-commerce, but emphasize in particular the three main subsections, which are mobile banking (m-banking), mobile payments (m-payments) and mobile shopping (m-shopping). M-banking refers to the use of mobile devices for financial management (Shaikh and Karjaluo 2015), m-payments refer to the use of mobile devices to pay for products or services (Slade et al. 2015) and m-shopping involves the use of mobile devices to search, browse, compare and purchase products and services online (Groß 2015).

From the retailers' point of view, mobile retail is based on the creation and maintenance of mobile websites, mobile ads, mobile customer service, as well as the management of mobile social networks (Shankar et al. 2010). Mobile phones are changing the way people shop in online stores and at physical locations (Pasqua and Elkin 2013, Pollák et al. 2015). Goh et al. (2015) found that consumer behavior differs depending on what device is used in the search for information – mobile phones and computers. Many users read content displayed on mobile phones intermittently due to smaller screens. This finding is also supported by the research of the group of authors Ghose et al. (2013), who found that searching for information via mobile phones increases costs and, in addition, the relative attractiveness of the first search result is higher than in the case of computer searches. The following part of the presented paper focuses on the analysis of secondary data in connection with consumer behavior in the field of m-commerce.

3 M-commerce trends in the world — Today, the global population is almost 7.7 billion people (Population 2019). Given the huge expansion of the Internet, it is not surprising that every second person in the world is currently an Internet user (eMarketer (2017a). At the same time, e-commerce statistics from the Statista portal (2019) point to the fact that there are 1.92 billion digital customers in the world in a given year, which is 7.2% more than in the previous year (eMarketer 2017b). These figures represent 63% of the total Internet user base and about one quarter of the total global population.

Data from We Are Social (2019), a large-scale report on digitization around the world, shows that the world's mobile phone population increased by 100 million in 2018. The total number of these people reached more than 5.1 billion by January 2019. This number increases the global penetration of mobile phone users to 67% and makes up two thirds of the total global population. The report suggests that 42% of the global population are also mobile social users. Interesting figures are also given by GSMA Intelligence (2019), according to which in 2018 there were 3.6 billion people in the world using mobile internet. At the same time, these figures represent 47% of the total global population.

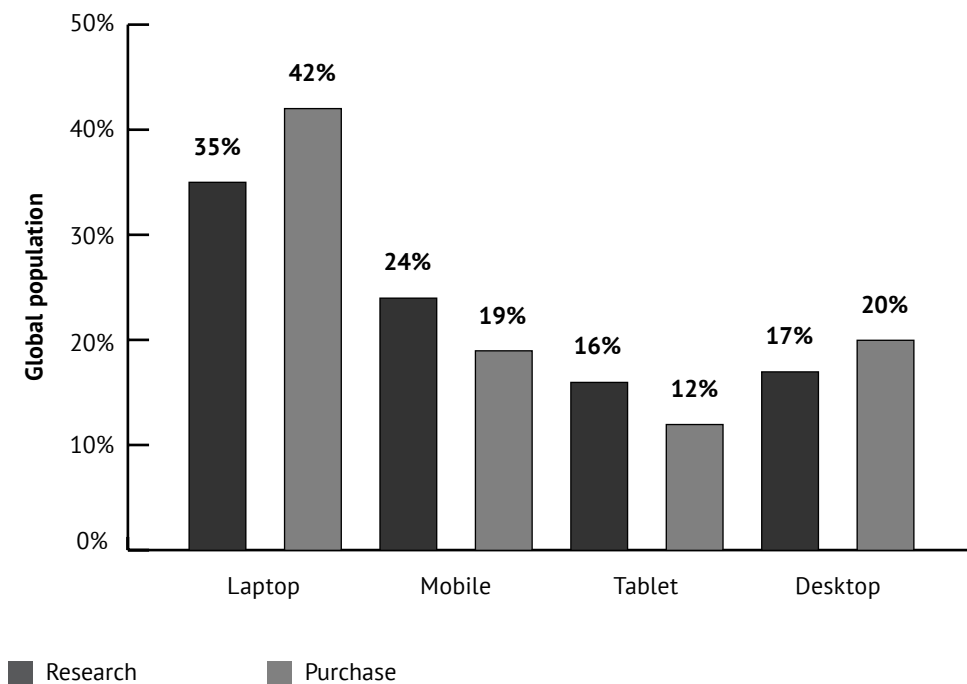


Figure 1: Search and purchase of products in terms of used equipment
Source: Deloitte (2018)

Interesting results were obtained by Deloitte (2018), which conducted a global survey on a sample of 54,154 mobile consumers from 35 countries and six continents. Among other things, the survey focused on the devices used by respondents to search for and purchase products. The results revealed that the most used device for searching and buying products is a laptop and the second most used is a mobile phone. However, it is interesting to note that respondents use mobile devices to search for products (24%) than to complete their purchases (19%). On the other hand, laptops are used to search for products (35%) less than they are used to complete their online purchases (42%) (Figure 2).

Wolfgang Digital (2020), which analysed more than 130 million sessions from November 2018 to October 2019, said in its report that 2020 was the first year in which most of the revenue was generated through mobile devices. In addition, however, the report in question indicates the percentage of traffic and revenue by devices used. While we record 8% traffic through tablets, the share of revenues from this device is at the level of 9%. A 22% share of traffic was recorded using the desktop, while revenues from this device were much higher, 36%. The opposite situation is recorded in the case of mobile devices. The percentage of traffic is the highest – up to 70%. On the other hand, the share of revenues from the device is much lower, at only 55%. It is therefore clear that mobile devices are predominantly used for searching and browsing the Internet, but in terms of purchases made and related revenue, the numbers are still low.

According to a report by Monetate (2020), which analysed 2.1 billion customer sessions at more than 250 retailers, in Q1 2020, global mobile conversion rates were 1.81%, for desktops 1.98%, and conversion rates on tablets reached 2.92%. However, the mobile conversion rate in the UK is slightly higher, at 3.50%, compared to 3.14% for computers. These data could also be caused by the impact of the pandemic, when the operation of brick-and-mortar stores was limited and people relied on e-commerce and mobile devices. In 2019, the conversion rate on mobile devices was less than half that of computers, at 2.25% compared to 4.81% for computers. Tablets also performed better, achieving an average conversion rate of 4.06%. Obviously, people probably like to spend time on mobile devices, but they prefer a computer for the purchase itself. This may be because it is more difficult for people to view the products and then complete the purchase on small screens. Similar findings were arrived at by Invesp (Saleh 2020), who claims that mobile sales are at 56%, which is more than half of all sales, but as indicated by the results of other analysis, the growth of the mobile conversion rate is not so significant. The figure below interprets the conversion rate development from a perspective of devices.

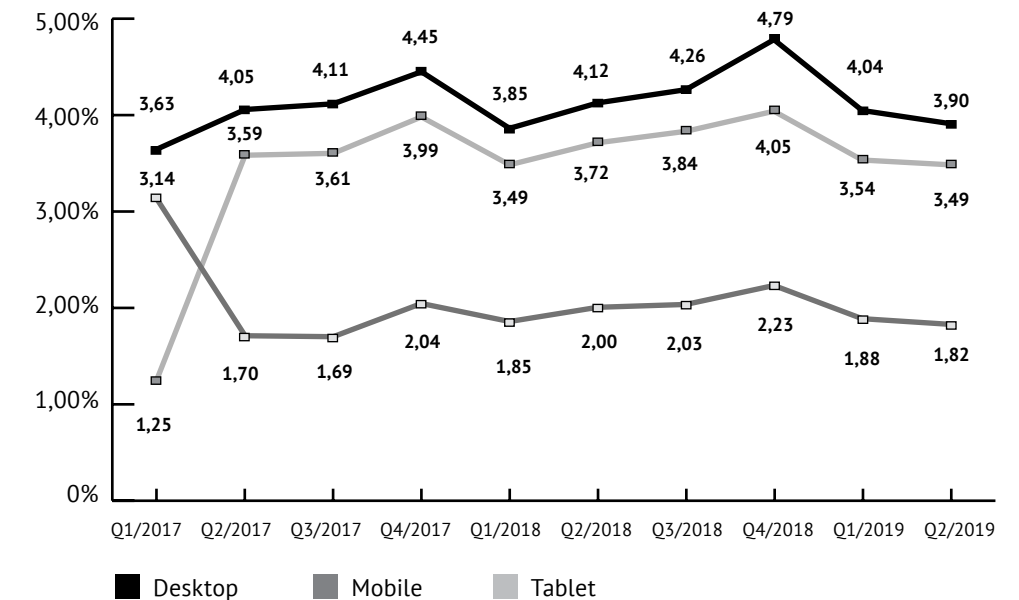


Figure 2: Conversion rate from a perspective of devices
Source: Saleh (2020)

An interesting finding is the fact that since Q1 2017, the conversion rate of mobile devices has decreased rapidly. Only a slight upward trend had been recorded before Q4 2018, when the downward trend overtook until Q2 2019. As is evident, mobile devices achieve the lowest conversion rate among other devices. On the contrary, the highest rate, which is up to 4%, is in the case of desktops. According to Invesp (Saleh 2020), Q4 2018 was the period in which the

highest rate was recorded across all devices, in particular, in the case of tablets, up to 4.79%. Subsequently, however, the ratio of this device was reduced to 3.90% in the following half-year. The importance and positive development of m-commerce is also evidenced by statistics by the eMarketer portal (2018) (Chart 3), which states that retail e-commerce sales reached exactly \$ 2.3 billion in 2017, an increase of 23.2% compared to the previous year. The share of mobile devices in this market accounted for 58.9% of total e-commerce sales in that year, which represents \$ 1.4 billion.

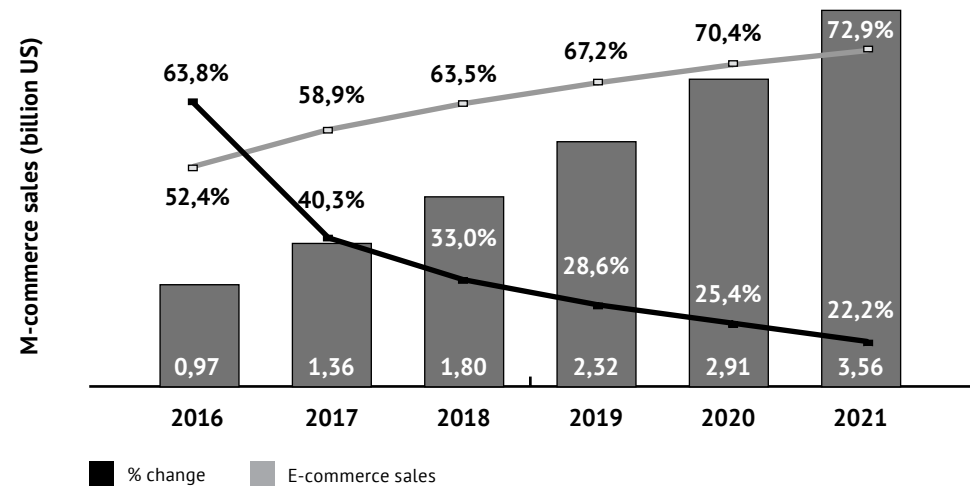


Figure 3: Share of m-commerce in e-commerce (global)
Source: eMarketer (2018)

In 2018, the share of m-commerce in total e-commerce could be about 4.6 percentage points more. It is projected to reach \$ 1.804 billion – a 63.5% share in e-commerce. The portal predicts that in 2021, mobile e-commerce could reach up to \$ 3.5 billion, accounting for nearly three-quarters (72.9%) of total e-commerce sales.

Mobile website statistics also report excellent results. More than half (52.48%) of website traffic comes from mobile devices. Worldwide Internet traffic is clearly dominated by mobile devices. In second place in this ranking are desktop computers, which is responsible for 44.59% of the Internet traffic. The market share of tablets in this area is low. It covers less than 3% of Internet traffic (Stat Counter 2019).

This shift reflects the changing attitudes towards m-commerce and signals a new era of growth for other shopping channels that are heavily dependent on the mobile phone. There is no doubt about the fact that Asia is the driving force behind m-commerce. 63% of consumers in the region shop every month via their mobile phones. Figures in Europe and North America are also rising, hovering between 40% and 45% (Young 2018).

Conclusion — The constant development of mobile technologies is a reflection of changing consumer shopping habits. With the change in available technologies comes the change in shopping channels, which bring consumers new business experience. Although mobile com-

merce has a growing tendency in a global sense, according to the data presented above, it is evident that these devices are still not the dominant purchasing channel. The ubiquity, as one of the most significant advantages of mobile phones, encourages users to use their mobile devices in the initial stages of the purchasing process. After reaching the purchase stage, however, customers opt for another device. There may be several reasons for this.

Mobile devices have much smaller screens than tablets and computers, so the mobile payment process can be more challenging than when using any other device. Businesses should therefore facilitate the process of completing and paying for an order as much as possible, for example by automatically filling in addresses on the basis of a postal code, or by pre-selecting a numeric keypad when entering credit card details. Boosting purchases made through mobile devices is also possible by adding key Call to action buttons and making it easier to scroll through products for immediate purchases. A great tool to support m-commerce are mobile applications that can be personalized, easier to use, and which by their nature can improve the shopping experience.

As mentioned in the previous sections, mobile devices show strong business potential in the retail environment. For the time being, however, it remains questionable to what extent m-commerce shopping preferences will change the consumer behavior. The amount of time people spend on mobile devices, combined with the trends that are evident, makes the mobile phone a powerful business tool that should not go unnoticed.

Poznámky | Notes — This research is one of the partial outputs under the scientific research grants VEGA 1/0694/20 „Relational marketing research – perception of e-commerce aspects and its impact on purchasing behavior and consumer preferences” and VEGA 1/0609/19 „Research on the development of electronic and mobile commerce in the aspect of the impact of modern technologies and mobile communication platforms on consumer behavior and consumer preferences”.

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Kľúčové slová | Key Words — mobile commerce, mobile devices, online shopping, conversion rate

mobilný obchod, mobilné zariadenia, online nakupovanie, konverzný pomer

JEL klasifikácia | JEL Classification — M30, M31

Résumé — **Prehľad súčasných trendov v mobilnom obchode: globálne perspektívy**

Neustále sa zvyšujúci globálny záujem o mobilný obchod signalizuje naliehavú potrebu prehĺbiť poznatky o správani a preferenciách spotrebiteľov. Lepšie pochopenie záujmov a hod-

nôt mobilného používateľa je kľúčové pre úspešné riadenie a rozvoj mobilných nákupných kanálov. Pomocou sekundárnych údajov zozbieraných zo správ výskumných spoločností a štatistických portálov sa práca zameriava na popísanie stavu mobilného obchodu a jeho vývojových trendov vo svete. V nadväznosti na analýzu sekundárnych údajov sa v príspevku zaoberáme možnosťami optimalizácie obchodných stratégií v oblasti m-commerce.

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Recenzované | Reviewed — 19. August 2021 / 13. September 2021

DEVELOPMENT OF REAL ESTATE MARKETING – TRENDS FOR THE FUTURE

Real estate marketing has changed fundamentally over the past twenty years, mainly due to digital technologies. Due to the availability of online platforms as intermediary websites, the complexity of interaction relationships between providers, demanders, and real estate agents has increased. The study takes the perspective of real estate agents and uses the example market of Cologne/Bergisch-Gladbach to show what new potential digital channels offer for the reach and intensity of real estate marketing. Real estate agencies are challenged to evolve technologically, but then have a wider inventory of marketing channels and presentation options at their disposal. In the future, social media and video streaming platforms could further revolutionize property marketing, offering further potential to proactive providers, especially in terms of property branding and international sales.

1 Introduction

1.1 Motivation and problem — Germany's real estate markets are in an imbalance. While there is a high surplus demand in large cities, which contributes to exploding rental and purchase prices in the case of housing shortages, in rural and peripheral regions properties are still vacant or can only be put to use at prohibitively low purchase or rental prices and thus saved from neglect (Voigtländer 2017, p. 10; Deschermeier et al. 2017, p. 2). Real estate marketing is called upon to balance out these imbalances on the demand market, i.e. to motivate tenants and buyers to settle or invest in less sought-after or innovative locations, while boom regions need to acquire providers to meet demand. To achieve this goal, real estate marketing according to the traditional, analogue pattern, in which customers went to an agent they trusted, has reached its limits. In order to open up new markets, it is necessary to reach customers nationwide by combining various classic and digital channels. Prospective customers must already be enthused about the property using meaningful digital presentations to arouse their interest in new locations (Pavenkov and Rubtcova 2019, p. 1; Khikhadze 2020, p. 26). Finally, it is important to effectively structure target groups in the demand and supplier segment and also to work on them in the long term in order to build customer trust (Streibich 2011, p. 71; Althaus 2013, p. 96).

1.2 Objectives and methodology — Many real estate providers are overwhelmed with the variety of options that digital technologies in a particular offer. Scientific research also provides hardly any empirical results on how real estate marketing can be holistically conceived. Using practical examples from the region – Cologne / Bergisch Gladbach – this article aims to show how the marketing mix in the real estate sector can be adapted to the market, especial-

ly with the integration of digital technologies, and which future trends real estate providers should keep an eye on to ensure the future viability of their company. An overview of current sales strategies, their interaction, and their further development potential will be given, thus also providing a foundation for further academic research on real estate marketing.

2 Traditional real estate marketing — Until the 1990s, the marketing of real estate in Germany was primarily carried out via physical media and thus according to simple principles, which will be briefly described to show how the marketing of real estate has changed over the past 20 years and continues to change today, primarily due to digital technologies. The classic real estate market is characterized by three central parties, real estate demanders (prospective buyers and tenants), real estate providers, i.e. owners willing to sell and rent, as well as intermediaries who mediate between the supply and demand side, represented by real estate agents or institutions such as banks, which maintain real estate brokerage departments (Walzel 2000, p. 70).

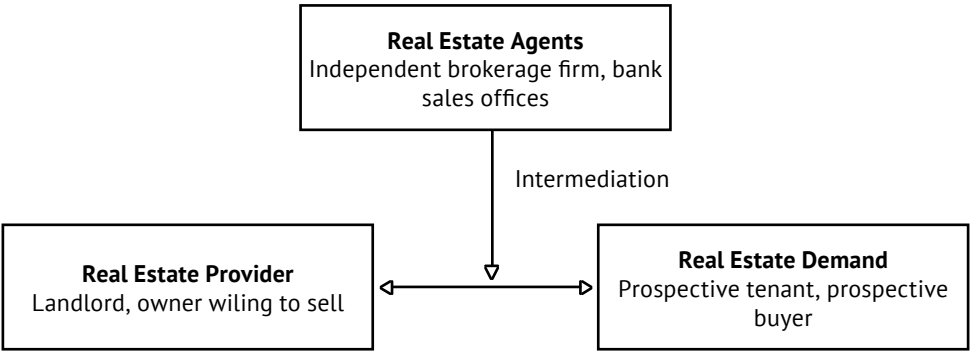


Figure 1: Players in the real estate market
Source: Author

In the following, the changing position and function of real estate agents will be considered.

2.1 Origins of real estate marketing as a regional, analogue approach — Until the 1990s, property sellers, be they landlords or owners willing to sell, usually went to an estate agent they trusted, who usually had an office near the property (Falk et al. 2004, p. 573). This physical proximity to the property represented a locational advantage since mediation work had to be carried out physically and directly in the property to a large extent. Thus, the circle of real estate companies suitable for mediation was limited to a few renowned providers, which ensured them a location and trust advantage. In order for the agent to act for the provider side, a formal brokerage contract was usually signed as an exclusive sales contract. Real estate agencies had a moat due to their location-

and reputation-related competencies, which made it difficult for other providers to enter the market (Tsagris 1974, p. 1). Thus, established brokerage agencies possessed market power vis-à-vis both the supply and demand side (Saritarla and Loeck 2005, p. 11). The estate agency sought buyers for the property or new tenants on a fixed, contractual basis. Due to their unique position, estate agents often made use of their right to collect a commission from both sides in the sales business (Delcours and Miller 2002, p. 12).

Real estate agents usually advertised property offers in physical sales portals, i.e. in their own shop as well as in local and national daily newspapers, under the heading: Real Estate Sales or Rentals and initiated contacts with interested parties willing to buy or rent (Baryla and Ztanpano 1995, p. 1-ff). Due to the limited transparency of physical advertising markets, real estate agencies played an important role in transmitting information to the demand side (Haag et al. 2000, p. 205). Real estate agents thus had a confidence-building function and lowered the transaction costs of real estate marketing due to personal involvement. Real estate agents usually conducted the necessary extensive viewing appointments on-site, since in many cases little detailed information could be obtained from the available advertising media (Barresi 1968, pp. 59-60).

Correspondence with sellers and buyers usually had to be conducted primarily by telephone, which was made more difficult by the limited accessibility of customers via landline telephony. Real estate agents also prepared property-related contracts in time-consuming work. For example, rental and purchase contracts had to be printed out and sent by post. Thus, real estate brokerage was often delayed or made more difficult due to existing communication barriers. A high level of commitment on the part of the real estate agent was required to maintain communication between the supply and demand sides (Epley 2001, pp. 221-224).

The role of the real estate agent in the pre-digital age was thus justified by the trust-building, information-providing, and time-intensive brokerage activity that was important for both sides. Fixed contracts ensured a secure income for estate agents. Market entry by competitors was already limited due to physical barriers.

2.2 Digitalization and effects on marketing — Through digitization and especially through the widespread distribution and use of the internet, also and especially for the distribution of goods and services, the demands on marketing communication and also the demand behavior of consumers as a whole have changed (Wigand 1997, p. 5; Dollmayer 2001, p. 12).

On the supplier level, Web 2.0 offers numerous new possibilities for product information and interaction with the consumer. For example, products are now presented via websites. In addition, video channels and social media are used to draw attention to products and to get in touch with consumers (Brynjolfsson et al. 2003, p. 1580). Marketing communication is thus no longer reserved for sales partners who have suitable sales and presentation rooms, but increasingly also takes place in direct sales (Bird 2007, p. 15ff). This leads to a „democratization“ of the sales levels: All market participants can interact on an equal footing in digital markets and make direct contact with each other (Liu et al. 2019, p. 395). For product providers, this results in a broader, always available, and international supply space, which is, however, at the same time characterized by greater complexity (Karlovit 2020, p. 13).

However, digitization and online marketing and sales also result in changes on the demand side of the market (Nunan and DiDomenico 2019, p. 469). Online media reduce the transaction costs of procurement for consumers, as online presentations can save them trips to the supplier. Buyers can obtain information about product variants and alternative procurement channels online at any time (Wind and Mahajan 2002, pp. 43-44). Search engines and comparison portals transparently compare purchasing options and prices for comparable products within

seconds, so that customers can quickly find the cheapest supplier and realistically compare prices and services in case of quality differences (Yasmin et al. 2015, pp. 69-72). However, this new freedom of choice also contributes to an intensification and higher rationality of search behavior among consumers and also often causes decision-making weakness in the face of the multitude of new alternatives that open up every day (Carbonaro and Votava 2005, p. 27f). The change in product supply and demand in the age of new digital media also leads to intermediaries having to redefine their role in the sales process (Lobato 2016, p. 348). On the one hand, the intermediary function appears to have become obsolete due to direct market access for suppliers and consumers. The classic mediating activity seems dispensable in view of the comprehensive information offered via Web 2.0. The disintermediation hypothesis states that increasing price and service transparency deprives intermediaries of the ground for mediation activities (Schoder 1999, p. 599).

On the other hand, the increasing prevalence of intermediaries in consumer goods marketing, for example, the success of sales portals such as eBay or Amazon-Marketplace, also confirms that intermediaries have taken on a new important role in the market (Giaglis et al. 2002, p. 231). Thus, intermediaries also take over the function of information evaluation and bundling in online channels by comparing and evaluating the contents of different websites, which is crucial especially due to increasing information diversity. From the customer's point of view, this reduces information complexity and simplifies and accelerates the purchase decision. Intermediaries also take on important trust-building functions in an increasingly anonymous digital world (Palmer et al. 2000, p. 1). Repeated business contacts and hedging systems reassure customers, many of whom hardly know direct suppliers. Due to reputation and image, intermediaries in the online segment can support branding and build customer trust (Sihare 2017, p. 10).

3 Real estate marketing today — In real estate marketing, too, these changes brought about by digital media are now taking concrete shape in the form of a new variety of offer spaces, new sales strategies, and an expanded target group profile. This will be illustrated with reference to examples from the Cologne/Bergisch-Gladbach area:

3.1 Diversity and integration of digital and classic offer spaces — To market real estate in the age of Web 2.0, real estate agencies have their own website and their own social media profiles as advertising platforms in addition to classic media such as newspaper advertisements. Of greater importance and reach, however, are the extensive internet portals such as ImmobilienScout24.de, Immowelt.de, Immonet.de, and many others, which, as intermediation platforms, enable the listing of properties with detailed information text, property photos, videos, and further digital pdf documents (such as floor plans or energy certificates).

Through property portals, prospective tenants and buyers receive comprehensive information on each property posted, which goes far beyond the content that can be conveyed through traditional media. Interested parties can also efficiently search online platforms based on their own requirements by means of search functions, for example by narrowing down the offer area according to flat size, contract type, location, and price. For example, ImmobilienScout24.de finds a total of 1,607 properties for rent in the Cologne region on 10.10.2021, with 431 hits for flats with two rooms or more and with at least 60m² of living space. If one also limits the search to a radius of 1 km as the crow flies from the city center, 11 hits remain for this market segment (ImmobilienScout24.de 2021/1, online).

In the hit list, properties are arranged according to uniform criteria so that a price and quality comparison can be made transparently. Intermediation platforms also offer price overviews

that reflect the price development in the past years. Interested parties thus receive a complete overview of the desired market and submarket within seconds and can effectively track the development of offers and prices by, for example, setting up search queries, which then notify property seekers of new offers by e-mail as a push service. Via service functions, market participants can determine the value of their property free of charge based on the offer histories available in the portals and thus ensure that the property is offered at a price in line with the market. For example, Immoscout24.de determines an estimated purchase price of € 615,000 for the sale of a three-room flat Cologne Am Zuckerberg 1 of 100 m² on 22.10.2021, with 7,950 potential buyers registered on the portal. The report, which is automatically generated by the portal, also shows price ranges of between €473,000 and €880,000, depending on the standard of fittings, and indicates that there has been an average market price increase of 9.9% over the period 2020/21. (Immobilienscout24.de 2021/2, online).

3.2 New digital sales strategies for real estate agencies — In digital real estate intermediation portals, real estate agencies are also given extensive opportunities to present their own business and benefit from new contact possibilities to real estate providers and enquirers. For example, eighteen real estate agents in the 50668 Cologne region will present themselves via immobilienscout24.de on 10.10.2021, each with an agency photo, the number of their currently active advertisements, the proportion of their sales advertisements, and with a rating ranking of customers, reference objects and recommendation rate. From the agent profile, one can directly access one's advertisements on the website (Immobilienscout24.de/3 2021, online). Real estate agents can forward to their own website. Thus, digital interaction platforms enable real estate agencies to have an additional advertising presence and thus expand the potential of acquiring new customers (Shaw 2020, p. 1037). Real estate agencies also have the opportunity to directly contact direct sellers who advertise via the intermediation portals and offer their services (Kaur 2019, p. 147). For this purpose, telephone or email contact is available for each advertiser via an internal encrypted email of the intermediation website. Chat messages can be exchanged there. Access to the customer is thus made possible barrier-free and directly around the clock. Digital media also enable private providers to communicate directly in the same way. Real estate agencies are required to prove their expertise in real estate sales by presenting their competencies online to acquire customers. This is achieved through the professional presentation of the acquired real estate offers, for example through complete informative text documents and professional property photos (Sittler 2017, p. 1ff). The agency's profile can be presented partly via the intermediary's website, but more comprehensively via the agency's own linked websites or websites that can be found directly in the search engine. Through search engine optimization of their website or commercial search engine marketing, real estate agencies can acquire customers directly. For example, using the keyword combination „Immobilien Bergisch-Gladbach“, a list of more than 100 real estate agencies in the region can be found via Google Maps, each with their regional location, opening hours, contact details, website, and (after activation) the Google rating on a scale from 1 (minimum) to 5 (top), along with text comments by customers and interested parties. Knigge-Immobilien in Bergisch-Gladbach, for example, achieved a ranking of 4.3 in 37 Google ratings, with prospective buyers praising competence, reliability, and service in particular, but criticizing a lack of accessibility in some cases (Google.com 2021/1, online). Real estate providers can thus use digital media to expand their sales concept to include new channels and combine classic (telephone contact, office) with digital (website, search engine presence, and intermediation portal use) marketing strategies (Ying 2020, p. 1501). Thus, cus-

tomers can be reached via an expanded channel portfolio and thus more intensively, i.e. with higher information density and contact frequency than in the pre-digital age of real estate marketing. Real estate advertisements are basically visible to users from all over the world. This increases the potential clientele for the rental and purchase market. For example, an estate agent's offer from Bergisch-Gladbach could also be accessed by a prospective tenant who currently lives in Singapore but will soon be starting a job in the Cologne region. Due to the virtual property presentation with photographic images and videos of the property, a contract could already be initiated from Singapore via digital media, as a realistic impression can be conveyed. Via mobile media, the agent could also offer a live tour of the property filmed and transmitted via mobile phone. If appropriate collateral is provided, the agent could also process the contract via digital media (Shepard 2020, p. 120). The new tenant could then move into the property immediately upon arrival in Germany. Digital media thus save transaction costs for both the provider and the demanding party. Of course, the digital marketing of real estate requires paired internet and real estate expertise, which is why real estate landlords and sellers should rely on competent agencies to a greater extent than before.

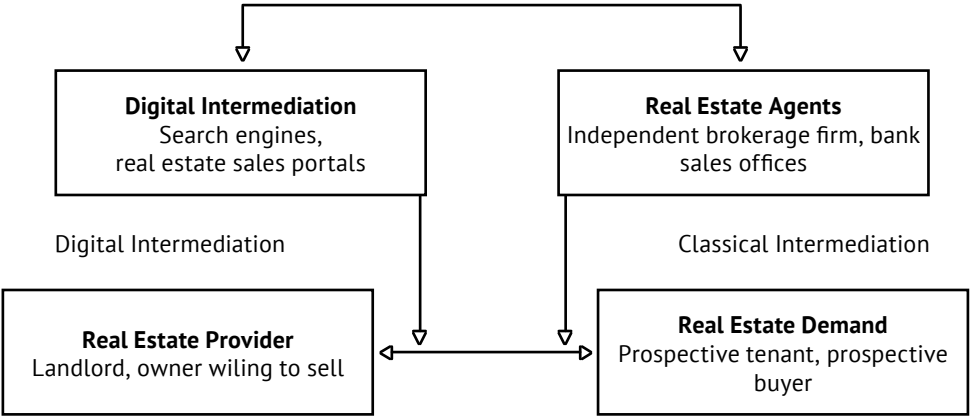


Figure 2: Real estate marketing as multimedia intermediation in the digital age
Source: Author

From the explanations of current strategies of real estate marketing via digital media, it becomes clear that the intermediation level in real estate marketing has significantly expanded via search engines and real estate brokerage portals and that a new virtual sales level has been added for providers, buyers and real estate agencies (Sawyer et al. 2014, p. 40). This increases market transparency and the intensity of interaction and thus reduces the transaction costs of contract initiation. Real estate agencies benefit from the greater reach of their intermediation activities but are also required to deal intensively with new technologies to hold their own in an increasingly digital competitive environment (Kumar 2014, p. 17).

4 Perspectives of real estate marketing

4.1 Video streaming technologies — Digital online technologies that can also be used for real estate marketing are developing rapidly. Already today, real estate is marketed using property videos and, in the case of new buildings, employing graphic video simulations that can be viewed online. Thus, in the future, marketing via video channels such as YouTube could become even more important, which is already the norm today for mass-produced products such as consumer goods and vehicles (Valjus et al. 2012, p. 331). Here, promotional videos, product reviews, and documentaries are posted via video channels, which can then be rated, liked, and shared by users. Due to the even more extensive three-dimensional and dynamic presentation via videos, interested parties can thus be reached even more actively (Wong-kitrungrueng 2020, p. 488).

4.2 Social media marketing — Social media marketing could also become even more important for the real estate sector in this context. Already today, so-called influencers are used to review and promote consumer goods online (O'Neill 2019, p. 42). Influencers are well-connected personalities in the online community who create and post videos themselves (Bakshy et al. 2011, p. 65). They receive incentives from providers for presenting the advertised object. Consumers are easily reached and influenced by this channel due to the authentic effect and personal interaction with influencers (Levin 2020, p. 19ff). In real estate marketing, influencers could visit properties as sample prospects and then post the property tour together with their personal documentation online. This marketing strategy is particularly suitable for larger new construction projects that address a broad customer base and are also marketed internationally over a longer period (Gopy-Ramdhany and Seetanah 2022, n. p.).

4.3 The increasing importance of real estate brands and trust-building — Due to the development of the internet as a central marketing platform for real estate and the internationalization of the real estate market, the importance of real estate-related brands has already increased. These include, above all, brands of renowned real estate agencies. With increasing market transparency, providers usually only succeed in differentiating themselves through memorable attributes that anchor the property succinctly in the consumer's memory. Conversely, an adequate internet presentation, e.g. using a virtual 3D tour, contributes to the establishment of brand concepts. Due to the permanence of property communication via the internet – even properties that have already been sold can still be accessed by those interested in new properties – the brand concept is given continuity and a historical reference. Users are motivated by internet communication, e.g. on social media portals, to relate to the property emotionally and to present themselves socially. This also strengthens the brand concept in real estate (Hamilton and Gunesh 2003, p. 1).

Up to now, real estate brands have primarily been used by large providers who have the corresponding marketing know-how within the company. Since large companies offer a higher project volume, it is easier for them to establish an efficient brand concept with umbrella and sub-brands than for small providers who only sell a few properties (Meyers 2010, p. 77). Especially for smaller real estate providers, the establishment of a meaningful brand concept represents an opportunity to assert themselves in an existing market dominated by large providers (Meyers 2010, p. 76).

4.4 Outlook and need for further adaptation — Due to the rapid development of digital technologies, the real estate market is constantly changing. Real estate providers are challenged to deal with ever new technologies of property presentation and customer acquisition

to remain competitive and position real estate projects at attractive prices. Property sellers and landlords can therefore benefit to an ever greater extent from professional agents who are familiar with the latest technologies and offer a broad property portfolio online. Especially in internet marketing, professional real estate agents can contribute to building trust between sellers and buyers and increase the value of the advertised properties by establishing a sales brand.

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Kľúčové slová | Key Words — real estate marketing, development, digitalization
realitný marketing, rozvoj, digitalizácia

JEL klasifikácia | JEL Classification — M31

Résumé — Rozvoj realitného marketingu – trendy do budúcnosti

Realitný marketing sa za posledných dvadsať rokov zásadne zmenil najmä vďaka digitálnym technológiám. V dôsledku dostupnosti online platforiem ako sprostredkovateľských webových stránok sa zvýšila zložitnosť interakčných vzťahov medzi poskytovateľmi, záujemcami a realitnými agentmi. Štúdia vychádza z pohľadu realitných maklérov a na príklade trhu Kolín/Bergisch-Gladbach demonštruje, aký nový potenciál ponúkajú digitálne kanály pre dosah a intenzitu realitného marketingu. Realitné kancelárie stoja pred výzvou technologicky sa vyvíjať, no potom majú k dispozícii širší inventár marketingových kanálov a možností prezentácie. V budúcnosti by mohli sociálne médiá a platformy na streamovanie videa ešte viac zintenzívniť revolúciu v marketingu nehnuteľností a ponúknuť ďalší potenciál proaktívnym poskytovateľom, najmä pokiaľ ide o tvorbu značky nehnuteľností a medzinárodný predaj.

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Recenzované | Reviewed — 8. November 2021 / 17. November 2021

LETO 2020 A INTENCIA CESTOVAŤ NA DOVOLENKU PO VYPUKNUTÍ PANDÉMIE: ANALÝZA ZISTENÍ VYBRANÝCH VEDECKÝCH ŠTÚDIÍ

Cieľom príspevku bola analýza vedeckých prác, ktoré sa venovali výskumu intencie cestovať na letnú dovolenku v lete 2020 po prvej vlne pandémie. Na základe prehľadu vybraných publikovaných zistení možno konštatovať: približne jedna pätina až jedna tretina opytovaných prejavila intenciu necestovať v aktuálnom roku, nízku intenciu cestovať vyjadřili staršie osoby a s horším zdravotným stavom a vyššiu muži, zamestnané osoby, osoby s vyšším príjmom a osoby, ktoré sú ochotné viac minúť. Zo psychologických faktorov sa ako negatívny činiteľ intencie cestovať javila cestovná úzkosť, obavy a zhoršená schopnosť vyhnúť sa neistote vyplývajúca zo zdravotnej krízy. Naopak, zistený bol pozitívny efekt intencie cestovať v zmysle, že pozitívne emócie, ktoré prináša cestovanie, môžu u niektorých ľudí prevážiť potenciálne riziko nákazy spojené s cestovaním. Ochota prijať nefarmaceutické opatrenia akými sú nosenie masky a podobne, ktoré môžu oddialiť prepuknutie choroby a znížiť celkový počet infekcií, pozitívne ovplyvňovala intenciu cestovať.

Úvod — Od marca 2020, kedy vyhlásila Svetová zdravotnícka organizácia (WHO) globálny pandemický status pre COVID-19, sa podstatne zmenil život vo všetkých oblastiach. Globálny pandemický status znamená, že choroba je rozšírená na celom svete, na celú svetovú populáciu, kdekoľvek môže byť hociktorá krajina infikovaná. Na základe odporúčaní WHO na zníženie šírenia infekcie bola zavedená politika fyzického dištancovania a vyhýbanie sa zhromažďovaniu na jednom mieste. To postihlo všetky oblasti, avšak cestovný ruch, ktorý je veľmi zraniteľné odvetvie, je považovaný za najviac postihnutý. Pretože samotné realizovanie ciest a skutočné počty cestujúcich boli pandemiou ovplyvnené, objektom záujmu výskumníkov v cestovnom ruchu sa stal jeden z významných subjektívnych faktorov ovplyvňujúcich správanie v čase pandémie – intencia (zámer, úmysel) cestovať. A vzhľadom na pretrvávanie pandémie vo forme „vln“, uskutočnenie výskumu intencie cestovať v čase kulminácie vlny pred letnou sezónou a jej faktorov poskytlo zaujímavé výsledky počas 2 období: výskum intencie cestovať približne 3 mesiace pred sezónou v lete 2020 a podobne o rok neskôr, v lete 2021. V tejto práci uvidíme výsledky analýzy štúdií, ktoré sa týkali intencie cestovať v lete v roku 2020, zisťovanej v marci až júli 2020. Štúdie, ktoré sa týkali výskumu intencie cestovať v lete 2021 zatiaľ neboli publikované v dostatočnom počte, preto ich analýza do tohto príspevku nie je zahrnutá. Podstatu pojmu intencia, teórie vysvetľujúce vzťah intencie a správania a činitele intencie uskutočniť dovolenkový pobyt v čase pandémie, sme podrobne opísali v našej predchádzajúcej štúdií (Ňakatová 2021). Na tomto mieste iba stručne zhrnieme, že pod behaviorálnou intenciou

sú chápané pokyny, ktoré si ľudia dávajú, aby sa správali určitým spôsobom (Triandis 1980). Zároveň pripomíname, že intencia nie je totožná so skutočným správaním, predpokladá sa, že vysvetľuje menej ako 30% variácie v skutočnom správaní (Sheeran 2002), a preto intenciu cestovať nemožno považovať za ukazovateľ skutočne realizovaných ciest. Napriek tomu, poznať zámery a úmysly turistov cestovného ruchu cestovať, zvlášť v čase pandémie a identifikovať ich faktory, je treba považovať za užitočné.

Metodika — Za účelom vyhľadania publikovaných výskumov boli analyzované vedecké štúdie evidované v databázach WOS, SCOPUS, Ebsco a Google Scholar. Obmedzenie vyhľadávania sa vzťahovalo na rok 2020 a 2021 a použité boli nasledovné slovné spojenia: „Holiday intentions during a pandemic“, „COVID 19 and holiday intentions“ a „COVID 19 and tourism“. Z nájdených štúdií bolo 36 analyzovaných podrobnejšie tak, aby zohľadňovali realizáciu výskumu približne 4 mesiace pred letnou sezónou 2020. Výsledkom je 13 štúdií, ktorých obsah uvádzame ďalej.

Výsledky výskumov intencie cestovať na dovolenku v lete 2020 — Tri analyzované výskumy intencie cestovať sa týkali počtu osôb vyjadreného ako percento opytovanej vzorky. Autori Kourgiantakis a kol. (2020) uskutočnili výskum na ostrove Kréta v čase od 23. do 27. apríla 2020 s použitím online dotazníka. V čase výskumu bolo na celom ostrove potvrdených iba 15 prípadov COVID-19. Zistenia ukázali, že pandémia spôsobila medzi respondentmi značnú neistotu. Približne tretina (28,7%) uviedla, že svoje plány letných dovolení už zrušila, zatiaľ čo väčšina (44,9%) sa ešte nerozhodla. Iba malá časť (17,5%) tvrdila, že bude pokračovať v plánovaní letnej dovolenky, aj keď s určitými úpravami. Čo sa týkalo intencie cestovať, väčšina respondentov potvrdila svoj zámer vycestovať na dovolenku počas leta (22,6%) a po lete až do vianočného obdobia (19,7%). Významné percento účastníkov plánovalo vycestovať niekedy v priebehu aktuálneho roka (29,1%) a iba menšia časť (28,7%) neprejavila v aktuálnom roku intenciu cestovať na dovolenku vôbec. Zo zistení autorov vyplynulo, že COVID-19 bol najdôležitejším faktorom ovplyvňujúcim rozhodnutia pri plánovaní dovolenky. Dokonca finančná situácia (rozpočet domácnosti) má menší (aj keď stále významný) vplyv na budúce cestovné intencie respondentov.

Zistiť, koľko osôb chce cestovať na dovolenku po pandémii, bolo cieľom výskumu ďalších autorov. Wachyuni a Kusumaningrum (2020) realizovali zber údajov pomocou online dotazníkov prostredníctvom WhatsApp v priebehu marca a apríla 2020. Údaje získané výskumom spracovali jednoduchou kvantitatívnu analýzou. Výsledky naznačujú, že až 78% respondentov vycestuje po skončení pandémie a iba 19% uviedlo, že sa k cestovaniu nevráti a 3% odpovedali, že nie sú rozhodnutí. Na základe výsledkov štúdie autori konštatovali, že existuje stále vášeň a optimizmus, že cestovný ruch sa obnoví rýchlejšie, pretože väčšina respondentov v tejto štúdií plánovala, kedy a kam budú cestovať, a to bezprostredne (0 – 6) mesiacov po skončení pandémie COVID-19.

Tretia štúdia autorov Li a kol. (2020) bola uskutočnená v Číne a položila dôraz na voľbu dopravy a zistenie percentuálneho zastúpenia jej druhov. Prieskum bol ukončený 9. februára 2020 – posledný deň povinnej národnej karantény. Zistilo sa, že respondenti majú v úmysle urobiť značné zmeny v cestovnom správaní v dôsledku prepuknutia nákazy COVID-19. Napríklad železničná doprava bola najobľúbenejším spôsobom prepravy na domáce cestovanie pred vypuknutím choroby (38,5%), ale po epidémii plánovalo použitie tohto dopravného prostriedku menej respondentov (25,4%). Podobne sa znížil podiel respondentov ochotných cestovať autobusom zo 7,1% na 4,3%. Cestovanie leteckou dopravou preukázalo iba malú úroveň poklesu pravdepodobne v dôsledku spoliehania sa ľudí na leteckú dopravu v krajine veľkej ako Čína.

K najvýznamnejšej zmene došlo v cestovaní autom, z 25,4% pred epidémiou na 41,2% plánovaných ciest autom po epidémii.

Významný počet publikovaných štúdií sa týkal sociálno-demografických faktorov, ktoré majú vzťah k intencii cestovať. Z nich uvádzame nasledovné štyri. Peluso a Pichierri (2020) skúmali dopad pandémie na reakcie turistov v máji 2020 počas druhej fázy tzv. zdravotnej krízy v Taliansku. Ich výskum sa zameriaval na sériu sociálno-demografických premenných – vek, pohlavie, vzdelanie, príjem, zdravotný stav a počet detí – s cieľom preskúmať ich vplyv na zmysel pre kontrolu nad situáciou, ako schopnosť vyhnúť sa neistote vyplývajúcej zo zdravotnej krízy a na zisťovanie intencie cestovať na dovolenku. Počas druhej fázy sa väčšina podnikov znovu rozbehla a ľudia sa mohli fyzicky stretávať a cestovať v rámci domácich hraníc, pri dodržaní pravidiel sociálnej dištancie a osobnej ochrany. Autori zistili, že starší respondenti a ľudia s horším zdravotným stavom majú pocit, že nedokážu mať veci pod kontrolou, a preto majú tendenciu vyhnúť sa situačnej neistote súvisiacej s pandemiou; tento pocit znižuje ich úmysel cestovať na dovolenku aj bezprostredne po skončení pandémie. Získané výsledky tak odhaľujú reťazec, prostredníctvom ktorého môže vek a zdravotný stav ovplyvňovať intenciu jednotlivcov cestovanie aj po pandémii.

Pappas (2021) publikoval výskum dovolenkovej intencie obyvateľov Grécka, išlo o 385 dospelých respondentov s trvalým pobytom v Aténach. Výskum bol vykonaný od 23. marca do 4. mája 2020, keď celá krajina bola uzatvorená. Výsledky naznačujú, že pri intencii cestovať na dovolenku v čase pandémie zohráva u respondentov úlohu vek: čím sú ľudia starší, tým je vyššie riziko úmrtí na COVID-19, preto sa starší ľudia budú pravdepodobne oveľa viac obávať rizík spojených s cestovaním. Druhým zistením bolo, že intenciu cestovať na dovolenku ovplyvňuje kombinácia podmienok, ktoré okrem veku tvoria príjem, psychologický vplyv COVID-19 a ekonomický vplyv COVID-19. Autori upozorňujú na niekoľko špecifik realizovaného výskumu: Po prvé, je to prvýkrát v modernej ére, čo odvetvie cestovného ruchu čelí takej rozsiahlej a ničivej kríze. Druhé obmedzenie vyplýva z prostredia realizovaného výskumu. Bol vykonaný v čase silného uzatvorenia dôležitej turistickej destinácie, ktorou Atény sú a ktorá je silne závislá od cestovného ruchu a už viac ako desať rokov bojuje aj s hospodárskou krízou.

Boto-García a Leoni (2021) skúmali v mesiaci jún 2020 vplyv COVID-19 na cestovateľské zábery ľudí počas leta na reprezentatívnej vzorke 3873 respondentov. Dáta boli zbierané v Španielsku, jednej z krajín s najvyššou mierou infekcie a úmrtnosti v danej dobe. Zber dát sa uskutočnil v 1416 obciach v 52 španielskych provinciách. Výsledky naznačujú, že väčšiu ochotu ísť na dovolenku v lete 2020 prejavili muži a zamestnaní respondenti. Okrem toho cestovné intencie súvisia s expozíciou COVID-19, ktorú definujú na dvoch úrovniach: 1. zónová expozícia podľa stupňa obmedzení uložených v zóne, kde respondent žije a 2. individuálna podľa toho, či jednotlivec osobne trpel príznakmi COVID-19. Výsledky ukázali väčšiu cestovnú intenciu medzi tými, ktorí boli viac vystavení COVID-19, či už osobne alebo na zónovej úrovni. Zistenia autorov naznačujú, že cestovanie môže pôsobiť ako prostriedok na uvoľnenie stresu, ktorý pomáha ľuďom zotaviť sa zo zlých udalostí, že pozitívne emócie hľadanie vzrušenia, ktoré prináša cestovný ruch, môžu u niektorých ľudí prevážiť potenciálne riziko nákazy spojené s cestovaním.

To či budú mať klienti po pandémii intenciu cestovať na dovolenkové pobyty, zisťovali Ivanová a kol. (2020) u bulharských turistov v postpandemickom období. Údaje zhromažďovali od 7. apríla do 7. mája 2020. Výskumom bolo zistených viacero charakteristík postpandemického cestovného správania Bulharov: väčšina respondentov je pripravená na opätovné začatie cestovania do 2 mesiacov po povolení cestovať, pri svojej prvej ceste plánujú cestovať po krajine autom a so svojimi rodinami, ľudia s nižším príjmom budú cestovať hlavne autobusom alebo lietadlom na pobyty organizované cestovnými kancelárkami, ak sú tieto povolené a dostupné. Bulhari si vyberú destinácie podľa úrovne hygieny a bezpečnosti a respondenti viac oceňujú

destinácie s najspoľahlivejším zdravotným systémom a spoľahlivými dezinfekčnými systémami v ubytovacích zariadeniach cieľového miesta.

Ďalšie tri štúdie sa týkali psychologických faktorov, ktoré majú vzťah k intencii cestovať v čase pandémie. To, ako ovplyvňuje vnímanie rizika vypuknutie nového koronavírusu a s tým spojené vyhlásenie pandémie COVID-19 správanie sa turistov, skúmali Neuburger a Egger (2020). Výskum uskutočnili v regióne DACH (Nemecko, Rakúsko a Švajčiarsko) ako dôležitého trhu cestovného ruchu a po Taliansku druhého regiónu, ktorý bol výrazne zasiahnutý COVID-19. Výskum bol vykonaný v dvoch časových úsekoch v marci 2020, hneď po vypuknutí pandémie od 1. do 4. marca, vzorka pozostávala z 1158 respondentov a od 15. do 19. marca, vzorku tvorilo 212 respondentov. Aj keď výskum bol uskutočnený v dvoch termínoch relatívne krátkeho časového rozsahu, výsledky ukázali, že aj za tak krátky časový úsek sa môže zmeniť vnímanie rizika spojeného s pandemiou a dokonca môže viesť až k cestovnej úzkosti, ktorá intenciu cestovania do destinácie významným spôsobom ovplyvní.

Perič a kol. (2021) skúmali vplyv vnímania rizika srbských turistov na ich intenciu cestovať počas pandémie COVID-19. Výskum bol realizovaný v období od 18. mája do 24. mája 2020 na vzorke 348 respondentov prostredníctvom online dotazníka. Identifikovali päť kategórií vnímaného rizika ovplyvňujúceho cestovateľské intencie počas pandémie COVID-19: zdravotné riziko, psychologické riziko, finančné riziko, riziko destinácie a cestovné riziko. Logistická regresia bola použitá na preskúmanie spôsobu, akým vnímanie rizika ovplyvňuje intenciu a ciele cestovania počas pandémie COVID-19. Zistenia výskumu naznačujú, že vnímanie rizík (zdravotné, psychologické, finančné a destinácie riziká) medzi srbskými turistami negatívne ovplyvňuje ich cestovateľské intencie počas pandémie COVID-19.

Golets a kol. (2021) uskutočnili štúdiu na začiatku pandémie v Brazílii a ich cieľom bolo preskúmať úlohu vnímania zdravotných rizík a neznášaní neistoty v súvislosti s cestovnými intenciami na roky 2020 a 2021. Online prieskum na 1150 brazílskych účastníkoch bol vykonaný v čase od 5. apríla do 5. mája 2020. Štúdia odhalila, že vnímaná závažnosť ochorenia COVID-19, pravdepodobnosť infikovania sa a predpokladané trvanie pandémie boli najvplyvnejšími faktormi intencie cestovať na roky 2020 a 2021. Cestovateľské skúsenosti a príjmy sa javia byť relevantné aj v období, ktoré účastníci vnímajú ako pokrízové (rok 2021).

Ďalšie dve štúdie sa týkali nefarmaceutických opatrení v súvislosti s COVID-19. Das a Tiwari (2020) zisťovali rozdiely vo vnímaní závažnosti COVID-19 a ochoty turistov prijať osobné nefarmaceutické opatrenia. Išlo o opatrenia odlišné od takých, ako sú vakcíny alebo lieky: nosenie masky, hygiena rúk, hygiena dýchania, izolácia a sociálne dištancovanie, ktoré môžu oddialiť prepuknutie choroby a znížiť celkový počet infekcií. Cieľovou populáciou boli India s intenciou cestovať počas COVID-19 po zrušení cestovných obmedzení a zber dát sa konal po celej Indii počas druhého a tretieho májového týždňa 2020. Tento konkrétny časový rámec na zber údajov autori vybrali zámerne, pretože v tomto období existovali predpoklady týkajúce sa zmiernenia cestných, železničných a leteckých obmedzení. Výsledky výskumu ukázali, že vnímaná závažnosť COVID-19 nepriamo ovplyvňovala intenciu cestovať prostredníctvom ochoty prijať nefarmaceutické opatrenia. Štúdia odhaľuje, že domáci aj medzinárodní turisti vnímajú riziko spojené s cestovaním odlišne a majú aj odlišné intencie a správanie, ktoré je umocnené mediálnym pokrytím a verejne prezentovanými názormi odborníkov na závažnosť ochorenia. Z výskumu vyplynulo, že intencia vycestovať počas pandémie COVID-19 je odolná, pretože cestujúci, ktorí majú v úmysle vycestovať do zahraničia alebo v rámci krajiny, považujú nefarmaceutické opatrenia (PNPI) za možné preventívne správanie, ktoré môže znížiť riziko nákazy počas cestovania.

Aj nasledujúca štúdia Liu a kol. (2021) u čínskych turistov skúmala faktory, ktoré ovplyvňujú postpandemické intencie cestovať v súvislosti s nefarmaceutickými intervenciami. Výskum bol

uskutočnený v čase od 20. júna do 10. júla 2020 na vzorke 508 respondentov. Výsledky ukázali, že hoci COVID-19 priamo a negatívne ovplyvňuje cestovateľské zámery do zahraničia, má aj nepriamy vplyv na cestovné zámery prostredníctvom účinku nefarmaceutických intervencií. Prínosom tejto štúdie je, že vyvinula rozšírený model TPB pridaním ďalších konštruktov do modelu TPB.

Na záver chceme uviesť štúdiu Štracha (2021), ktorá síce priamo nepracuje s konštruktom „intencia cestovať“ v čase pandémie, ale prispieva k pochopeniu správania sa turistov cestovného ruchu tým, že opisuje, ako sa mení správanie spotrebiteľov a identifikuje nové segmenty a kritériá segmentácie. Podľa autora, globálna mapa marketingu, marketingovej komunikácie a spotrebiteľského správania sa rýchlo a na neurčito zmenila. Objavili sa nové segmenty a ich veľkosti sa menia pomerne rýchlo, keď prichádzajú a odchádzajú vlny pandémie. Uvádza tri alternatívy tvorby segmentov spotrebiteľov a za zaujímavú považujeme prvú, ktorú autor charakterizoval ako štruktúru, ktorú budú tvoriť nasledovné segmenty, ktoré majú vplyv na spotrebiteľské výdavky. Segment „Hybernácia a výdavky“ je znepokojený vplyvom. Nakupujú však rovnako ako predtým a značky sú pre nich stále dôležité. Spotrebiteľia „Cut Deep“ sú väčšinou starší (45 rokov plus) a hrozí im, že prídu o prácu. Veľká väčšina z nich nakupuje menej často a nakupuje len základné zásoby. Značky sú pre nich menej dôležité. Segment s označením „Ušetrite a skladujte“ znižuje výdavky na voľný čas a oblečenie, idú na nákup potravín a zabezpečujú sa tak, aby mali dostatok základných vecí na nasledujúci rok. „Hromadenie škrečkov“ je segment znepokojených svojimi rodinami a dlhodobými účinkami pandémie. Segment „Zostaňte pokojní, pokračujte“ sa snaží uplatňovať normálne spotrebiteľské správanie a viesť svoj život nezmenený. Ak sa tento segment obáva o čokoľvek, potom je to hromadenie a nezvyčajné správanie ostatných. Na základe pochopenia týchto segmentov možno formulovať hypotézy o intenciách podmienených odlišným typom osôb, ktoré k uvedeným segmentom patria. A osádza na budúci výskum formuláciu týchto hypotéz konkretizovať a výskumne testovať.

Poznámky | Notes — Táto štúdia bola podporená Agentúrou na podporu výskumu a vývoja v rámci projektu APVV-17-0166: „Ekonomické a psychologické faktory výdavkov turistov v cestovnom ruchu: mikroekonometrické modelovanie“

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Kľúčové slová | Key Words — intencia, cestovné správanie, vnímanie rizika, pandémie *intention, travel behavior, risk perception, pandemic*

JEL klasifikácia | JEL Classification — M31

Résumé — Summer 2020 and intention to travel on holiday after the pandemic outbreak: Analysis of findings of selected scientific studies

The aim of the paper was to analyze the scientific works that focused on the research of intention to travel on summer holiday in the summer of 2020 after the first wave of pandemic. Based on an overview of selected published findings, it can be stated: approximately one-fifth to one-third of respondents expressed an intention not to travel in the current year, low intention to travel was expressed by older people with poorer health and higher intention by men, employed people, people with higher income and people who are willing to spend more. From the psychological factors, travel anxiety, worries and a worsened ability to avoid the uncertainty resulting from the health crisis appeared to be a negative factor in the intention to travel. On the contrary, a positive effect of intention to travel has been found in the sense that the positive emotions that travel brings may outweigh the potential risk of travel-related infection in some people. The willingness to accept non-pharmaceutical measures, such as wearing a mask and the like, which can delay the onset of the disease and reduce the total number of infections, has had a positive effect on travel.

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Recenzované | Reviewed — 4. December 2021 / 8. December 2021

PERSONAS CREATION USING GOOGLE ANALYTICS

This case study investigates how a marketing persona may be created with the use of data gathered by cookies and with the use of Google Analytics. The data gathered originates from the largest IT e-learning platform VITA. The basis of our research was measurement in the Google Analytics tool and the WooCommerce plug-in within the WordPress content management system. Our case study shows how a marketing persona may be created and recommends that once such a persona is created it needs to be validated repeatedly with data on real customers before it may be used for marketing purposes.

Introduction — Marketing personas are a useful way to create a relatable and understandable representation of a target group. This persona always needs to be created by the use of significant amounts of qualitative and quantitative data. The most common approach in the online sphere is to gather this data with the use of cookies and analyze it with online analytics services. Although it is a very common practice, companies and students alike can be found to lack understanding of this topic, especially combined with the use of marketing personas. This topic is further complicated by regulation relating to personal data, especially the General Data Protection Regulation (GDPR). In this paper we are therefore going to investigate this legislation in relation to the use of cookies and analytics tools of Google Analytics and create a persona based on data gathered by the VITA e-learning platform about its users.

Our research questions are:

1. What user data do companies have available?
2. How traffic data from Google Analytics can be used to create personas?
3. What are the differences between male and female visitors to the VITA e-learning?
4. Who is the ideal visitor (persona) of the VITA platform?
5. Is it true, based on data from VITA, that buyer and audience personas are not the same?

In the first chapter we are going to review available literature on GDPR and personal data, cookies, Google Analytics and personas. The second chapter is where the reader can find information on the methodology that was used in the creation of a persona. The paper then ends with discussion and conclusions.

1 Literature review

1.1 GDPR and personal data — The General Data Protection Regulation (GDPR) is currently the most important legislative document within the European Union, which defines what can be considered personal data, how it may be gathered and used and also the rights of the concerned persons. In §2 the law states that personal information is any data concerning the identification of a natural person that make up their physical, physiological, genetical, psychic, mental, economic, cultural or social identity (GDPR 2018). From that follows that under some circumstances personal data may be considered personal online identifiers assigned to individuals by technical devices such as IP addresses, cookies, RFID location data as well as

email addresses when they are unique and make a person identifiable. The reason for this is that this data may be used to identify the person by lawful means by simple searches online or offline (Pawera and Veselý 2018, p. 127).

Gathering personal data may only be done with explicit consent given by the concerned person. This is regulated in §14 which states that an operator may ask for consent only separately, clearly, accessibly and understandably. The operator must be able to prove at any time that consent has been given. The concerned person has the right to revoke their consent at any time and should be able to do so the same way it was given. Some aspects of this paragraph are further specified in §19. There the law obliges the operator to make information available to the concerned person before consent is given. This includes the contact information of the operator, the purpose for which data is processed, the legitimate interests of the operator or of a third party, if the operator is inclined to take the information to 3rd countries or international organisations. Additionally, information must be provided as to how long data will be stored, about the rights of the concerned person, if they are required to provide this information and what happens if they do not and if there is the existence of automated individual decision-making including profiling. When an operator is in possession of personal data, they are required to abide by the seven principles that make up the base of GDPR, Lawfulness, Purpose limitation, Data minimisation, Accuracy, Storage limitation, Integrity and confidentiality, Accountability. They are required to uphold the conditions that were stated before consent was granted and must report any changes that are going to happen to all concerned persons. As mentioned before, the concerned person may take away their consent at any time and §23 also makes it possible that they may ask for deletion of any and all of their personal data in possession of the operator, which the operator must do without delay (GDPR 2018).

1.2 Cookies and user data — Http cookies are small text files often including identifiers that are created by web servers upon connection and sent to browsers. These cookies are then sent back each time the browser requests a new webpage. This way preferences, login information, habits, browsing information and activity (HP 2018). Http cookies are widely used to manage online experiences by users. Their wide use, unique identifiers and the amount of data that is gathered makes them not only ideal for marketing purposes and website management, but also for malicious actors. While cookies are simple text files that cannot change, therefore cannot be used as viruses, they may be used for spying on users. In relation to GDPR, cookies may only be used with the consent of the concerned person apart from the most basic and necessary cookies that are required to use the service.

There are three types of cookies:

- First-party cookies – created directly by websites that a user is browsing. As long as the webpage is reputable, they may be considered safe.
- Third party cookies – cookies generated by websites that the user is not currently browsing. Most often these are advertising cookies and cookies of analytics companies. Here each different advertisement that is present on an open website may generate a cookie even if the user has never clicked on an advertisement. Afterwards these cookies may continue to track the user to any website that contains these advertisements.
- Zombie cookies – a special type of cookie, that tracks a user without their consent. This cookie is directly installed on user's device and may be automatically restored even after it was deleted. These may be also used by analytics companies, but also by the aforementioned malicious actors (Kaspersky 2021).

The use of cookies in online marketing is very significant as they are a source of large amounts

of data on the behavior of equally large numbers of users. They are a quick way of getting behavior-based feedback through for example A/B testing. They also may be used to enhance customer experiences such as offering products, services or advertisements based on the user's interest and are a way of targeting marketing activities.

Cookie name	Purpose
__utma	Stores visitor identifiers. Contains a numeric identifier. Tracking unique site visitors.
__utmb	Stores session identifiers. Calculation time-based metrics e.g. time on page, time on the web.
__utmc	Stores session identifiers. Calculation time-based metrics e.g. time on page, time on the web.
__utmz	Stores visitor identifiers. Where the visitor comes from. Tracks marketing campaigns, keywords and landing pages.
__utmv	Preserves custom variables. To store the information you want to associate with site visitors.

Table 1: Overview of cookies and their purpose
Source: Authors

1.3 Google Analytics ——— Based on Google data and the HotJar report, Google Analytics is the most widely used analytics tool in the world. There are approximately 30 million websites and applications worldwide that use Google Analytics to track and analyze traffic. Of them about 32,000 web pages are in Slovakia and their use continues to grow in the future (Trends Builtwith 2021). Google Analytics provides website owners with JavaScript tags (libraries) to record information about the page a user has seen, for example the URL of the page. The Google Analytics JavaScript libraries use HTTP cookies to „remember“ what a user has done on previous pages / interactions with the website. Google Analytics supports three JavaScript libraries (tags) for measuring website usage: gtag.js, analytics.js, and ga.js. Both versions of Google Analytics, Universal Analytics and Google Analytics 4, use first-party cookies (Google Developers 2021). Audience and behavior reports are used to analyze users' website traffic and their behavior. In our work, we are primarily interested in the Audience with subreports: Overview, Active Users, User Explorer, which we use when creating personas. In the audience, we analyze demographics and visitor behavior, how they interact with content, and what technologies they use to access the web. When processing data from Google Analytics, we use the segment as a subset of data to compile and identify a male persona (Zheng and Peltsverger 2015, p. 3).

1.4 Personas ——— A simple definition of a Persona is „a summary of the characteristics, needs, motivations and environment of a key type of web site user“. A more specific definition from the Foviance guide to segmented personas is: „A persona is a fictional character that communicates the primary characteristics of a group of users, identified and selected as a key

target through the use of segmentation data, across the company in a usable and effective manner“. We create personas based on qualitative and quantitative data about the target group and current or past customers (Smart Insights 2021). The main purpose is to predict behavior of users, based on their past behavior, to engagingly tell our marketing stories in the right tone, to the right people, and with the right words. The benefits of using personas are:

1. gain a better understanding of your ideal customer and consistent perception of who we are talking to,
2. segments/targets marketing and prioritization of product updates, improvement of services, optimization of sales techniques,
3. improves internal and external marketing processes and easy transfer of information, simple explanation to anyone else,
4. supports empathy and overcome objections of customers,
5. increases conversions a identifies negative personas.

In addition to the benefits, certain problems are also associated with personas:

1. cannot be used internationally,
2. one person will never capture the entire target group,
3. idealization of the customer.

When determining goals and finding out which persona will suit them best there are two types of personas. These are the following:

1. Buyer personas – Goal is to convert them to customers.
2. Audience personas – There are involved in the conversation with you. Goal is to share and like your content to spread your reputation and brand.

Based on Hubspot data (note [1]), on average, in up to 68% cases the buyer and audience persona are not the same persona.

2 Methodology ——— In line with the research goals, the authors used a qualitative method of the case study with cluster analysis. We analyzed data from Google Analytics about users of the largest Slovak IT online educational platform called VITA. Based on data from Google Analytics, we have compiled the following research questions:

1. What user data do companies have available?
2. How traffic data from Google Analytics can be used to create personas?
3. What are the differences between male female visitors to the VITA e-learning?
4. Who is the ideal visitor (persona) of the VITA platform?
5. Is it true, based on data from VITA, that buyer and an audience persona is not an equal persona?

The basis of our research was measurement in the Google Analytics tool and the WooCommerce plug-in within the WordPress content management system. Part of the quantitative research was the classification, i. e. sorting and segmentation of user information. Using deduction, we identified a male persona. The research sample consists of visitors to the VITA e-learning platform. These are potential clients of IT Academy, s. r. o. and VITA Company, s. r. o., based in Bratislava. The main business of these companies is education and provision of certification exams, especially in the field of information technology, marketing and management. VITA Company has an innovative educational system called VITA, which is implemented by its own e-learning portal using the WordPress content management system. VITA stands

for Virtual IT Academy. VITA Company ensures the operation, administration of the educational portal together with the sale of accredited and certified online courses. IT Academy provides the creation of online content and courses, as well as the sale of online courses or employee training. analyzed data on traffic and visitors to the e-learning platform. We analyzed the data for the period 1. 1. 2020 – 1. 1. 2021 in Google Analytics. Based on the audience data, we created 2 segments, namely the men and women segment.

Period	01.05.2020 – 01.05.2021
Users	32.156
New users	32.254
Sessions	51.628
Number of sessions per user	1.61
Page views	192,711
Pages/Session	3.73
Avg. session duration	00:13:37
Bounce rate	60.91%

Table 2: Research sample of visitors the VITA e-learning platform
Source: Authors

3 Case study – VITA — In Google Analytics, we have identified basic audience metrics for both the women's and men's segments in Figure 1. Women make up 27.76%, men 20.42% and gender could not be determined 51.82% of the total data. We found that the average session duration is nearly 13 minutes for men and nearly 9 minutes for women. For women, we also noticed a higher bounce rate and number of new users. Although the proportion of women in traffic to Google Analytics is 7.34% higher than that of men, we have decided, based on internal order data from customers, to create a male person. We compiled a persona for the men segment called Mario thoughtful.

The data showed us that the average age of an ideal male customer is 31 years old and he is employed as a programmer. Based on geographical data, we found out that the ideal customer lives in Bratislava, he likes to be educated in the category of programming languages. He is more of an introvert and an analytical type of personality. His goal is continuous education in the field of programming and obtaining certification. He often buys in e-shops and likes to travel. The most common frustrations are caused by work, data loss, or technical problems. Despite these frustrations, he would not change the job.

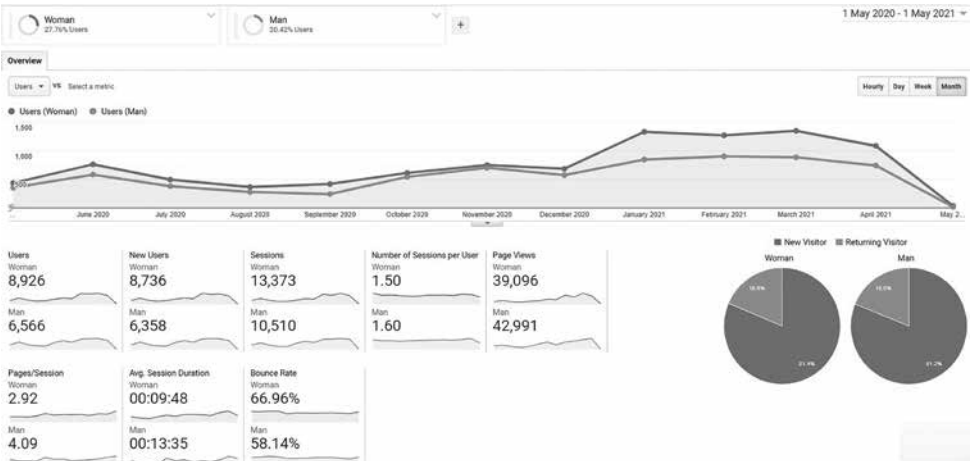


Figure 1: Basic metrics on traffic to the VITA e-learning platform
Source: Authors



Figure 2: Male person according to Google Analytics data
Source: Authors

Discussion and conclusion — Companies have access to user data from orders and analytics tools like Google Analytics (RQ1). Using cluster analysis in Audience tool, we grouped customers into clusters based on sex, demographics and behavior (RQ2). Based on data of Google Analytics, we found that the majority of visitors, up to 27%, are women, as can be seen in Figure 1. Women visit the VITA platform more often than men. Male visitors have 1.4 times higher pages/session, avg. session duration is higher by almost 4 minutes and the bounce rate is lower by about 9% for men (RQ3) The ideal male customer (buyer persona) is a man with an average age of 31, employed as a programmer who lives in Bratislava, likes to be educated in the category of programming languages. He is more of an introvert and an analytical type of personality. Its goal is continuous education in the field of programming and obtaining certification. He often buys in e-shops and likes to travel. The most common frustrations are caused by work, data loss, or technical problems. Despite these frustrations, he would not change the job (RQ4). Based on qualitative research and data analysis, we recommend implementing the creation of people based on data from Google Analytics and compare them with data from real customer orders, so we can better target users and satisfy their requirements and needs. Personas are used to better target ads, adapt the content of online courses to the needs of customers. We confirm the information from Hubspot based on data from VITA that the buyer and an audience person is not an equal person (RQ5).

Poznámky | Notes — [1] <https://blog.hubspot.com/marketing/buyer-persona-research>. The research was conducted in accordance with the objectives of the VEGA 1/0737/20 grant project called Consumer Literacy and Changes in Consumer Preferences when Buying Slovak Products.

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Kľúčové slová | Key Words — GDPR, personal data, user data, cookies, Google Analytics, personas, marketing

GDPR, osobné údaje, používateľské údaje, cookies, Google Analytics, osoby, marketing

JEL klasifikácia | JEL Classification — C8, M31, M37

Résumé — **Tvorba persón s využitím Google Analytics**

Táto prípadová štúdia skúma, ako možno vytvoriť marketingovú osobu pomocou údajov zhromaždených použitím súborov cookie a pomocou služby Google Analytics. Zobierané údaje pochádzajú z najväčšej IT e-learningovej platformy VITA. Základom nášho výskumu bolo meranie v nástroji Google Analytics a v module WooCommerce v rámci redakčného systému WordPress. Naša prípadová štúdia ukazuje, ako môže byť vytvorená marketingová osobnosť, a odporúča, aby sa po vytvorení takejto osoby opakovane overili údaje na skutočných zákazníkoch predtým, ako ju možno použiť na marketingové účely.

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Recenzované | Reviewed — 10. September 2021 / 25. September 2021

A REVIEW OF NEUROMARKETING ORIGINS AS A NEW MARKETING RESEARCH METHOD

We give a literature review of neuromarketing and the origins of its emergence as a new marketing research method. We attempted to establish a general descriptive summary of relevant literature that stresses the definition of neuromarketing as a new marketing discipline and retraces its origins and foundations since and before the advent of neuro-economics, as the latter is considered to be a precursor. The purpose of this paper is to define what neuromarketing is from the point of view of academics and practitioners, how and when it started to chart its path into academia and the business world, by drawing attention to the ever first attempts to use uncommon neuroscience tools to assess consumer's behavior. This paper draws a timeline of neuromarketing origins and a summary of the first attempts of consumer's behavior observations, which relied on neural and physiological responses.

Introduction — The human being tends to resist change, and any change is difficult at first, as writer Robin Sharma points out: „all change is hard at the beginning, complicate in the middle, and beautiful at the end.” In this way was the path of neuroscience to unite with marketing and create neuromarketing. Neuroscience, like any new and controversial field, has struggled for the past 18 years to pave its way into marketing and consumer studies, and to achieve a certain degree of credibility and acceptance (Harris et al. 2018). This period was characterized by a relentless effort to achieve a better understanding of human behavior, an effort which resulted in the emergence of a symbiosis between the biological and social sciences. This unique and controversial marriage has gradually contributed to generating valuable insights relating to marketing and consumer behavior studies (Agarwal and Dutta 2015; Plassmann et al. 2015). This emergence of neuroscience to marketing was imminent because of the limitations and drawbacks of traditional methods used in the study and observation of consumer behavior, based mainly on oral information and self-assessments' declared by respondents, researchers had therefore yielded to the need for a more effective way to work around these limits, and which could offer a better understanding of consumer behavior. Indeed, neuroscience is a field that seeks to understand the structure and function of the human brain, how it encodes and represents the environment around it, and how it controls the body and provides theoretical frameworks to assess the correlations between the brain and behavioral states, in order to understand the causal links between the stimulus and the response (Perrachione and Perrachione 2008). Cognitive neuroscience studies consumer behavior, with the aim of achieving a better understanding of brain mechanisms underlying certain functions such as: reasoning, decision-making, emotion and memory, these brain functions go hand in hand with marketing concepts like ad response and brand loyalty. Thus, neuroscience has

made a place in marketing to study with much more precision, the neural mechanisms of individuals exposed to marketing actions and stimuli.

From an academic point of view, studying and knowing history is very important. History is mirrored with dimensional roots that provides the memory of the past and retrace the meaning of a given phenomenon over time (Black and MacRaild 2017). This traceability that historical studies offer allows researchers to establish patterns from the past and provides them with data to create the future. And in marketing, it is always crucial to keep an eye on that „rearview mirror” for a better understanding of the current and the future marketing issues/novelties, to add up a vigorous quality to the field, and permits its scholars as well as society as a whole, to build up an understanding of its origins and its patterns of change and form the discipline identity.

As there is a lack of research/studies about the origins and history of neuromarketing (by executing simple research in Google Scholar using the key words „history of neuromarketing“, „neuromarketing origins” it gives evidence of lack and absence of publications that address the history of neuromarketing as the main research objective, not in a concise and peripheral way), in this paper, we will try to retrace the literature review and the origins of neuromarketing, as drawing a timeline of the early first attempts of studying consumer's behavior relying on tools and methods, previously and uniquely used in neuroscience.

Methodology — The field of neuromarketing is considered to be still in the state of infancy and of great interest to marketing and business researchers. This article is the result of an exploratory research, and we used the technique of content analysis to deliver it. This technique is known to be used among other procedures to deliver description of the messages' content. We mainly based our analysis on peer-reviewed academic articles and books. Google Scholar and PoP (Publish or Perish) were used to find and access the books and the articles (primary and secondary data), and it allowed us to easily classify the peer-reviewed articles according to the number of citations, in order to have more consistent and valid data. The following key words were used: neuromarketing, neuroeconomics, neuroscience, marketing research, origins, history, consumer behaviour. As the main purpose of the article is to draw a timeline of the development of neuromarketing as a new marketing method throughout history, we pushed our research in Google Scholar and PoP as way in the past as possible in order to be sure of collecting all the works that addressed the advent of neuromarketing and the use of neuroscience to solve marketing problems. Primary and secondary data that retrace the definition of neuromarketing, its origins and the first attempts of unifying neuroscience and psychology with marketing, were selected. In total, 33 publications were read and analysed.

1 What is neuromarketing?

1.1 Definition of neuromarketing — The structure of the word „neuromarketing” itself suggests that it is an intersection, a mixture of two fields: marketing and neurosciences. In fact, we can define neuromarketing as the application of neuroscience methods and knowledge in marketing and its traditional approaches (Lee et al. 2007), bringing to it more novel and uncommon tools and technics, and it is considered to be an interdisciplinary field linking psychology, neuroscience and economy (Chatterjee 2015). In their 1106 times cites article What is „neuromarketing”? A discussion and agenda for future research (2007) the authors stress that applying neuroscience along with cognitive psychology can be challenging and intimidating for marketing scholars due to the lack of knowledge of the tools used in both fields, although neuroimaging technology should not be unreachable for marketing departments as, generally, most business academics work in larger universities with substantial neuroscience tools.

The availability of sophisticated technologies and the readiness of interdepartmental collaboration within a university is not a worldwide fact, especially in developing countries, where scientific research is suffering from, lack of funding resources and quasi-absent collaboration between departments and disciplines. What makes neuromarketing a novelty that aroused the curiosity of academics and practitioners, is the fact that it uses clinical and scientific information about brain functions and mechanisms, as an attempt to explain what's happening inside the consumer's brain, the so called „black box” (Fugate 2007). Such enthralling and interesting definition gave rise to many ethical considerations around neuromarketing, some academics think and are afraid it would allow marketers to reveal the „buy button” inside the consumer's mind, while there is no scientific evidence for such speculation, and we strongly believe that neuromarketing's purpose is to better understand the consumer behavior and do better marketing research, and if finding the mystical buy button would be of great interest for marketers, so would be discovering the love button for psychological researchers (Lee et al. 2007). For Droulers and Roulet (2007), neuromarketing is the study of explicit and implicit mental processes, and of consumer behaviors, in various marketing contexts relating to evaluation, decision making, memorization and consumption activities, which is based on paradigms and knowledge of neuroscience. In fact, it is considered to add a layer of theory to marketing research, and its popular perception as being unethical should not be applied to scholarly marketing research, it should be instead considered as a legitimate discipline for future research on consumer's behavior. Patrick Georges and Michael Badoc (2010) in their book „Le Neuromarketing En Action” argue that current and future marketing specialists need to understand what can explain the difference between declarative behavior and the real buying behavior, which is often an emotional and not a rational perception, as Jacques Séguéla (note [1]) points out: „When you ask a coworker what happens to melting snow, the answer to getting a good IQ score is „water”, while to get good EQ scores a better answer would be „spring””. The authors of the book insist on the limits of traditional methods of market research, these studies being essentially based on oral and declarative information; what the respondents say which may be different from their actual thinking.

The neuromarketer Dr. A. K. Pradeep (2010) in his book „The buying brain: Secrets for selling to the subconscious mind”, explains how advances and improvement in brain monitoring tools and digital technologies allow scientists to expand their knowledge of how the human brain works. As a neuromarketing specialist, he provides insights into brain functions and technological advancements that allow marketers to directly call for the thoughts and feelings of the consumer. His work is recommended to products developers, designers and marketers that are looking for ideas to innovate in their marketing strategies.

Neuromarketing as an expression, its origins go to professor Ale Smidts (note [2]) (2002) as he provided the first description of this new field: „The goal of neuromarketing is to better understand the customer and its response to marketing stimuli, by directly measuring the processes in the brain and involving them in the theory and stimuli development. While the main emphasis is on better understanding the customer through theorizing, it should ultimately also help the manager design more effective marketing incentives. In short, neuromarketing is aimed at increasing the effectiveness of marketing activities by studying brain responses.” By observing the behavior of consumers, one can see how their buying process and their appreciation of the persuasive message are not 100% rational, the hold of emotion, memory and attention is very important, hence marketers need to „see” what is going on in the consumer's mind, to have a clearer understanding of the elements that interact in the process and the

buying decision. Neuroscience is „the key” to accessing the consumer's brain.

1.2 Neuroeconomics as precursor — As we have previously mentioned, neuromarketing has a precursor: Neuroeconomics, which birth goes to cognitive neurosciences in the field of behavioral economy. Georges Loewenstein (Loewenstein et al., 2008) (note [3]) points out that „... given the increasing prominence of neuroscience within the field of psychology and the openness of behavioral economics to new methods and ideas, it was only a matter of time before behavioral economics would embrace neuroscience. When that happened, in the late 1990s, the new field of neuroeconomics was born. Neuroeconomics, we argue, has further bridged the once disparate fields of economics and psychology.”

Douglas L. Fugate (2007) in his widely cited article Neuromarketing: a layman's look at neurosciences and its potential application to marketing practice pointed out that neuroeconomics is the precursor of neuromarketing, they both use clinical information about brain functions and mechanisms in order to help explore what is happening inside the human brain, ore the so called „black box”. Neuroeconomics helped researchers achieving some interesting findings that form the basic frameworks for neuromarketing disciples, findings such as the consumer uses the rational prefrontal cortex to make decisions, and the usage of immediate reward or punishment stimuli activates the limbic system which generates rash and irrational choices, and also, the important role emotions play in the decision-making process, spotted later with the advancement of technologies and computational systems.

Neuroeconomics as a precursor came with major implications to the marketing field. The introduction of neurosciences tools and technologies of brain imaging (e.g., fMRI) to marketing research may change the picture of the field and motivate marketers to abandon the endless expensive research focus groups and interviews where the consumer is not really telling what she/he actually feels and thinks, where subconscious motives are unlikely to be accurately articulated (Fugate 2007; Ruanguttamanun 2014; Venkatraman et al. 2012). While these implications are to revolutionize marketing research, we think it's too early to consider neuromarketing a takeover, although it is a powerful complementary method to the conventional marketing research methods and techniques, it has the potential to provide insights that somehow overcome the subconscious biases that the traditional methods don't, and to measure and analyze the consumer's emotional response to marketing stimuli.

Economics, psychology and neurosciences were once dissimilar fields, but within decades of hesitations, temptation and experiments, they are now cooperative fields that have converged into one unified discipline, with the crucial goal of contributing in the construction of a general theory of human behavior (Glimcher and Rustichini 2004). In other terms, neuroeconomics can be defined as the study of the interactions between the brain and the external environment around it, in order to produce economic behavior (McCabe 2008), and it uses neurosciences tools and knowledge to predict that behavior. By analogical reasoning we could hence say the following in a marketing context: neuromarketing uses neurosciences tools and knowledge to predict marketing behavior.

1.3 Limits of traditional methods and the role of emotions — Over time, the effectiveness of traditional marketing research has been challenged and called into question. This claim is based on the observation of the failure rate of new products and services at launch, a very high rate as shown in studies carried out by Nielsen on the launch of thousands of FMCG (note [4]), and companies prioritize strategic innovation in a market that has become saturated, in order to face fierce competition, but above all a consumer who is not always rational in his purchases. However, there is a very popular belief that the failure rate of new products

and services is approximately valued around 80%, which is very exaggerated and with no empirical evidence (Crawford 1979), and many empirical studies since the early 1960s found the failure rate to be ranged between 35% and 49% (Castellion and Markham 2013). All the same we shouldn't misread these data, it should be taken into consideration given the actual texture of the marketplace, where the consumer is stifled by an array of products and services at his fingertips offering almost the same characteristics, which makes the competitiveness more tenacious.

Industry	Percent failure
Chemicals	44%
Other materials	39%
Industrial services	43%
Consumer goods	45%
Consumer services	45%
Capital goods	35%
Healthcare	36%
Software and services	39%
Technology	42%
Average	41%
Highest	45%
Lowest	35%

Figure 1: New product failure rate by industry
Source: Castellion et al. (2013)

It is clear that there is a gap between what individuals say and do, and very often they cannot accurately describe what they really feel about a product or advertising, the reason behind this paradox resides in the amazing complexity of the human brain. Traditional methods have shown their weaknesses despite the consistent investment required to conduct them, mainly because their outputs depend on the eagerness and the ability of respondents to accurately describe how they felt after being exposed to marketing stimuli (Burgos-campero 2013; Cruz et al. 2016), and we can assert that many people can't explain in a logical way the reasons behind their decisions, as almost 70% of them are made subconsciously, and it is now an unanimous assumption that people cannot fully explain their preferences when explicitly asked, as the human behavior is mainly driven by processes at a subconscious level (Khushaba et al. 2013; Marichamy and Sathiyavathi 2014). There is another fascinating neurological finding which would make us rethink the way we conduct quantitative and qualitative research: the brain actually is likely to alter the data recorded when asked to recount how it reacted to something (Pradeep 2010), also the ordering of the questions may affect the answers as people tend to answer questions in consistency with the previous ones that may evoke certain memories and attitudes (Mullainathan and Bertrand 2001). It means that the fact of asking the question „how did you feel about that”, may distort the answer, in other words, that surveys are not 100% bias free, as focus groups may be influenced by „ruling” participants, or deficient because of shy and hesitating ones. Consumers don't tell the truth, and sometime without

realizing it, the reason behind this is that our decision-making process is not totally rational, and emotions play a pivotal role in delivering the decisions we make and in constructing our behavior. Within decades of research, it is now asserted that the purchase decision (act and intention) is a cognitive process where emotion, with all its components and different types, plays the role of indirect or unconscious decision maker.

This is what John O'Shaughnessy and Nicholas Jackson O'Shaughnessy stress in their famous book *The marketing power of emotion* (note [5]) „...marketing folklore suggests that emotion can stimulate buying interest, guide choices, arouse buying intentions, and influence future buying decisions. All these popular beliefs about the power of emotion have received research support. Thoughts about buying are not listless mental acts. They can be exciting and can involve strong likes and dislikes, anxieties, and aspirations. Just think about the emotional component of buying a new car. Emotions intensify wants and desires and intensify motivation. Even ethical behavior can be suppressed because of a failure to generate the emotion needed to motivate moral action. Emotion is not an aberrant element when making buying decisions but a necessary condition if decisions are not to be continually postponed. The emotional is so paired with making tradeoffs in decision-making that it is impossible to identify situations where deliberated decisions do not have an emotional dimension.” It means that emotions play an essential role in our daily life and communication, thus emotions became an essential element in marketing, and we speak henceforth about emotional marketing as a specific strategy that companies are using in order to make the advertising, packaging and branding emotionally appealing. Marketers are in a constant challenge to communicate directly toward emotional states, needs, wants, beliefs and the emotional aspirations of consumers, and they succeed in doing this by focusing all their attention to the collection and analysis of their consumers' emotion, which we consider a separate data, and should be treated as one, and there is no doubt that the continuous development of brain imaging technology will enable marketing researchers to better assess and understand the role of emotions in the decision-making process, and to learn more effective methods to trigger those emotions in the consumer in order to build a strong brand loyalty and trust and create more persuasive advertising, with no intention to control or manipulate the consumer.

Neuromarketing is a recent discipline, compared to neuroeconomics, is considered to be still in the state of infancy (Morin 2011; Wilson et al. 2008) but is already offering to marketers an array of tools and technics; although more or less complex; that allow them to measure with more accuracy the advertising effectiveness and overcome the drawbacks of conventional methods by direct brain observation (functional Magnetic Resonance Imaging, Electroencephalography) or measurement of physiological responses in the body (eye movement, skin conductance, facial expressions, hear and respiration rate...).

2 A preview of the origins of neuromarketing

2.1 The first attempts of brain imaging in marketing — It appears that neuromarketing as a discipline has different birthdays before the rise of neuroeconomics in the late 1990's and the rapid improvement of neuroscience. By exploring the literature, we found out that the curiosity and appraisal to start studying brain functions and activities in order to achieve a better understanding of consumer's behavior began almost 20 years ago, as some scholars recommended electroencephalography (EEG, brain waves measures) to study the impact of promotions on the buying behavior (Wilson et al. 2008), and at the time, it was uncommon and difficult at first as it was complicated interpreting and retrieving data from EEG devices (Stewart 1984 and 1985). But decidedly with the continuous advancement of digital technologies, the limitations of EEG measurement are now transcended, especially with the de-

velopment of noninvasive tools and methods that neurosciences offer, in order to probe and analyze the neural activity of the brain. Since the 1980's neuroscience and cognitive psychology joined forces and created a thoroughly new paradigm for understanding the consumer, in a way that it allows to understand how she/he stores, retrieves and uses information, and some scholars argue that marketers seek to influence the intricate processes of evaluation and decision making of the consumers, and they use tactics and technologies unethically in order to control and redirect their decisions (Wilson et al. 2008), which is a very extreme and exaggerated assumption. We believe the decision-making process is so complex to control and deviate, and there is no such thing as „the buy button” that neuromarketing advocates are intentioned to unveil. There is no doubt that the continuous development of brain imaging technology will enable marketing researchers to better assess and understand.

The first attempt of unifying marketing and brain imaging took place in the late 1990's and the credit goes to Gerry Zaltman (note [6]) (Economist 2004; Zaltman 1997), the Harvard marketing guru provided an array of suggestions and insights in order to improve the effectiveness of marketing research. Zaltman stressed that when all the components of marketing research (the subject, managers, consumers, survey designs, sampling techniques...) come to ignore the nature of the human thoughts and behavior, it may lead to bias and a certain degree of subjectivity, as it leaves researchers overly prominent in the research process. This is one of the limits of traditional methods, and neuroscience can help with the endeavor of improving marketing research and overcome the traditional methods limits, and it requires the introduction of cognitive processes to the equation, processes that can be observed, measured and analyzed through neuroscience tools and techniques.

In conclusion of his 1025 cited article Rethinking market research: Putting people back in (1997), Gerald Zaltman made what we can call the announcement of neuromarketing birth, as he referred to a study he was conducting in collaboration with Stephan M. Kosslyn at Harvard University and the Massachusetts General Hospital where PET Scans were used (Positron Emission Tomography) to evaluate the impact of different marketing stimuli relating to automobile dealerships, with the aim to measure three constructs conveyed in those stimuli: anxiety, trust and comfort. His proposition was to use neuroscience tools and technologies in order to improve marketing research, as the latter is crucially vital and strategic to every company willing to survive and overcome the ferocious competitiveness in today's economy. Zaltman succeeded in identifying some neural „signatures” that correlate with valence and emotional reactions generated in response to imagined alternative retail environments of cars dealerships.

By reading and examining Zaltman's work, which was crowned by obtaining an US Patent of invention in year 2000 (Zaltman and Kosslyn 2000) we can understand why the credit of „inventing” neuromarketing as a practical marketing research tool goes undoubtedly to him, because he did what exactly neuromarketing is and should be about: completing qualitative traditional methods in order to assess, measure and validate the data collected via oral and verbal means, and as a result, we can expect to have better and deeper insights of the consumer behavior and predict it with greater precision. Despite the fact that Zaltman's work was innovative and revolutionized marketing research, PET is an invasive method, and less invasive technologies should encourage marketing research to embrace neuroscience (e.g., EEG). This controversial union began then to attract attention when Brithghouse opened a neuromarketing division in 2001, with the ultimate aim to changing the marketing world forever (Fisher et al. 2010; Lee et al. 2007; Morin 2011; Wilson et al. 2008).

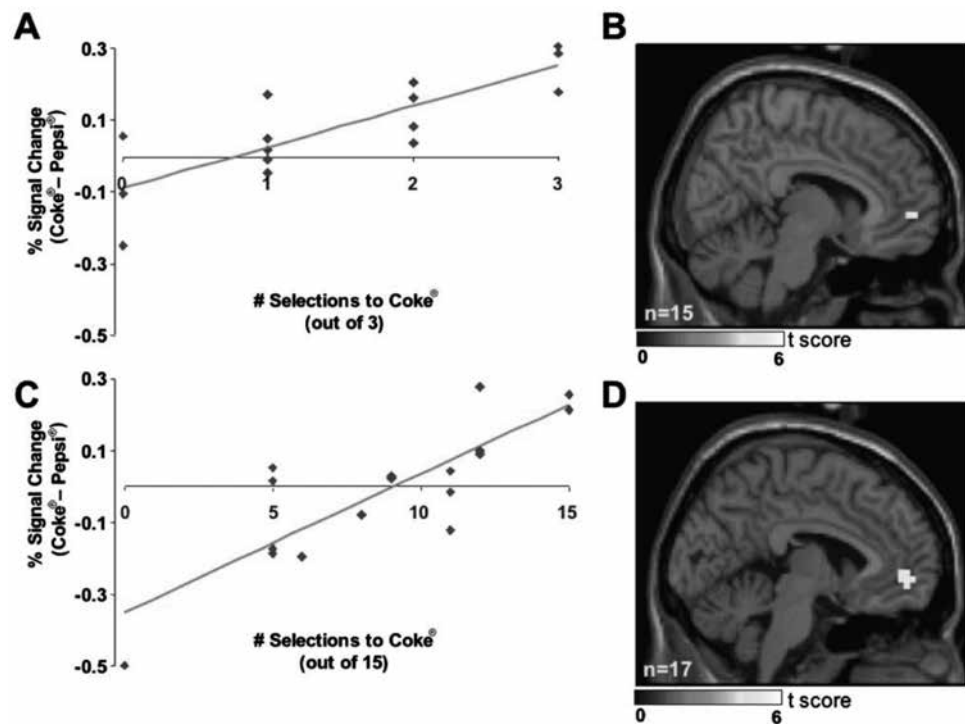
„...neuromarketing is the manifestation of the growing value attributed to neuroscience in the scientific and business sphere...” (Levallois et al. 2019). There is no doubt that a notorious and

irrevocable link exists between academic and business versions of neuromarketing, but there is still ambiguity on what „world” is influencing the other. At the very beginning, the coupling of neuroscience technology and marketing seemed to be odd, although the academic „cradle” was already ready to welcome it and the environment was very favorable.

The fMRI was one of the first neuroscience tools that marketing academics have gotten familiar with. It was indeed a matter of time for this to happen given the brisk advancement in technology and the advent of neuropsychology and neuroimaging (Dumit 2004).

As we can see, neuromarketing appeared and developed undoubtedly with the emergence of neuroeconomics, although academics and especially neuroeconomics specialists underline the must of highlighting the distinction between the two: „...a related, although clearly distinct discipline that seems to be emerging alongside neuroeconomics is neuromarketing. Neuroeconomics is a purely academic discipline concerned with the basic mechanisms of decision making. In contrast, neuromarketing is a more applied field concerned with the application of brain scanning technology to the traditional goals and questions of interest of marketers, both those in academia and those in private industry. While these two disciplines are related, they are also very distinct. This is a distinction often overlooked by popular media.” (Glimcher et al. 2009).

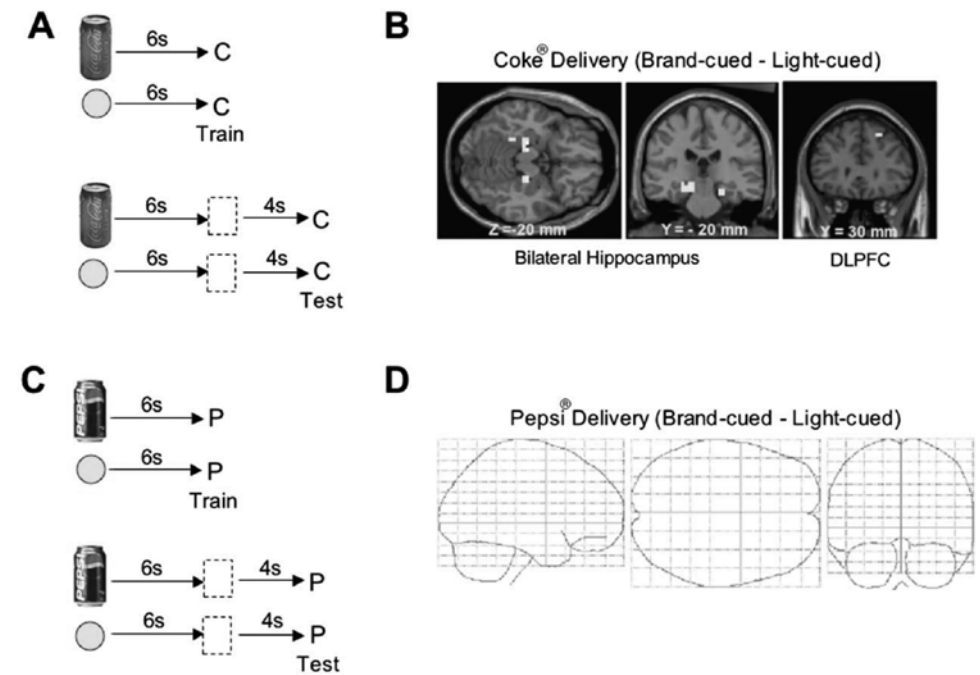
By exploring the roots of neuromarketing as a discipline, we cannot do it without evoking The Pepsi Challenge (note [7]) case study, which consisted of a blind taste test, where customers were asked to taste cola drinks from two unlabeled white glasses and select the one they preferred the most, and this experiment gave birth to the consensus that Americans preferred Pepsi over Coca-Cola, unconsciously. This famous experiment was taken a step further using fMRI scanner in order to reveal what was happening inside the testers' brains, with the purpose of highlighting the behavioral and neural response to Pepsi-co and Coca-Cola when consumed anonymously; using fMRI; and analyzing the behavioral and neural influence of knowledge about which drink is being consumed (McClure et al., 2004). Two different taste tests have been carried out to assess the neural responses: a first taste test outside the fMRI scanner, and the second one while inside it in order to simultaneously monitor the brain activity of the 67 individuals recruited to take part of the experiment. The blind tests have shown that Pepsi-co was preferred over Coca-Cola, and that sensory information inputs (taste in this case) play a minor role in determining people's behavior, and brand knowledge is likely to cause biases in preference decision. The fMRI tests illustrated the activation of the DLPFC and the Hippocampus areas while tasting the drinks, these areas are known to be related to memory and affective information. In fact, it has been demonstrated that DLPFC plays a primary role in processing emotional memory, as for emotional content to influence the memory processes (Ferrari and Balconi 2011), it is also commonly known that DLPFC is implicated in relational memory encoding and in episodic memory retrieval (Blumenfeld et al. 2011; Sandrini et al. 2003). The hippocampus is known to be implicated in processing and recalling affective information and plays a major role in recalling declarative memories (Fortin et al. 2002; Teyler and DiScenna 1985; Tulving and Markowitsch 1998; Voss et al. 2017). As results of the experiment carried out by McClure and his team (McClure et al. 2004), we can assess that the test participants were undoubtedly recalling Coca-Cola ads while actually drinking Pepsi-co.



(A) Behavioral preferences expressed in the 3 trial taste test varied linearly with brain responses in the ventromedial prefrontal cortex (group 1). The vertical axis is the contrast (delayed Coke response - delayed Pepsi response) for the voxels shown in (B).
 (B) SPM of neural correlates of behavior preference shown in (A) (thresholded at $p < 0.001$; uncorrected for multiple comparisons).
 (C) Correlation between behavioral preferences expressed in the 15 trial taste and brain responses in the ventromedial prefrontal cortex (group 2).
 (D) SPM of neural correlates of behavior preference shown in (C) (thresholded at $p < 0.001$; uncorrected for multiple comparisons).

Figure 2: Neural correlates of preference for anonymous Coke and Pepsi delivery in 3-trial and 15-trial anonymous taste tasks

Source: McClure et al. (2004)



(A) An image of a Coke can was used to cue the occurrence of Coke. A red or yellow circle (randomized across subjects) predicted the other. Both sodas delivered were Coke.
 (B) Coke delivered following an image of a Coke can evoked significantly greater activity in several regions when contrasted against Coke delivered following a neutral flash of light. Significant activations ($p < 0.001$, uncorrected) were found bilaterally in the hippocampus (MNI coordinates [-24, -24, -20] and [20, -20, -16]), in the left parahippocampal cortex (MNI coordinates [-20, -32, -8]), midbrain (MNI coordinates [-12, -20, -16]), and dorsolateral prefrontal cortex (MNI coordinates [20, 30, 48]). See Table 1 for details.
 (C) In the scanner, an image of a Pepsi can was used to cue the occurrence of Pepsi. A red or yellow circle predicted the other soda, and both sodas delivered were Pepsi.
 (D) No voxels survive $p < 0.001$ threshold (uncorrected) for the equivalent contrast in the semianonymous Pepsi experiment.

Figure 3: Effect of brand knowledge on brain responses in semi anonymous tasks

Source: McClure et al. (2004)

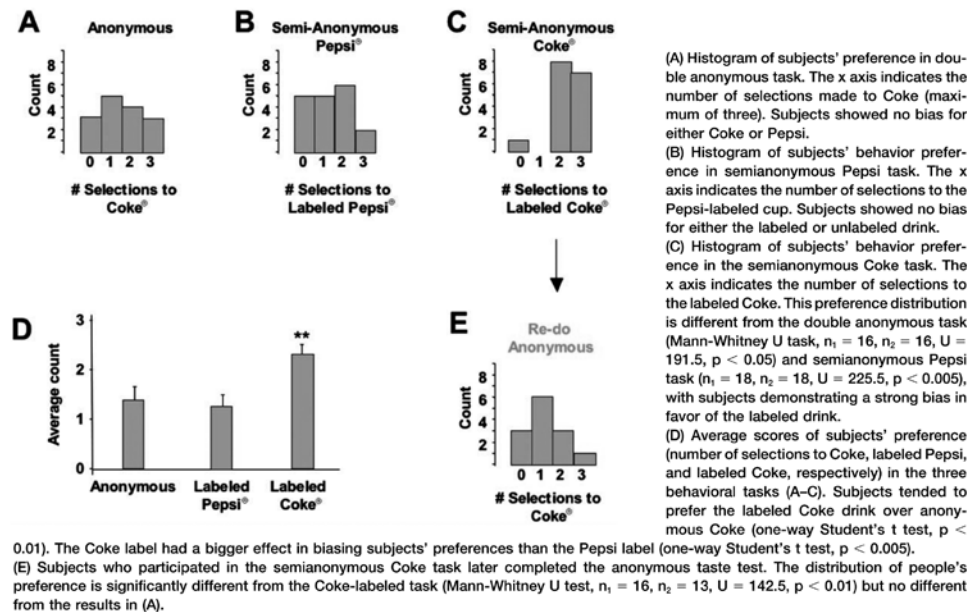


Figure 4: Effect of brand knowledge on behavioral preferences
Source: McClure et al. (2004)

Another brain imaging method which is nowadays widely used in neuromarketing studies is EEG. In 1988, an EEG measure was performed on subjects who were viewing TV advertisement, and one of the main findings was that memory correlated significantly with changes in the EEG signals (Rothschild et al. 1988), and today, memory is considered one of the main metrics neuromarketing studies aim to measure.

2.2 The first attempts of biometrics in marketing — Beside brain waves measures and brain imaging there are biometrics tools and methods as the second component of neuro-marketing arsenal. Pupillometry which is a clinical method that measures the spontaneous dilatation of the pupil diameter and the pupillary light reflex (Kirsch and Chervin 2011) is one of the biometrics measures used in neuromarketing among others (eye-tracking, galvanic skin response, facial expressions recognition, etc.). David C. Arch (1979) proposed pupil dilatation measures to study the cognitive response of consumers in a marketing research context, and stressed that at that time, the method shown high scientific potential in measuring consumer's behavior and his/her reactions to persuasive messages. Krugman (1964) wanted to assess the ability of Pupillometry to predict consumer's behavior and compare the data collected from this unorthodox measurement with the traditional one: interviews. To realize this, he conducted two studies involving greeting cards and sterling silver patterns, used as visual stimuli and shown to the subjects taking part of the experiment, pupil dilatation was measured simultaneously and interviews were conducted at the end of stimuli visualization, in order to collect verbal responses from subjects by asking them what stimuli they liked and the ones they liked less. This attempt of merging neuroscience with marketing has demonstrated that there is always a difference between verbal

responses and how actually our body reacts to visual stimuli, and pupil dilatation measurement, back at the time, has established its potential as a future neuromarketing tool.

Patterns	Shoppers				Browsers		
	Sales rank	Pupil rank	Percent change	Verbal rank	Pupil rank	Percent change	Verbal rank
Acorn	1	5	+5	8	1	+1.0	2
Acanthus	2	1	+2.3	6.5	3	+2	4.5
Cactus	3	7	-.9	3	6	-.1	3
Cypress	4	3	+1.7	4	5	0.0	7
Continental	5	2	+2.1	2	2	+6	4.5
Pyramid	6	10	-2.6	1	8	-1.4	1
Blossom	7	9	-2.2	10	10	-3.7	10
Caravel	8	4	+8	9	4	+1	9
Argo	9.5	6	-.1	6.5	7	-.9	8
Nordic	9.5	8	-1.4	5	9	-2.2	6

The following rank-order correlations were obtained:

Sales rank with shoppers' pupil rank = +.43

Sales rank with shoppers' verbal rank = +.14

Sales rank with browsers' pupil rank = +.66 ($p=.05$)

Sales rank with browsers' verbal rank = +.60 ($p=.05$)

The shoppers' percent change in pupil dilation was more favorable than the browsers' i.e., larger +% or smaller -% for seven of the ten patterns, suggesting greater interest in silverware in general on the part of the shoppers. A one-tail of this hypothesis shows that $t=1.84$; $df=9$, $p=.05$.

Figure 5: Comparison of sales, pupil responses and verbal ratings for silverware
Source: Krugman (1964)

Pupil dilatation measurement was not the only neuroscience and clinical „gate“ that awakened the interest and curiosity of marketers regularly looking for more accurate ways to observe, analyze and understand consumer's behavior. Studies and observations of consumer's responses to stimuli, relying on eye movement tracing have been carried out years before the first attempt of integrating Pupillometry in marketing research (Behe et al. 2013). Wedel and Pieters in their 524 times cited article „A review of eye-tracking research in marketing“ (Wedel and Pieters 2015) gave us a detailed historical review of the usage of eye movement analysis in marketing research, in fact they draw attention to the first endeavor carried out by Nixon in 1924 (Wedel and Pieters 2006 and 2015) with no technology involved at the time, he observed eye movements of consumers who were browsing through magazines pages with printed ads, and he managed to conduct this experiment by hiding himself in a box behind a curtain. Afterward in 1940, the marketing field witnessed the collection of eye movement data from users paging advertising in newspapers, by means of the Purdue Eye Camera (Kabslake 1940).

Wedel and Pieters report that later in 1978, appeared one of the most cited and pioneering article about the usage of eye-tracking technology with the aim to study consumer's behavior: „Eye-fixation can save the world” by Russo (Russo 1978), where he suggested that eye fixation methodology offers an array of advantages the verbal methods (interviews, focus groups) don't, and that both methods should be used in a paired and complementary way for better insights and more detailed and accurate data.

Conclusion — It is clear that the birth of neuromarketing wasn't precocious; it was long and originated from the seismic shift in neuroeconomics and behavioral neuroscience and many Avant-grade attempts and experiments with the aim to revolutionize marketing research in the early 1920s, starting with Nixon's endeavor to observe the eyes movement of individuals who were paging through printed ads, to Zaltman's study of emotional responses and neural signatures using PET scans. And since the first introductions of biometrics to marketing, the business world and academia have embraced technology with the aim to revolutionize marketing research, and now, brain imaging, eye-tracking and other methods are vaguely used in every marketing area: packaging, product development, advertising, e-commerce, in store decision making, etc... But as a discipline, we believe neuromarketing is still to gain momentum, and it requires more intensive research in order to shape its theoretical frameworks and draw conclusions on the causal links connecting consumer's behavior and the prediction of his/her decision-making process, and also, further research and experiments are necessary in order to confirm neuromarketing as a powerful complementary tool to the conventional methods and end the skepticism around potential intentions and possibilities to manipulate the consumer's free will.

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Kľúčové slová | Key Words — neuromarketing, neuroeconomics, neuroscience, marketing research, consumer behavior
neuromarketing, neuroekonómia, neuroveda, marketingový výskum, spotrebiteľské správanie

JEL klasifikácia | JEL Classification — D87, M31

Résumé — **Prehľad pôvodu neuromarketingu ako novej metódy marketingového výskumu**

Príspevok poskytuje prehľad literatúry o neuromarketingu a počiatkoch jeho vzniku ako novej metódy marketingového výskumu. Pokúsili sme sa vytvoriť všeobecný popisný súhrn relevantnej literatúry, ktorý zdôrazňuje definíciu neuromarketingu ako novej marketingovej disciplíny a sleduje jeho počiatky a základy od a pred príchodom neuroekonómie, keďže tá sa považuje za jeho predchodcu. Účelom tohto príspevku je definovať, čo je neuromarketing z pohľadu akademikov a odborníkov z praxe, ako a kedy si začal nachádzať svoju cestu do akademickej sféry a sveta obchodu, a to upozornením na vôbec prvé pokusy o využitie

nezvyčajných neurovedeckých nástrojov na posúdenie spotrebiteľského správania. Tento príspevok vykresľuje časovú os pôvodu neuromarketingu a zahrňa prvé pokusy o pozorovanie správania spotrebiteľov, ktoré sa spoliehali na nervové a fyziologické reakcie.

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Recenzované | Reviewed — 29. November 2021 / 10. December 2021

FOODIE: UPGRADING A BASIC NEED TO ARTISTIC OBSESSION

In 2018, the Disgusting Food Museum opened its doors in the Swedish city of Malmö (currently with franchise museums in Berlin and Bordeaux). The small museum has on permanent display some 80 of the world's most disgusting foods, which adventurous visitors may sample. Exhibited delicacies include for instance roasted guinea pigs from Peru (cuy) or a well-aged shark from Iceland (hákarl). There is something about: tell me what you eat and I will tell you who you are.

Food for a modern consumer is merely a way to fill the gap. Whether you prefer sour, bitter, savory, sweet, or umami for your taste buds, there is a meal to spice up every soul. No more food is a quick affair to curb hunger. Food has become a trendy thing to talk about. Elaborate and informed social talk about various kinds of meat, variety of cheeses, coffee preparation, differences among wine regions or staple foods of ethnic cuisines complement basic conversational skillset.

Celebrity chefs, microbreweries, culinary tours, passion for organic and raw, escape from digital into real world and desire for something which engages all senses and bonds people together – all of that and much more food lovers can relate to. Food has become a real hobby. Foodies train their pellets to further develop their refined and zealous taste by experimenting in cooking, attending special classes, using quality, original and unusual ingredients, trying different diets or ethnic cuisines, participating in discussion groups, visiting a great variety of well-acclaimed eateries. Some of them share their experiences through social media, follow renowned chefs, subscribe to food magazines, watch cooking shows and food travelogues, or collect cookbooks.

Food influencers need to be on foodstagram if they want to be recognized. Instagram is a strong platform for foodies to communicate. A picture or a video as visual stimuli are strong messengers of a tasty promise. A successful food influencer complements digital content with blogs, podcasts, and other (traditional) media appearance. Foodie influencing scene has been vibrant, colorful, and as one would expect there is content for any liking. Foodies influence public knowledge of nutrition, cooking skills, cost of home cooking, and body ideals among other elements.

Food can be an object of artistic inquiry as evidenced by @aurelycerise or @tanaka_tatsuya. Are you into watching a young lady smushing her face into various kinds of bread with interesting background music (@breadfaceblog), into searching for dogs in yummy treats (@dogs_infood), or do you enjoy other eating too much (#hotdogeatingcontest). Desire to stand out from the social media clutter has led to the extreme. In 2021, Instagram was accused for commercially profiting from pages that glorified eating disorders. Potentially harmful accounts were swiftly discontinued for not complying with platform policies. So called food porn has yet been another discipline with influencers consuming (@showry) or playing with food (@stephanie_sarley) in pseudo-sexual way.

Visualizing food for social media is a discipline by itself. Viewers are made to believe that what they see is what they get. Various photo gadgets, appropriate lighting, right kitchen equipment, tableware and decoration, and software tools are a must for a good social media result. A multitude of instructional videos is freely available. Food photographers routinely use fake acrylic or resin ice cubes, white glue instead of milk, shaving cream instead of whipped cream, and fill in plates with false bottoms (usually simple dough from flour and water). Tricks such as inserting cardboard in between pancakes to make a stack look tall and fluffy and bathing the breakfast food in motor oil instead of syrup to prevent a soggy effect have gone viral. Taking a beautiful picture of a cup of coffee takes a diluted soy sauce, frothy bubbles from dishwashing liquid and a tampon soaked in hot water for nice airy swirls of steam.

Key income opportunities for food influencers are no different to other players on the social media scene. A (large) following is their most important asset, through which they generate income cashing out on paid contextual advertising. Another important income source is sponsorships for promoting restaurants, retailers, destinations, or kitchen equipment brands to name a few. Appearances in traditional media, book publishing, running cooking classes and participating at events complement the package.

Résumé — Gurmánství: Jak povznést základní potřebu na uměleckou posedlost

Není jisté, že ještě počátkem tisíciletí by bylo společensky přijatelné veřejně deklarovat vlastní zálibu v jídle. Spíše by se možná jednalo o prohlášení omlouvající bobtnající body-mass-index. Mezitím se však schopnost společensky konverzovat o různých odstínech jídla, pokrmech a ingrediencích dostupných v různých zemích či rozlišovat kávu na víc než zrnkovou, mletou a instantní, stalo nutností lvů salónů. Scéna food bloggerů a food influencerů utěšeně roste a pečuje o komunitu gurmánů – hobbyistů. Jejich kombinace triků, tipů a obchodně-podnikatelských praktik nás může učit o tom, jak povznést jednu ze základních lidských potřeb na uměleckou posedlost.

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SEDMNÁCTÝ ROČNÍK SOUTĚŽE MARKETÉR ROKU VYHLÁŠEN

Česká marketingová společnost vyhlásila sedmnáctý ročník soutěže Marketér roku za rok 2021. Vyhlášení této významné odborné i společenské události proběhlo v rámci odborného semináře Přichází nový marketing?, který pořádala Česká marketingová společnost spolu s Klubem učitelů marketingu a mediálním partnerem Active Radio v atraktivním prostředí Restaurace Atelier Petřín v Praze dne 9. 11. 2021.

Slavnostního aktu se za Českou marketingovou společnost zúčastnili čestná prezidentka společnosti Jitka Vysekalová, prezident Tomáš David, Petr Uchytil z ACTIVE RADIO a další členové prezidia. Tradičně podpořil vyhlášení soutěže svým osobním sdělením prof. Philip Kotler, osobnost světového marketingu.

Jedním z hlavních cílů České marketingové společnosti je podpora marketingu jako nezbytného faktoru rozvoje a konkurenceschopnosti naší ekonomiky. Mezi cestami k jeho dosažení získala významnou roli soutěž o Marketéra roku, která vstupuje již do sedmnáctého ročníku. Oceňujeme významné osobnosti, které realizovaly marketingové projekty odpovídající pravidlům soutěže z hlediska inovativnosti, efektivnosti, rozvoje metod a současných principů marketingu včetně etického přístupu a příspěvku ke společenské odpovědnosti firem. Vítěz získá Velkého modrého delfína, který je symbolem moudrosti, aktivity, komunikativnosti i pozitivního pohledu na okolní svět.

Souběžně probíhá soutěž Mladý delfín pro vysokoškoláky studijních oborů zaměřených na marketing.

Uzávěrka přihlášek je 15. dubna 2022. Podrobnosti o soutěži, zejména o způsobu podávání přihlášek, jsou k dispozici na www.cms-cma.cz, případně je možno směřovat další dotazy na emailovou adresu info@cms-cma.cz.



Jitka Vysekalová, čestná prezidentka ČMS, Tomáš David, prezident ČMS a Petr Uchytil, Radio Active

DRÁBIK, PETER, 2021. SPOLOČENSKY PROSPEŠNÉ INOVÁCIE V DISTRIBÚCII.

BRATISLAVA: VYDAVATEĽSTVO EKONÓM. 203 S. ISBN 978-80-225-4800-7.

„Inovácie sú všade prítomnou súčasťou, hybnou silou a nástrojom zabezpečovania trvalej udržateľnosti spoločensko – hospodárskeho rozvoja.“ Touto myšlienkou vstupuje autor do rozsiahlej a náročnej problematiky elektromobility v oblasti distribúcie vo vzťahu k ochrane životného prostredia.

Predmetná publikácia analyzuje a hodnotí problematiku inovácií v šiestich kapitolách s náročným obsahom. Charakteristická je čistota obsahu pojmov, ich vedeckosť, zrozumiteľnosť a rozmanitosť, tiež miera aktuálnosti. Tieto vlastnosti rozpracúva autor v prvej kapitole.

Vychádza z názorov popredných svetových teoretikov ako Bobrov, Vlček, Drucker, Schumpeter. Práve ostatne menovaný vymedzil 5 charakteristík pre inovácie. P. Drábik taktiež synteticky vymedzil obsah kategórie inovácie, ako filozofie činnosti, ktorá zasahuje všetky zložky reprodukčného procesu, ako je marketing, vývoj výrobkov a technológií, plánovanie, výroba, predaj, príprava kádrov, riadenie sociálno-ekonomických a environmentálnych faktorov. Tiež ako synonymum úspešnej produkcie, asimilácie a používania novosti v ekonomike a sociálnej sfére. Ponúka nové riešenia problémov vyvolaných zmenami v podnikateľskom prostredí, v požiadavkách zákazníkov, technologickom rozvoji, v globalizácii, ale tiež v ozeleňovaní hospodárstva a trvalý udržateľný rozvoj. Podrobnejšie vysvetľuje vplyv inovácií na zákazníkov, občanov, zamestnancov, obchod, výrobu, technológie a organizáciu výroby, ekonomických a environmentálnych faktorov. Tiež ako synonymum úspešnej produkcie, asimilácie a používania novosti v ekonomickej a sociálnej sfére.

Ponúka nové riešenie problémov vyvolaných zmenami v podnikateľskom prostredí, v požiadavkách zákazníkov, technologickom rozvoji, v globalizácii, ale tiež v „ozeleňovaní“ hospodárstva a trvalo udržateľný rozvoj. Podrobnejšie vysvetľuje vplyv inovácií na zákazníkov, občanov, zamestnancov, obchod, výrobu, technológie a organizáciu výroby.

Takýto teoretický vstup do problematiky je žiaduci, je určený pre teoretickú rovinu i pre prax. Prvá – silná kapitola upriamuje pozornosť na inovačné stupne a význam inovácií pre organizácie a spoločnosť so smerovaním na budúcnosť. Za cennú súčasť tejto kapitoly možno považovať inovačné stratégie. V závere kapitoly zdôrazňuje autor strategické inovácie v automobilovom priemysle s akcentom na princípy nízkych nákladov. Postupne plní text svoje ciele v časti elektromobilita ako environmentálno – energetická inovácia.

V druhej časti publikácie konkretizuje autor inovačné trendy v sektore automobilového priemyslu. Charakterizuje ich, ba zachádza hlboko do dodávateľského sektora. Definuje spoločensky prospešné inovácie v distribúcii. Ústredným pojmom je elektromobilita. Jadrom druhej kapitoly sú štyri strategické trendy výroby automobilov:

- zameranie na zákazníka,
- pripojené autonómne autá,
- digitálny dodávateľský reťazec,
- udržateľná mobilita.

Napokon sa autor zamýšľa nad efektívnosťou automobilového priemyslu v tom zmysle, aby boli uspokojené požiadavky zákazníkov. Poskytuje prognózu podielu automobilov s rôznymi typmi pohonu do r. 2030. Čitateľa zaujme hodnotenie udržateľnej mobility, ktorej najvýraznejšie aspekty sú:

- užívateľské aspekty,
- odvetvové,
- makroekonomické,
- spoločenské,
- distribučné,
- autoritatívne,
- vládne a ostatné.

„Zelená logistika“ – zelené obstarávanie je spôsob zadávania dodávok, ktorý berie do úvahy vplyv vybraného tovaru a služieb na životné prostredie tak, aby negatívny vplyv na životné prostredie bol čo najmenší. K posudzovacím kritériám autor zaraďuje možnosť recyklácie, biologickú odbúrateľnosť, materiálnu a energetickú náročnosť výroby, zdravotnú neškodnosť a iné.

„Zelený spotrebiteľ“ – výraz zahŕňa konečného zákazníka aj priemyselného zákazníka, ktorí požadujú, aby tovary a dodávky vôbec boli šetrnejšie k životnému prostrediu.

„Zelený sklad“ – autor má na mysli usporiadanie skladu s cieľom minimalizovať počet najazdených kilometrov manipulačnou technikou pri skladových operáciách.

Kapitolu uzatvára časť „environmentálny marketing a distribúcia“, ktorý popisuje „zelený marketing“ tromi pohľadmi:

1. predajný pohľad – uvádzať na trh tie výrobky, ktoré sú šetrné k životnému prostrediu
2. sociálny pohľad – snaha znižovať negatívne vplyvy na životné prostredie
3. environmentálny pohľad – reagovať na environmentálne problémy

Zelený marketing vychádza zo zelenej ekonomiky, ktorá podporuje ľudskú prosperitu, sociálnu rovnosť, zníženie rizík a ekologických škôd.

Nové prístupy k environmentálnej segmentácii trhu nájdu uplatnenie aj v oblasti elektromobility a v marketingovej činnosti producentov elektromobilov.

Tretia kapitola poteší milovníkov a autority v technickej oblasti. P. Drábik ju nazval „environmentálno-technická inovácia pohonov automobilov“. Priestor dostali aj otázky – typy pohonov v elektromobile. Taktiež elektromobilita vo svete a na Slovensku, spotrebiteľské postoje. Ako príklad uvádza autor Nemecko, kde je registrovaných 1,9% elektromobilov. V USA podiel nových registrácií predstavuje 1,8%. Čína predpokladá do r. 2025 20% -ný podiel. Nórsko je vodcom inovácií, nové registrácie elektrických vozidiel predstavujú 46,7% z celku.

S poľutovaním sa v publikácii konštatuje, že slovenské organizácie nie sú zapojené do tohto trendu, čo je spôsobené nízkou inovačnou schopnosťou v oblasti elektromobility. Kapitola je ukončená podčiarknutím unikátnych príležitostí elektromobility na Slovensku, ako je:

- výkonnosť hospodárstva,
- ochrana životného prostredia,
- priestor a potreba vedeckého bádania.

Štvrtá kapitola predmetnej monografie je zameraná na „Rozvoj elektromobility a jej vplyv na spotrebu elektrickej energie“. Problematika je výsostne aktuálna. Cieľom je znížiť spotrebu energie a emisií. Pri presadzovaní elektromobility zavážia prvky ako:

- cena vozidla,
- cena batérie,
- náklady na prevádzku,
- údržba a opravy vozidla,
- cena paliva – elektriny alebo ropy.

V tejto súvislosti vystupuje význam efektívnosti elektromobility. Autor analyzuje a hodnotí všetky technické prvky. Z autorových analýz vyplýva záver, že národné vlády členských krajín EÚ musia výrazne zvýšiť investície do nabíjacej a tankovacej infraštruktúry.

Zaujímavý pohľad poskytuje medzinárodné porovnanie emisií skleníkových plynov na počet obyvateľov. EÚ sa nachádza v strede hodnotiaceho grafu. V zásade sa dá povedať, že elektrické vozidlá majú nižšie emisie skleníkových plynov počas životného cyklu ako má bežný európsky automobil.

V dvoch záverečných kapitolách prezentuje autor vlastnú výskumnú činnosť, ktorá vychádza z cieľa monografie. Je založená na využití radu náročných matematických a štatistických metód, pomocou ktorých hodnotí spotrebiteľské aspekty rozvoja elektromobility na Slovensku. Vo vytvorenom modeli pracuje s 388-timi respondentami. Cenné sú výsledky ekonomickej závislosti spracované koreláciou. Napokon analyzoval bariéry rozvoja, ktoré brzdia pokrok.

V závere možno položiť otázku: Čím je hodnotná predmetná publikácia autora P. Drábika? Možno uviesť viacero prvkov:

- obohacuje ekonomickú teóriu novými prvkami a pohľadmi nielen dobovo platnými, ale progresívnymi,
- osloví každého, lebo sa dotýka života všetkých,
- dáva množstvo podnetov na rozmyšľanie o budúcnosti,
- obohatí myseľ a praktické rozhodovanie.

Využiteľná je študujúcimi, doktorandmi, riadiacimi pracovníkmi, pedagógmi a každým, kto sa zaujíma o budúcnosť.

FREYOVÁ, HANNAH, 2020. HELLO WORLD: JAK ZŮSTAT ČLOVĚKEM VE SVĚTE ALGORITMU.

PRAHA: VYŠEHRAD. 251 S. ISBN 978-80-7601-246-2.

Veľmi neskromne uvediem, že moja vedecká minulosť v SAV a učiteľská erudícia na univerzite mi často umožňovala a prinášala možnosť recenzovať také knihy, ktoré boli takmer vždy doložené mnohostrannými poznámkami a registrami uvádzaných autorov. Také knihy som sama nakoniec aj vyhľadávala a rada som o nich písala recenzie.

Takou je aj kniha Hannah Freyovej, profesorky matematiky na University College London, ktorá je svetovo uznávanou popularizátorkou vedy, a teda predovšetkým matematiky. Uvádza sa, že má v sebe vzácnu schopnosť sprostredkovať zábavnou formou vedecké poznatky aj tým, ktorí matematiku nemilujú a neobľubujú. Knišku vydalo nakladateľstvo Doubleday/ Penguin Random House v roku 2018. Jej zvláštny názov má formu sloganu. Autorka to hneď na začiatku knihy vysvetľuje tak, že ide o tradíciu zo sedemdesiatych rokov, kedy sa táto fráza rozblíkla na obrazovke populárnej učebnice programovania. Fráza „Ahoj svet“ znamenala prvý okamih, kedy ste si mohli so svojim počítačom pokecať, vysvetlila. Táto fráza odvtedy spája programátorov a všetky počítače, ktoré boli kedy naprogramované. „Ahoj svet“ je pripomienkou momentu dialógu medzi človekom a strojom. Situácia, kedy je hranica medzi kontrolujúcim a kontrolovaným prakticky neznateľná. Znamená začiatok partnerstva – spoločnú cestu možností, na ktorej jeden bez druhého nemôže existovať.“ (s. 10)

V úvode textu mojej recenzie vyberám zo svetových recenzií na uvedenú knihu:

... kniha poskytuje jedno z najlepších a najzrozumiteľnejších vysvetlení, ako fungujú algoritmy ...

... autorka dokáže závažnú tému nadľahčiť svojim jasným štýlom, pútavými príbehmi a charakteristickým zmyslom pre humor ...

... je jedným z najlepších vyličení veľmi komplexnej problematiky ...

... kniha spája matematickú erudíciu s rozprávačským talentom a kladie dôležité otázky o algoritmoch a ľuďoch – a o ich spoločnej budúcnosti ...

Čo to teda je ten algoritmus? V pedagogickej encyklopédii sa uvádza, že toto slovo pochádza z arabského osobného mena al-Khwarizom, prešlo cez latinské algorismus a znamená jednoznačný predpis na riešenie danej úlohy s určitým počtom krokov. Vyjadruje sa formou slov, grafov, vzorcov, tabuliek a operátorov... Jeho vlastnosti sú: determinovanosť – presné určenie, čo sa má v jednotlivých krokoch urobiť; rezultatívnosť – musí viesť k výsledku a masovosť – platí pre celú triedu úloh rovnakého typu. Je to kľúčový pojem kybernetiky a programovania. A ako vidí, čo je algoritmus, autorka knihy? „Algoritmy, neviditeľné kúsky kódu, ktoré tvoria ozubené kolesá a páky vo veku moderných strojov, dávajú svetu všetko od sociálnych médií po vyhľadávače, od satelitnej navigácie po systémy, odporúčajúce hudbu, a sú rovnako pevnou súčasťou našej modernej infraštruktúry, ako ňou boli a sú mosty, budovy a továrne. Nájdeme

ich v nemocniciach, súdnych sieňach i automobiloch. Používajú ich policajné sily, supermarkety i filmové štúdiá. Naučili sa, čo máme a čo nemáme radi, radia nám, na čo sa dívať, čo čítať a s kým chodiť. A po celú tú dobu majú skrytú moc pomaly a jemne meniť pravidlá toho, čo to znamená byť človekom.“ (s. 12)

Toto autorka píše v Úvode knihy a na ďalších jej stranách bude odhaľovať podstatu algoritmov, konfrontovať ich moc s nezodpovedanými otázkami, ktoré vyvolávajú. Keďže je vedkyňa, snaží sa byť, a aj je objektívna v ich hodnotení. Píše s nezaujatím, že pri algoritmoch ide o pochopenie vzťahu medzi človekom a strojom. Veď i samotný stroj zostavil a používa človek. A preto sa ďalej pýta, kto sme, kam ideme, ako nás ovplyvňujú technológie. Na príkladoch uvádza ako algoritmy spolupracujú s nami ľuďmi, opravujú naše chyby, riešia naše problémy, ale aj vyrábajú problémy nové ...

Knižka je autorkiným hľadaním odpovedí na otázku, či má algoritmus pre spoločnosť jasný prínos, preto uvádza nielen jeho možnosti, ale sa pýta aj na jeho limity. Celá knižka je rozdelená do siedmych kapitol, s Úvodom, Záverom, Poďakovaním a Registrom. Knižka je napísaná odborným a zrozumiteľným štýlom, obsahuje 33 strán poznámok! Autorka knihy ďakuje 60-im ľuďom z tímu nakladateľstva, ktorí rôznym spôsobom prispeli k písaniu a vydaniu knihy, ďakuje i 15-im recenzentom, ktorí autorku tak isto prispeli radami k úspešnému vydaniu knihy a samozrejme svojej 8 člennej rodine za podporu a dôveru. Ona je však nepochybne dušou tejto knihy.

Už len názvy kapitol knihy sú v súvislostiach s algoritmom veľmi zaujímavé. Sú to tieto názvy: Moc, Dáta, Spravodlivosť, Lekárstvo, Automobily, Zločin a Umenie. Obsah jednotlivých kapitol predstavuje spojenie ľudí s algoritmami. Spojenie ľudí a počítačov. Spojenie ľudí a matematiky. Spojenie ľudí a stroje.

V kapitole Moc ešte spresňuje pojmy, keď píše, že algoritmus je séria logických inštrukcií, ktoré hovoria ako od začiatku do konca splniť úlohu. Ide o zoznam postupných krokov, ktoré majú takmer vždy matematický obsah. Uskutočňujú sekvenciu matematických operácií – pomocou rovníc, aritmetiky, algebry, infinitezimálneho počtu, logiky a pravdepodobnosti – a prekládajú to do počítačového kódu. Dáta sú z reálneho sveta, ako aj úlohy a zadania.

Algoritmov je nespočetné množstvo s rôznymi cieľmi, trikmi. Možno ich však členiť do 4 kategórií: 1. Stanovenie priorít: vytvorenie zoznamu. Ide o vytvorenie nejakého poriadku v obrovskom množstve možností. 2. Klasifikácia: výber kategórie. Existujú algoritmy, ktoré dokážu automaticky vytriediť a odstrániť nevhodný obsah na YouTube ap. 3. Asociácia: hľadanie odkazov. Zoznamovacie algoritmy navrhujú partnerov na základe svojich zistení.

4. Filtrovanie: vyčlenenie toho, čo je dôležité. Algoritmy rozpoznávajúce reč, oddelujú signál od šumu, aby mohli dešifrovať to, čo hovoríte.

Prevažná väčšina algoritmov je vytvorená tak, aby uskutočňovala kombináciu uvedených princípov. Postupy, ktoré algoritmy používajú možno predstaviť v dvoch paradigmách: 1. Algoritmy založené na pravidlách. Sú zostavené človekom a sú priame a jednoznačné. Napr. recept na tortu. 2. Algoritmy založené na strojovom učení. Sú účinné pri riešení problémov, kde zoznam inštrukcií by nebolo možné spísať. „Pre niekoho je predstava algoritmu pracujúceho bez vyslovených inštrukcií receptom na katastrofu. Ako môžeme ovládať niečo, čomu nerozumíme? Čo keď schopnosti vnímavých superinteligentných strojov presiahnu schopnosti ich stvoriteľov? Ako zaistíme, že umelá inteligencia (AI), ktorej nerozumíme a ktorú nedokážeme ovládať, nezačne pracovať proti nám?“ (s. 23) Autorka píše, že tá chvíľa je ešte veľmi ďaleko. V kapitole rozoberá na konkrétnych prípadoch stretnutia umelej inteligencie s ľudskou hlúposťou, odhaľuje záklusie fungovania algoritmov, zvažovaním vlastného úsudku proti úsudku počítača. „... kritickou súčasťou procesu je práve ľudský element: že mať človeka s právom veta, ktorý preveruje návrhy algoritmu pred rozhodnutím, je jediný rozumný spôsob,

ako sa vyhnúť chybám.“ (s. 31) Autorka kriticky hodnotí najmä tie algoritmy, ktoré nás obklopujú, ktoré nás ovplyvňujú priamo. Sú to tie, ktoré obchodujú s najdôležitejšou modernou komoditou – s dátami. Kapitulu končí skepticky, keď píše o malom vplyve na silu a dosah pre „... algoritmy, ktoré potichu sledujú náš pohyb po internete, pre tie, ktoré zhromažďujú naše osobné informácie, napádajú naše súkromie a odhaľujú našu povahu, aby mohli jemne ovplyvniť naše správanie. V tejto osudnej zmesi zle cielenej dôvery, moci a vplyvu sa skrývajú dôsledky s potenciálom zásadne zmeniť našu spoločnosť.“ (s. 34)

Mnoho konkrétnych príkladov uvádza autorka v kapitole Dáta. Veľké obchodné reťazce rýchlo pochopili a rozpoznali hodnotu údajov o jednotlivcoch. Verní zákazníci supermarketov predstavujú obrovský objem predaja. Vernostné klubové karty, kupóny ovplyvňujú nákupné správanie zákazníkov. Disponovanie využívaním čísel kreditných kariet zákazníkov a odpovedí v prieskumoch vedie k tomu, aby obchod prepojil zákazníkov so všetkým, čo si kedy v obchode kúpili, umožňuje to obchodu detailne analyzovať ako ľudia nakupujú. Meniť nákupné správanie ľudí, prostredníctvom on-line nákupov. „Zakaždým keď nakupujete on-line, zakaždým, keď sa prihlásite k odberu informačného bulletinu, alebo sa zaregistrujete na internetových stránkach, alebo sa pýtate na nové auto, alebo vyplníte záručný list, alebo si kúpite nový dom, alebo sa zaregistrujete k voľbám – skrátka zakaždým keď poskytnete nejaké svoje údaje – sú informácie o vás zhromažďované a predávané sprostredkovateľovi dát.“ (s. 43)

Sprostredkovateľ skombinuje dáta, porovná informácie, ktoré si niekto kúpil a získal a vytvorí o nás podrobnú zložku – dátový profil digitálneho tieňa. V doslovnom zmysle slova. V rámci databázy poskytovateľa by ste si potom mohli otvoriť digitálny súbor s identifikačným číslom, (identifikátorom, o ktorom vám nikto nikdy nepovie) a ten obsahuje stopy všetkého, čo ste kedy urobili. „Vaše meno, dátum narodenia, vaše náboženské vyznanie, ako trávite dovolenku, k čomu používate svoju kreditnú kartu, váš majetok, vašu váhu, vašu výšku, vaše politické preferencie, vaše hazardné návyky, zdravotné postihnutie, aké užívate lieky, či ste prekonalí potrat, či sú vaši rodičia rozvedení, či máte sklony k závislosti, či ste obeť znásilnenia, vaše názory na obmedzenie zbraní, vašu predstieranú sexuálnu orientáciu a mieru vašej dôveryčivosti. Existujú tisíce a tisíce podrobností v tisícoch a tisícoch zložkách a súboroch uložených kdesi na ukrytých serveroch, prakticky o každom z nás.“ (s. 43-44)

Autorka knihy hovorí, že to má mnoho výhod, keď sa nám predkladajú veci, ktoré zodpovedajú našim záujmom a potrebám. Ale zároveň uvádza, že je veľa problémov, keď sa ľudia začnú rozčleňovať do kategórií, podľa toho akí sú. Problémy môžu byť až hrozné, môže ísť až o zneužitie. Ani zákon ich neuchráni. Veľké internetové firmy majú modely založené na myšlienke mikro- cielenia. Autorka celkom odhaľujúco píše: „Sú to obrovské mašinerie, poskytujúce priestor pre reklamu a zarábajúce peniaze tak, že milióny užívateľov aktívne navštevujú ich webové stránky, klikajú na ne, čítajú sponzorované príspevky, sledujú sponzorované videá a dívajú sa na sponzorované fotky. V každom zákutí internetu sa v pozadí skrývajú algoritmy, ktoré obchodujú s informáciami, o ktorých neviete, že ich majú a nikdy ste im ich neposkytli. Z vašich najosobnejších súkromných tajomstiev robia obchodnú komoditu.“ (s. 47)

Niekedy sa to môže nahýbať až cez istú strašidelnú čiaru. Bude to vtedy „... keď sa o vás bez vášho vedomia zhromažďujú súkromné a citlivé informácie, aby vami bolo možné manipulovať.“ (s. 50)

Autorka v tejto súvislosti v knižke podrobne zanalyzovala škandál britskej politickej poradenskej spoločnosti Cambridge Analytica, ktorá vytvorila algoritmus, ktorý by mohol vyvodíť niečiu osobnosť čisto podľa lajkov na Facebooku, neskôr aj na Twitteri. Plánovala výsledky využiť v reklame, ktorú vydávala za žurnalistiku. Osobnostné profily voličov využívala táto spoločnosť vo volebnej kampani v amerických prezidentských voľbách. „Cambridge Analytica predkladala manipulatívne falošné správy užívateľom Facebooku na základe ich psycho-

logických profilov.“ (s. 53) Bola to veľká emocionálna manipulácia, ktorá ukázala, ako tieto metódy môžu ovplyvniť, ako ľudia hlasujú a ako, za čo utrácajú svoje peniaze. Je zaujímavé, že je nemožné určiť, aký veľký to všetko malo v skutočnosti vplyv na prezidentské voľby v USA, ktoré vyhral Donald Trump.

Autorka v tejto kapitole otvorene píše, že voľný prístup k okamžitým globálnym komunikačným sieťam, k bohatstvu ľudského poznania na dosah dlane, najnovšie informácie zo sveta nie sú zadarmo. Sú zaplatené reklamami. Taká je naša dohoda s nimi! „Voľne dostupné technológie na oplátku za vaše dáta a možnosti využívať ich k vášmu ovplyvňovaniu a vykorisťovaniu. To najlepšie a to najhoršie z kapitalizmu v jednej jednoduchej výmene.“ (s. 55)

V kapitole Spravodlivosť sa autorka zamýšľa nad posudzovaním viny a udeľovaním trestu v súvislosti s využitím algoritmov v súdnych procesoch. Nie je to exaktná veda a sudca nemôže zaručiť precíznosť vo výkone. Podľa nej, kedykoľvek majú sudcovia možnosť voľne posudzovať prípady, robia to celkom nekonzistentne. Dokonca v tom hrá rolu určitý element šťastia.

Riešením dosiahnutia konzistentnosti sudcu by bolo odobratie mu možnosti robiť vlastné uváženie. Súdiť podľa predpísaných rozsudkov, vraj ako v niektorých častiach Austrálie, či federálne v USA. Získanou presnosťou sa však stratí iný druh spravodlivosti. Žiadny systém nie je dokonalý, sú v ňom súperiace krivdy, existuje v ňom chaos protikladných nespravodlivostí. Na scénu môže preto nastúpiť algoritmus, ktorý prekvapivo môže zaručiť aj konzistentnosť a aj spravodlivosť. Nemôže rozhodnúť o vine, ale môže použiť údaje o jednotlivcovi k výpočtu rizika recidívy. Autorka pripúšťa, že algoritmus bude robiť chyby, ale jej záver je nasledovný: „Dobre navrhnutý a riadne regulovaný algoritmus vám prinajmenšom pomôže zbaviť sa systematického skreslenia a náhodnej chyby. Nemôžete zmeniť celú skupinu sudcov, zvlášť, ak vám oni sami nie sú schopní povedať, na základe čoho vlastne robia svoje rozhodnutia.“ (s. 88)

V kapitole knižky Lekárstvo autorka píše o často diskutovanej presnosti diagnostiky niektorých závažných ochorení. Ide napr. o predikciu a klasifikáciu onkologických chorôb. Autorka píše o zámere v tejto oblasti spojiť sily človeka a stroja. „Algoritmus odpracuje bežnú drinu pri hľadaní obrovského množstva informácií v obrázkoch, pričom zdôrazní niekoľko kľúčových oblastí záujmu. Potom to prevezme patológ. Nezáleží na tom či stroj označí bunky, ktoré nie sú rakovinové, ľudský expert to môže rýchle skontrolovať a odstrániť označenie tých, ktoré sú v poriadku. Tento druh screeningového partnerstva s algoritmom nielen ušetrí množstvo času, ale tiež zvýši celkovú presnosť diagnózy na ohromujúcich 99,5%.“ (s. 101) Autorka vychádza z presvedčenia, že algoritmy (pravdepodobne) pomôžu, no nie podľa zložitých kategórií patológov, ale môžu ponúknuť lepšiu diagnostiku pri hľadaní anomálií, skrytých v malých úlomkoch dát, ktoré ľudskí lekári nedokážu nájsť. V kapitole je veľa presvedčivých konkrétnych príkladov, ktorými autorka potvrdzuje svoje názory na využitie algoritmov v diagnostike závažných ochorení. Aj v tejto oblasti vidí mnoho problémov, napr. v neprepojených, chaotických a neštruktúrovaných údajoch o zdravotníckej starostlivosti. Nepripomína nám to niečo? Problémom je ochrana súkromia, dôverných až intímnych informácií o každom z nás. Nepripomína nám to niečo? Údaje o zdravotnej starostlivosti človeka sú rozprávanie o jeho živote. „Pokiaľ niekto vlastní vaše genetické údaje, vie tiež niečo o vašich rodičoch, o vašich súrodencoch a o vašich deťoch.“ (s. 116) A akonáhle je to vonku, niet cesty späť. „Nemôžeš zmeniť svoju biologickú podstatu, alebo ju poprieť. Pokiaľ niekto získa vzorku tvojej DNA, nemôžeš ju zmeniť. Môžeš ísť na plastickú operáciu tváre, môžeš nosiť rukavice, aby si skryla odtlačky prstov, ale tvoja DNA je tu vždy. Navždy je s tebou spojená.“ (s. 116) Nepripomína nám to niečo?

Je to vždy veľká dilema: mať veľký prospech z otvorenosti lekárskeho záznamu voči algoritmom, ale ... vzdáme sa súkromia, možnosti krádeže údajov, zneužitia voči nám, obetovania súkromia? Ide o genetické testovanie, o gigantické databázy genetických údajov s miliónmi

vzoriek. „Je to rovnaké ako v prípade internetových gigantov, s tým rozdielom, že sme odovzdali ako súčasť obchodu svoju DNA, teda rozdáваме tie najosobnejšie údaje, ktoré máme.“ (s. 118) Je to biznis, nie je to pre spoločnosti len nejaký bonus, je to ich hlavný podnikateľský zámer. Anonymita sa len sľubuje. Nepripomína nám to niečo? Autorka píše o varovaniach, aby sa naša DNA neocitla v neznámych databázach, s tým, že nás nikto nemôže nútiť podstúpiť vyšetrenie proti svojej vôli. „Jediným spôsobom, ako sa vyhnúť tomuto druhu diskriminácie, je na prvom mieste, že sa nikdy nenecháme testovať. Niekedy môže byť nevedomosť skutočne blážená.“ (s. 120) Nepripomína nám to niečo? Zavedenie algoritmov v akomkoľvek aspekte života, bude vždy vyvažované medzi súkromie a verejné blaho, medzi jednotlivca a populáciu, medzi výzvy a priority. Problémom, podľa autorky knižky zostáva, keď sú prínosy algoritmov nadhodnocované a riziká sú skryté. Nepripomína nám to niečo?

V kapitole knižky s názvom Automobily autorka rovnako fundovane píše o využívaní a o problémoch algoritmov v doprave na zemi a vo vzduchu. Ide napr. o automobily samo riadené bez šoféra, o autopilotov v leteckej doprave. Podrobne popísala a rozobrala napr. prípad letu Air France 447, počas ktorého zahynulo všetkých 228 ľudí na palube. Pravdepodobne analýza záznamov z čiernej skrinky ukázala, že piloti neskoro a zle a nesprávne nahradili autopilota a v panike spôsobili pád lietadla. „Autopilot, ktorý v dátach nedokázal rozumne čítať, spustil v kabíne poplach a preniesol zodpovednosť na ľudskú posádku.“ (s. 143) Aj v tejto kapitole uviedla autorka konkrétne príklady ako chápať využitie algoritmov, predovšetkým v automobilovom priemysle. Píše o tom takto: „Pokiaľ má všetko správne fungovať, musíme tomu prispôbiť svoj spôsob myslenia. Musíme sa zbaviť myšlienky, že by autá mali zakaždým fungovať dokonale a pripustiť, že zatiaľ čo mechanické zlyhanie môže predstavovať vzácnu udalosť, algoritmické zlyhania v dohľadnej dobe takmer iste ničím výnimočným nebudú.“ (s. 150) Dilemy v tejto oblasti zostávajú, veď ako možno zistiť, že dobré je dostatočne dobré, na cestách a vo vzduchu?

O využívaní algoritmov v policajnej práci píše autorka knižky v kapitole pod názvom Zločin. Aj v nej, na základe konkrétnych prípadov vražd, uviedla, že pomocou algoritmov bolo možné vyriešiť niekoľkoročné neobjasnené prípady niekoľkých zločinov. Napr. algoritmus geoprofilovania útočníkov sa osvedčil v policajnej praxi a stále je využívaný. Ide však v tejto oblasti najmä o predvídanie trestných činov a o zamedzenie kriminality občanov. „.... algoritmus vlastne nedokáže povedať, čo sa stane v budúcnosti. Nie je to krištáľová guľa. Môže predvídať len riziko budúcich udalostí, nie udalosti samotné – a v tom je nepatrný, ale dôležitý rozdiel.“ (s. 164) Ide o vytváranie prediktívnych policajných algoritmov, ktoré predstavujú prísľub do budúcnosti. Rovnakou samozrejmosťou modernej policajnej práce a prísľubom dobrej budúcnosti spoločnosti sú algoritmy rozpoznávania tváre. Pracujú s fotografiami, s 3D zábermi, merajú parametre tváre a porovnávajú ich s databázou známych tvárí s cieľom zistiť identitu, ktorá je zobrazená. Algoritmy sú v tomto úspešnejšie ako ľudia. Kritickým bodom je však nasledovné: „.... podobnosť spočíva v oku diváka. Bez presnej definície podobnosti nemôžete merať ako odlišné sú dve tváre a nebude existovať žiadna prahová hodnota, od ktorej môžeme povedať, že sú dve tváre identické. Nemôžete definovať, čo to znamená byť dvojníkom, alebo povedať, ako často je určitá tvár, ani – a to je najdôležitejšie – nemôžete stanoviť pravdepodobnosť, že je na dvoch obrázkoch rovnaký jedinec.“ (s. 175) Je preto potrebné pracovať s týmito algoritmami opatrne. Polície sveta v súčasnosti disponujú miliónmi portrétov našich tvárí, nainštalované kamery odhaľujú pri cestovaní všetkých, od hľadaných zločincov, po obyčajných chodcov. Autorka v závere kapitoly vyjadruje naliehavú potrebu regulácie algoritmov v prípadoch trestnej činnosti. „Môže to dopadnúť tak, že sa nakoniec rozhodneme, že by mali existovať určité limity pre dosah algoritmov. Že niektoré veci by sme nemali analyzovať a počítať. Možno je v tom trochu sentimentu, ktorý konieckoncov platí i mimo svet zločinu. Nie snáď kvôli nedostatku

DICTIONARY OF USEFUL MARKETING TERMS

M

marketing university | univerzita marketingu — Discover the top marketing universities with the university rankings for masters.
Objavte špičkové marketingové univerzity s univerzitným rebríčkom pre magisterské štúdiá.

marketing year | hospodársky rok — Annual and quarterly supply-use statistics are on a marketing-year basis.
Ročné a štvrťročné štatistické údaje o dodávkach sú založené na báze marketingového roku.

mascot | maskot — Miraitowa was the official mascot of the Tokyo Olympic Games.
Miraitowa bol oficiálnym maskotom olympijských hier v Tokiu.

masculine | maskulínny, mužský — It is a movie likely to appeal to a masculine audience.
Je to film, ktorý pravdepodobne osloví mužské publikum.

masculinity | maskulinita, mužskosť — Traits traditionally viewed as masculine in Western society include strength, courage, independence, leadership, and assertiveness.
Medzi črty tradične považované v západnej spoločnosti za mužské patrí sila, odvaha, nezávislosť, vodcovstvo a asertivita.

Maslow's hierarchy of needs | Maslowova hierarchia potrieb — The theory of Maslow's hierarchy of needs claims that people will only satisfy some needs after more basic needs will be satisfied.
Teória Maslowovej hierarchie potrieb tvrdí, že ľudia uspokojia niektoré svoje potreby až po uspokojení základných potrieb.

mass | masový, vo veľkom množstve — During times of mass unemployment, there's a pool of cheap labor for employers to draw from.
V časoch masovej nezamestnanosti existuje zásoba lacnej pracovnej sily, z ktorej môžu zamestnávateľia čerpať.

mass advertising | masová reklama — Mass advertising is used to reach a wide variety of audiences.
Masová reklama sa používa na oslovenie širokého spektra cieľových skupín.

mass balance | hmotnostná bilancia — This part deals with the mass balance of sea ice and is divided into chapters on modelling and observation.
Táto časť sa venuje hmotnostnej bilancii morského ľadu a je rozdelená do kapitol o modelovaní a pozorovaní.

snahy samotných algoritmov. Ale pretože – možno – existujú veci, ktoré sú mimo možnosti nezaujatého stroja.“ (s. 183)
Algoritmy vo svete umenia sú obsahom ostatnej kapitoly recenzovanej knižky pod názvom Umenie. Zaoberá sa v nej súvislosťami popularity, kvality, rebríčkami filmových, hudobných a knižných hitov a bestsellerov s využívaním algoritmov v pozadí. Moderné algoritmy sú bežne schopné predvídať zdanlivo nepredvídateľné, ako píše autorka knižky. Všetko je v tejto oblasti možné, pretože ako jeden spisovateľ na adresu prípadného úspechu istého filmu povedal: „Nikto nič nevie.“ V umení nie je vždy možné a ani vhodné kvantifikovať kvalitu. Autorka píše o tom takto: „... v našom estetickom uznaní umenia hrá rolu kontext a nie je možné vytvoriť pevné meradlo pre estetickú kvalitu, ktorá by fungovala vždy a všade. Bez ohľadu na štatistické techniky, alebo triky umelej inteligencie, alebo algoritmy strojového učenia, ktoré nasadíte, keď sa snažíte podstatu umeleckej dokonalosti podchytiť za pomoci čísel. Je to ako snažiť sa zovrieť v dlaniach dym.“ (s. 198) Autorka dopĺňa myšlienky, že skutočné umenie nie je možné vytvoriť náhodne. Existujú hranice dosahu algoritmov. Nedá sa všetko kvantifikovať. Medzi všetkými číslami a štatistikami jej chýba odpoveď na otázku – aký je to pocit byť človekom. V Závere nastoľuje filozofickú dišputu o vzťahu človeka a stroja. Algoritmy, ktoré sú vytvorené, sú užitočné, ale spôsobili i mnoho komplikácií, ktoré bude potrebné čo najskôr objasniť a vysvetliť. Kvintiesenciou celej tejto knižky je nakoniec veta: „Vo veku algoritmov nie je nič dôležitejšie ako ľudia.“ (s. 212)
Čo napísať na záver tejto mojej komentovanej recenzie, ako som ju sama tak nazvala? Je to, podľa mňa vynikajúca knižka, ktorej predchádzala vynikajúca správa o jej vzdelanej a múdrej autorke, exaktnej vedkyňi, ktorá vie priblížiť pomerne zložitú problematiku čísel, štatistiky, pravdepodobností a algoritmov v rôznych oblastiach ľudskej činnosti. Rozhodne ju odporúčam nielen prečítať, ale aj preštudovať, najmä tým, ktorých sa téma knižky profesijne dotýka.

mass communication | masová komunikácia — Mass communication is the public transfer of messages through media to a large number of recipients.

Masová komunikácia je verejný prenos správ prostredníctvom médií veľkému počtu príjemcov.

mass concentration | hmotnostná koncentrácia — Several types of mathematical description can be distinguished: mass concentration, number concentration, and volume concentration.

Je možné rozlíšiť niekoľko typov matematického popisu: hmotnostná koncentrácia, číselná koncentrácia a objemová koncentrácia.

mass customization | masové prispôsobenie — Mass customization is a business strategy that focuses on customers and recognizes the need to provide outstanding products while using new procedures.

Masové prispôsobenie je obchodná stratégia, ktorá sa zameriava na zákazníkov a uznáva potrebu poskytovať vynikajúce produkty pri použití nových postupov.

mass distribution | masová, hromadná distribúcia — Mass or intensive distribution is used when products are designed for a mass market.

Hromadná alebo intenzívna distribúcia sa používa, keď sú produkty určené pre masový trh.

mass market | masový trh — Advances in technology have made many products affordable to the mass market.

Vďaka technologickému pokroku sa mnohé produkty stali cenovo dostupnými pre masový trh.

mass marketing | masový marketing — Toothpaste brands like Colgate utilize mass marketing for example by having commercial spots on TV.

Značky zubných pást ako Colgate využívajú masový marketing napríklad tým, že majú v televízii komerčné spoty.

mass media | masmédiá — There is a widespread belief that traditional mass media is dying.

Panuje rozšírený názor, že tradičné masmédiá umierajú.

mass produce | masovo vyrábať — What is happening now, is that companies mass-produce goods remotely, in isolation, from consumers who will be using those products.

Teraz sa deje to, že spoločnosti hromadne vyrábajú tovar na diaľku, izolovane od spotrebiteľov, ktorí budú tieto produkty používať.

mass production | masová výroba — The company specializes in the mass production of furniture with modern designs.

Spoločnosť sa špecializuje na sériovú výrobu nábytku s moderným dizajnom.

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