Bohdan Jung   https://orcid.org/0000-0003-1361-4768

Szkoła Główna Handlowa
bjungh@sgh.waw.pl

Tadeusz Kowalski   https://orcid.org/0000-0002-0900-4468

Uniwersytet Warszawski
t.s.kowalski@uw.edu.pl

MEDIA MANAGEMENT: THE ATTENTION PERSPECTIVE

Abstract

With media being one of the first sectors of the information economy to be fully (i.e. with respect to its design, production, distribution, and consumption) digitized, an era of its management has come to an end. Existing boundaries between different media types have collapsed, as well as all limitations about time and space of media dissemination. However, this seemingly limitless expansion of media markets and media overabundance has come across a new barrier, which is that of human/consumers' attention needed for media consumption. Given shortening attention spans (as documented by empirical research), attention is increasingly perceived as the most valuable resource for the media sector and new strategies for attracting, retaining and sustaining attention must be devised and managed. Managing attention is now becoming the new core of media management.

Keywords: attention, attention span, media management, digital economy, attention management

JEL: Z1, M11, D8

1. Media management: concepts and issues

Before our eyes, a particular model of media functioning and development in the conditions of a changing market is coming to an end, or its possibilities are significantly limited. Managers operating in traditional market structures assumed the existence of clear boundaries between different media types, relied on a high degree

of predictability of supply and demand fluctuations, quite precisely localized the geographic boundaries of the market, and took as evidence the time and space limitations in dissemination. The typical development philosophy was based on the belief in linear growth, disrupted by extraordinary gains and opportunities at times at most.

The development of computer technology and digital language created a new environment characterized by a significant dynamic of changes related to the technique and technology of media, the way of managing them, the basis for generating revenues, operating efficiency, ownership relations, and which seems to be particularly important, patterns of media consumption.

Providing information and entertainment through increasingly sophisticated distribution systems in the real and virtual worlds is becoming a more and more complex task. Media content can now be disseminated globally with tremendous speed and many forms.

The phenomenon of concentration, which has traditionally focused the attention of researchers on the daily press and sometimes magazines, has gained tremendous speed and now covers almost all types of media. Traditional media animators (owners, managers, creators), who perceive their role as performing and fulfilling ownership and employee functions related to a certain trademark, title, or name, more and more often define their role differently, perceiving themselves primarily as content providers (content and its various forms). At the national and international level, media conglomerates, i.e., companies in many media industries whose comprehensive strategies pose severe challenges for other market participants, are gaining more and more importance and influence.

The term "media management" is becoming more and more popular, although there are rarely any attempts to define the meanings ascribed to it. Some, explaining directly ("media management"), imagine that it is a process similar to manipulating media, using them for specific purposes, for centralized action, consisting of issuing instructions to the media regarding desired behavior. Undoubtedly, there is a certain intellectual resentment to the past times when there was no social media, prosumption, Internet communication, user-generated content, and other phenomena of the new media environment. However, such an approach does not seem appropriate. It ignores the existence of significant competition in many media markets and thus the practical impossibility of centralized disposition, especially in democratic political systems and in the economic dimension of market ones.

Others believe that media management is the essence of activities undertaken by a media planner, i.e., a specialist in planning advertising campaigns in the media, whose activities include the selection of appropriate media for the implementation of specific goals. The advertising budget allocation is like controlling the media, managing some parts of their content, and giving them guidelines for implementing specific advertising messages. This approach is undoubtedly dominated by the industry perspective of advertising agencies and media houses. Also, this

approach does not seem to completely cover the topic, i.e. understanding what media management is.

For specialists in new media, especially the Internet, this term is associated primarily with creating website content, rules for supplementing them, composing, user experience, specific software, reacting to errors, and elements of audience interaction. Management in such an approach becomes a constant process of monitoring the virtual space. Undoubtedly, this understanding of media management does not exhaust the problem. However, it indicates many essential elements that are the subject of activity of managers employed in the media.

For example, "management" is such a bonus, an element of prestige and importance of certain people and their activities.

So what is media management, and how will it be understood here?

The traditional approach to the problem of defining this research area consists of three elements: the existence of a group of researchers interested in the topic (including academics), the subject of research, and methodology (particular methods for a given area of research) (Ferguson, 1997). Leaving the first and last question unresolved for the moment, attention will be focused on the subject of research.

The first step in this direction is to identify the specific features of a particular area of research. For example, the forerunners of media management studies pointed to several features that distinguish media industries from other areas of production and services (Lavine, Walkman, 1988):

(1) They categorized most media products into the perishable commodities category.

(2) They indicated a significant share of creative workers employed in the media who belong to specific professional groups (journalists, reporters, graphic designers, filmmakers, screenwriters, composers, directors, and many others).

(3) They pointed to the specific organizational structure of media companies, characterized by flexibility and the particular importance of horizontal ties (horizontal structures).

(4) They recognized the importance of the social role of the media, especially appreciating their universal visibility and significant impact on society.

(5) They emphasized the importance of the blurred boundaries between traditional media, such as the press, radio, and television.

The analysis of the proposed specific features of the media seems to indicate that many of them have properties similar to other types of economic activity. Ad hoc products are often fast-moving consumer goods (FMCG). This feature makes the media similar to, for example, food products, which often have a limited shelf life, but also, it is worth noting that many of them are considered essential goods. The observation of social behavior shows that, although with varying intensity, the vast majority of society uses the media. The activities related to it are almost routine, sometimes even ritualistic. The media are increasingly becoming an element of the individual's daily functioning in society. They are, to some extent, irreplaceable,

especially when it comes to entertainment or informing about public matters. Although the utility associated with it is temporary, as with energy-providing food, the need for exercise is relatively persistent throughout most of a person's life.

A highly distinguishing feature of the media is a significant share of people who perform creative work among the total number of employees, who are expected to be able to think abstractly, be creative, have a specific intuition, and act by combining elements of routine and novelty. Although it is probably not easy to create a complete list of professions and specialties occurring in media production, it is pretty evident for an observer that the media gathers numerous creative employees (Vinet, 2005). In the conditions of usually a strong inclination toward individualism, the issue of coordinating their activities becomes a particular object of effort by people responsible for them – i.e., the managers.

Another feature, although also attributable to other activities, strengthens the previous feature. Flexible and horizontal structures are characterized by significant variability of organizational parts and positions, participation of employees in several tasks simultaneously, and performing various roles by them depending on their needs. An additional feature is the existence of many professional specialties and the significant importance of the time factor for acquiring qualifications (learning and qualifications accumulated through experience) (Koźmiński, Piotrowski, 1997).

The issue of the significant influence of the media on society requires no comment. The media are a visible element of everyday life and, at the same time, an instrument of influencing the mass imagination of members of society. Their role seems difficult, if not impossible, to replace.

The last distinguishing element leads to the increasingly important convergence of the media, which on the one hand, expand into areas common to IT and telecommunications, on the other hand, while maintaining a specific genre identity (printed press, radio, television), meet and compete on a common digital plane (Fiedler, 1997).

Although certain distinguishing elements may be subject to a reservation that separateness is non-exclusive, it does not constitute an obstacle to distinguishing a specific research area, and thus a subject, for research in media management. Moreover, it seems that in order to maintain certain methodological correctness of the delineation of the area as mentioned above, the indicated conditions can be treated jointly, thus assuming that they together form a specific area of practice and theoretical reflection.

A specific practical difficulty in distinguishing such an area is that the media are characterized by a high degree of mutual dependence and interrelationships with the economy, politics, culture, and society. These multiple relationships and dependencies make the media almost constantly the subject of public interest, which gives their activities a specific character. The media, an element of social control,

especially in the political and economic sphere, are subjected to such control intensively.

Douglas A. Ferguson points to five features distinguishing the media industries from others. First, according to the well-known statement – *There is no business like show business* – the importance of the media industry is often exaggerated. The analysis of business operations and accounting entries does not reflect the media's proper role, and the discrepancy in this respect can be very significant. On television, for example, almost every product is a type of investment with an unknown return on capital, and the amount of that investment is fundamentally different from most other products and services. The same media product can have hundreds of prices, which is most spectacularly visible on the market of license rights for film and television production.

Secondly, managers working in the media and owners of the media are subject to particular scrutiny by the public and competitors, which means that their successes and failures quickly gain public attention. As a result, managers are often identified with a media company by a wide range of public opinion, and they become its image. It also happens that they are directly criticized for the editorial or programming policy of the medium. They are identified with it, although their influence may be very limited in this respect.

Thirdly, in the opinion of consumers (recipients) of the media, their production does not involve any unique knowledge or experience. Almost every recipient feels entitled to formulate their assessments and criticisms of the media, feeling competent in this regard. Many other areas of the economy enjoy much greater respect in this field. This causes media managers to pay a certain price for the ubiquitous availability and presence of the media. As in the famous experiment of the royal jester Stańczyk, proving that "everyone feels like a doctor", many people think they are familiar with the complexities of the media. The belief that managers are inept is not uncommon. This situation is gaining ground with the development of user-generated content, social media, and prosumption. On the one hand, this state of affairs gains intellectual support, for example, in the works of Lawrence Lessig (Lessig, 2005, 2009), but on the other hand, it causes concern about the state of culture in others (Keen, 2007).

Fourth, the media industry relies on creative resource management. Although unique abilities and intelligence are present in every production field, almost all employees participate in the production of essentially intangible goods in the media. Human ingenuity is an essential foundation of the entire media industry, significantly distinguishing this field from others.

Fifth, the media industry creates a complex web of selection. For media people, selecting information is something completely natural and obvious. From the multitude of reports and proposals, a choice must be made to create specific content for a given time and place. However, by implementing this obvious function, the media becomes a kind of filter for public discussion, sometimes even an obstacle to the

development of public discourse. Many managerial activities appearing in the media are associated with making selection decisions, creating selection procedures, with making a choice – accepting one proposition and rejecting others. The problem of selection prompts a detailed consideration of who and to what extent is responsible for making a choice and who controls the flow of information?

The considerations so far lead to the conclusion that there is a particular area of theoretical reflection and practical activity, which seems to have a set of specific features that distinguish it from other areas of human activity, and which is related to the functioning of the media in general and media organizations in particular. An essential role in this respect is played by creative activities, which, due primarily to the immaterial nature of media goods, pose a specific challenge and expectation for management.

From this perspective, media management is, first of all, a complex, comprehensive set of management activities, which are connected, on the one hand, with the management of creative talents, and, on the other, with the organization of collective consumption of the products of creative work. The primary management activities include planning, making decisions, organizing, and leading, i.e., managing and controlling people. In carrying out these activities, managers use the human, financial, material, and information resources entrusted to them to a certain extent. Their activities are focused on the efficient and effective achievement of the organization's goals. Efficient operation is based on wise use of resources and avoiding waste. Effective action in the intention and the practical dimension should lead to achieving the intended goal (Griffin, 2002).

According to Bogusław Nierenberg, "media management" covers all decision-making processes related to media organizations and may be considered, among other things, in the following aspects: functional, process, or structural (Nierenberg, 2011). In line with this belief, the media are "managed" by a member of the National Broadcasting Council, an employee of the media house who prepares an advertising action plan, an IT specialist who programs new functionalities of the website, and many other more or less random people.

Rapid changes in the media under the influence of many different factors raise the question of the direction in which media development is going daily. What is the future of the already existing forms of communication? What could be the consequences of technological development and new forms of communication? Understanding the rationale behind media management is a convenient starting point for assessing decisions that determine the development of media systems in practice.

One manifestation of changes in the media is the tendency to redefine what constitutes the essence of media companies' activity. As a result, traditional hierarchies, markets, and products more and more often give way or are supplemented with new markets, new products, growing requirements of the competitive

environment, technology, and apprenticeship, and each of these elements is significantly conditioned by the managers' decisions.

Market changes prompt more and more media companies to implement various adaptation strategies to reduce risk. One of the most frequently used strategies is the diversification of activities and the formation of companies operating in various media markets. Thus, in addition to publishing press or radio or television activities, media companies are increasingly active in advertising, data transmission, and offering digital services in public relations agencies, sales promotion, and Internet services. Managing such complex, multi-industry projects requires specialist knowledge in many areas. Is it possible to cover and combine so many operations into one system (and thus achieve a specific synergy effect)? Treating a company solely as a radio or television station, newspaper or magazine becomes anachronistic in convergence. The same content can be offered in many different ways.

The media company manager is faced with delivering the information or – more broadly – content that is efficiently desired by the audience and regardless of the boundaries between the individual media. Adopting such an assumption requires focusing on the common elements of various media forms and abandoning the expectation that the media will be what they are in the future.

Newer concepts point to the importance of an appropriate information flow system, semantic problems, and the perception of problems that may interfere with efficient communication. Communication processes in media companies can help managers understand employees' behavior and motivation and become an element in constructing motivation systems and organizational structures. Participatory management is one way of solving these problems.

The media is an area traditionally subject to many legal regulations that essentially refer to their public nature. Each country has different rules and regulations in this regard. However, media managers must consider legal restrictions and obligations in practice, for example, on such issues as defamation, protection of privacy, access to public information, copyright and related rights, advertising, and sponsorship. In addition, like all other companies, they are bound by the rules of labor law, tax law, provisions on free competition, health and safety at work, etc. It should be noted that the rights to which the media are subject are not always state law. Quite often, especially in developed markets, the media succumb to self-regulation, so they adapt to specific rules and principles recognized by all entities or the vast majority of them operating on the market. Media law, labor law, and other areas of law constitute the area of daily activity of managers in the media and are, therefore, the subject of numerous case studies, which, however, do not have to be considered only on a purely legal level but constitute interesting matters for media management.

Actual market processes result from many factors, so quantitative market analysis must also include qualitative elements. Managers should be able to use different market research methods and understand the advantages and disadvantages

of each method. Market analyses have two primary goals. First, it is about making everyday decisions easier, in line with the belief that the right decisions can be made more quickly when accompanied by an awareness of where the company is located and where the market is headed. Second, analyzes are the basis for developing long-term strategies. Since the media operate in parallel on the market of ideas, media products, and advertising, the subject of analysis is, in particular, such issues as market structure, goals of media companies, the nature of demand, economic conditions of activity, but also the intellectual content of media products. Performing this type of analysis is a solid basis for formulating a company's behavior strategy.

Market analysis is a valuable tool for a manager's work, but it is also an introduction or preparation for the planning process. Every company operating in a competitive market must have a good understanding of the profile of its recipients. Establishing such a profile is usually supported by statistical computing techniques. The social and demographic composition of the audience is the basis for determining preferences, interests, expectations, needs, and, therefore, what constitutes marketing knowledge. Marketing research techniques constitute almost a separate field of interest. The manager's knowledge does not have to be detailed in this regard; it is enough for him to know what types of research are and their limitations in making conclusions. The most common research is market or market analysis, consumer research, media product research, advertising effectiveness evaluation, dissemination research, readership research, and program and advertising monitoring.

Managers' decision-making requires using much information from a variety of sources. One of the most important is financial information from accounting services. Financial information, often presented in long sequences of numbers and tables, also provides essential non-financial information that accurately describes the past and present states and provides a reasonable basis for formulating expectations. The lack of information of a financial nature often makes it impossible to perform management functions in planning, decision-making, and business evaluation. Without the financial aspect, the goals of a media organization cannot be precisely defined.

Moreover, the manager was assigned a criterion for assessing the effectiveness and correctness of actions. The amount of information that can be obtained from the analysis of financial statements is very significant, and which of them will be used and applied depends on the manager's position in the hierarchy of the company, the time horizon of the decision to be made, the size and complexity of the company itself and its program goals. One of the most important sources of information is budget.

The practice of accounting is usually associated with two ways of recognizing the management phenomena in the company: financial and management. Financial reporting is used primarily due to external needs and formal requirements for

preparing the balance sheet and the profit and loss account. The balance sheet is a specific photograph of the company's state at a given moment. *Management accounting* is a slightly different application, which provides managers with the information necessary to make decisions. The primary instruments here are partial budgets and income statements. The budget of a media company, which merges the individual and organizational units of the company into one, actually shows how the expenses will be incurred at a given time. It is also a reflection of the company's priorities. Revenue statements show what the power sources are. Several case studies deal with budget constraints and opening a new radio station, among others.

The last of the discussed aspects of a manager's work is technology development issues and the formulation of expectations about the future. Technology typically has multiple effects on the market, but from the perspective of a media company manager, two aspects are exciting: creating new markets or increasing market share. Technology can help achieve one or both of these goals, but it is also problematic. Opening a new market creates the problem of understanding, analysing, and learning to proceed regularly without prior preparation. Thus, it increases uncertainty and risk. Uncertainty and a lack of knowledge about new technologies are the reasons for quite an evident conservatism of managers, who often fear that undertaking a new venture may be destructive for the company. However, pioneering in specific new markets, associated with new technologies, can be a source of competitive advantage, motivating risk-taking. In the approach to new technologies, structural, technological, and social engineering aspects are quite often distinguished. The first is related to the company's structure, which forces the search for solutions that facilitate management or running a business, also at the technological level. The second and third often result from adapting to the general market tendency, adopting solutions already introduced by market leaders. The technology aspect, especially in internet convergence and development, is gaining importance.

In 2020, hybrid time was introduced as an essential element of modern media consumption. The development of this concept is to consider the impact of changes in media consumption patterns on media management (Jung, Kowalski, 2021). In particular, an attempt will be made to answer whether media management does not increasingly boil down to managing media consumers' attention (Lipnowski et al., 2020).

2. Importance and complexity of attention

The definition of attention is basically psychological and involves "a selective focus on some of the stimuli that we are currently perceiving while ignoring other stimuli from the environment." Attention is thus focused on something always at the expense of something else, just like in the case of spending money. Across a number of languages, we find the expression "to pay attention," suggesting that attention is

limited and valuable. When we "pay" attention to one thing, we tie up our mental resources and less attention is available to spend elsewhere. Theories of human attention all agree that it, being an individual, biological human attribute, is limited in its capacity. H. Simon described attention as a "bottleneck" in human thought (Herbert, Simon, 1992) and goes on to say that "A wealth of information creates a poverty of attention." (Herbert, Simon, 1992). This idea remains valid as it becomes even more apparent that limitations of attention are crucial to the functioning of societies, politics, media, culture, businesses, even personal contacts. While attention is also being regarded as one of the most valuable resources of the digital age (Webster, 2014), the unique character and complexity of which we are only starting to realise in an era of overstimulation from omni-present and pervasive (multi)media and information.

Attention is a multidimensional, multisensory cognitive phenomenon that can be studied and defined in a number of ways. Attention is more than just focusing on completing a task. Much audience profiling can be done from observing what one pays attention to as one's focus becomes one's reality. Attention mastery as a skill must be acquired early in life, since it is in high demand in education.

Attention is primarily an act of orienting, exploring, adjusting, and optimizing, not a process of filtering. Being a multifaceted concept, it includes such operations as: dividing, switching, selecting, orienting, searching, and sustaining. Each of these elements is of paramount importance to contemporary media management and calls for different strategies. Authors link attention to three distinct, yet interacting, networks: alerting, orienting, and executive control (Parr, 2015). The most important of these seems to be the skill (or science) of capturing attention, which has been given the term of '*captivology*' (Parr, 2015).[1] Media management deals with several processes related to audiences' experience with attention. The first stage would be to organize audience into an attentive phase (i.e. *paying attention*) in order to come into (economically) desirable state of '*paying with attention*' (i.e. eyeballs, click-throughs). Capturing audiences thus passes through three distinct stages:

- focusing;
- sustaining attention through finding dedicated time;
- monetizing attention into a revenue stream.

In literature of the subject a distinction is made between *deep attention* (concentrated, most desired by producers of media content) and *distracted attention* which is more shallow and involves much multitasking (thus expanding overall time available for media consumption in a more dispersed, less focused mode). This attention dichotomy is also referred to as sustained attention versus continuous partial attention (CPA). Attention is also classified according to audience's

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[1]   We are now witnessing the appearance of a new attention-based research and educational fields (such as captivology), the refocussing of existing ones (as in human centred informatics) and emergence of new study centres (such as the Centre for Attention Studies at King's College, London).

mode of engagement (attention is elicited intentionally or by unexpected events), which can be *voluntary* and *reflexive*, and its manifestation of engagement, which can be *covert* or *overt* (directed with or without eye movements). 'Covert' is defined as attention directed to a location that is different from that on which the eyes are fixated (Carrasco, Yeshurun, 1998). Covert attention reflects the alignment of mental attention resources with the response target while overt attention additionally allows for an alignment of eye movement resources with that response target. Covert attention precedes eye movements and during eye fixation it can be deployed to multiple locations simultaneously. Covert attention is also considered to accelerate the rate of visual information processing (Gibson, 1974).

Research points to essential differences between *voluntary* and *reflexive* attention (Blair, Ristic, 2019): reflexive attention is engaged quickly (typically in 100–300 ms), but it subsides quickly (500 ms). Voluntary attention, in contrast, takes longer to emerge (about 300–500 ms), but it lasts longer – about 1000 ms (Müller, Findlay, 1988; Müller, Rabbitt, 1989).

Our involuntary attention is unconsciously activated by stimuli in our environment while voluntary attention is consciously controlled. It can be used to deliberately ignore other competing stimuli in order to concentrate on a single task.

Another approach to attention involves distinction between alternating attention and dividing attention. *Alternating attention is* the mental flexibility that allows one to shift focus of attention and move between tasks having different cognitive requirements. It is alternating one's attention back and forth between two different (related or unrelated) tasks that require the use of different areas of the brain. *Divided attention* is the ability to process two or more responses or react to two or more different demands simultaneously. It is often referred to as *multi-tasking*.

Media audiences typically demand all these different kinds of attention. Using *selective* attention, one must be constantly shifting to whatever one is currently point of focus and one must prioritize which tasks receive one's attention and when. This type of attention seems to be closest to choices, which media consumers make when allocating their time to the various media (roughly equivalent to intermedia consumption).

Sustained attention involves concentrating at length on one particular task at hand and not getting distracted. From the point of view of media management this is the most valued type of attention. *Divided* attention (where we need to be concentrating on two different things at once) is the essence of multimedia consumption involving multitasking (Thomas, 2019).

Attention is also described as being reactive (i.e., in response to cueing) (Posner, 2016),[2] easily distracted, occurring in a flow in-between formalized time moments (work, study, obligations). The concept of a flow is attributed to (Csikszentmikhaly,

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[2] One of the measures of attention refers directly to the effect of orienting/attracting attention to cues. This is referred to as Posner' cueing paradigm.

2008), who conceptualized the state of a creative 'trance', a long period of sustained attention accompanying work or activity, which is truly engaging. This period is characterized by relative timelessness, loss of perception of time characteristic of task-oriented work (i.e., creativity cannot be bound by official work schedules such as 9 to 5 workday). It is in this immersive flow experience that longest uninterrupted attention spans can be found (Florida, 2002; Robinson, 2009).

Considerations on the complex nature and phases of attention this attention goes through would not be complete without referring to its biggest opponent – distractions. One of the biggest sources of distraction in contemporary life is the compulsive use of smartphone.

According to The Centre for Attention Studies report (London, 2022), users hugely underestimate the amount of times they check their phones. Their mean guess was that they do so 25 times a day, but in reality, was likely to be somewhere between 49 and 80 times a day. Half the interviewed sample (49%) said they feel like their attention span is shorter than it used to be, while with around a quarter (23%) disagree with this. Young people's attention spans in particular are worse than they were in the past, 47% of the surveyed sample also said that "deep thinking" has become a thing of the past.

For Mark distractions are not merely attention killers, they are also both stressful and costly. Her research has found that it takes an average of 23 minutes for a person to fully regain his or her focus on a task after being distracted. The Overload Research Group (a collection of academic and corporate researchers dedicated to reducing the amount of information that people have to deal with) has found that U.S. workers (Spira, 2011) waste about 25% of their time dealing with "an incessant stream of data," a loss to their employers of staggering $997 billion a year (Mark, Gudith, Klocke, 2008). Also, Mark's research has pointed to an unpredictable flow of attention rhythms at the workplace (Mark, Iqbal, Czerwinski, Johns, 2022). From Mark's other research (Mark, 2015) it stems that distractions are the key and most costly enemy of attention as on the average in 2004 people switched activities every three minutes and five seconds. In more recent communiques from her ongoing research Mark shared more up-to-date numbers and estimates, which were more shocking as in 2016 people's median attention on their computer for any screen was about 40 seconds. She then probes further asking how much can you really get done with only 40 seconds of focus time? Her research findings confirm that about half the interruptions were self-inflicted. The average person in the study checked their email 74 times a day, with some people on the high end of the spectrum checking up to 435 a day.

In 2015 Microsoft conducted a widely criticized study on attention spans (defined as ability to concentrate on something over a certain amount of time). Claim made by this study were widely quoted and became a contemporary urban myth about human attention. Microsoft speculated that the changes in attention focus were a result of the brain's ability to adapt and change itself over time and a weaker

attention span may be a side effect of evolving to a mobile Internet. According to this study, the average attention span for the respondents and volunteers was just 8 seconds, down from 12 seconds back in 2000. This human attention span of 8 seconds was nevertheless 1 second shorter than that of an average goldfish.

3. Attention as core issue in the attention economy

Perhaps the most significant bottleneck to an even more rapid expansion of contemporary media and information is the limited availability of time (and hence also of attention). The theoretical foundations for this concept were formulated at the beginning of the 21st century (Davenport, Beck, 2001; Lanham, 2006).

The starting point in these considerations is the assumption that information and knowledge have become more valuable production factors than capital. In the information society, knowledge and information resources are growing so fast that we can elaborate on an oversupply of information, which, in addition, is in multiform and can simultaneously be consumed in many communication channels. Large data sets are constantly analysed and organized by various programming tools. Algorithmic selection has become a necessary element for the implementation of these processes, and the development of the semantic network seems to be its logical consequence. One of the special consequences of algorithm development is the transformation of content macro data sets into a large number of micro-contents which is ever better adjusted to the preferences, expectations, interests and activities of virtual network users. In consequence,

> (…) the richer a society is in terms of its production, distribution and consumption of information, the poorer it becomes in terms of human attention. Inventions such, as the Internet, e-mail, databases, digital television, social media, and so on, together with the radical informatization of the process of production of commodities have created both an abundance of information and a demand for new forms of organizing and allocation attention (…) (Bueno, 2017, p. 1).

The basic measure in the attention economy is the time that the user is able to devote to the use of the offered resources (informational, entertainment content, advertising offers, products, services and others). Thus, time becomes a new field of economic exploitation and a new currency of business. In the attention economy, user time becomes one of the most important resources for monetization. The more time and attention the content offered on the web concentrates, the greater the chance to sell given products or services. As technological changes are much faster than the mental ability of a person to focus, network technologies have significantly increased the length of time humans are exposed to information. Miniaturization and portability of devices allow access to information resources almost anywhere, anytime, and it does not require special technical skills.

Media use in the digital economy is pervasive and dominant (Webster, 2014). At this point of digital economy's expansion not only media consumption time, but also place and context of their use seem to be under-researched by traditional methods that ascribe media consumption to a given medium (text, audio, electronic, etc.). Media users use and mix various information and communication techniques both in their leisure time and at/during work. Specificity of the digital economy makes media use for professional use possible both within and outside work, which makes additional claims on human attention. This means that work time is absorbed by private time and vice versa. Thus, private time becomes a yet another dimension of economic exploitation. For many types of economic activity, the development of digital and information technologies has proven to be disruptive and digital media are right at the heart of the 'digital vortex', being one of the first sectors to have fully digitized design, production, distribution and consumption of their output. The development of media and communication contribute to time and space compression and even collapse as anticipated by Lash and Urry (Lash, Urry, 1994), which allows media consumers to communicate in real time and be immediately informed about events worldwide.

Compression of time and space, which is one of the features of the attention economy, is now of significant importance in digital adaptation of subsequent areas of human activity to technological progress. The consequences of these changes, although difficult to predict, can lead to a new organization of working and leisure time, development of remote production and service implementation systems (trade, education, telemedicine and others), which in turn will significantly reduce the consumption of some resources (e.g., mass environmental costs of commuting to the workplace, maintaining large office spaces, customization of production and services, new measures and standards of performance.). Within the digital world both attention and trust seem to run in short supply, raising doubts about long-term sustainability of the system (Botsman, 2012). To meet these challenges adequate strategies for sustaining and managing attention must be developed rapidly.

4. Strategies for managing attention – an overview

(a) Agenda setting

One of the oldest strategies for coping with the relative overabundance of information and growing deficits of attention is orienteering of attention through agenda setting. Given the specificity of the digital era and its social media, 50-year-old agenda-setting theory continues to be highly relevant (McCombs, Shaw, Weaver, 2014). The agenda-setting's effects on attitudes, opinions, and behavior of media consumers are vivid in today's world (perhaps even more so than ever) and the issue of contemporary need for orientation (NFO) is the driving force in sales, news

and politics. Their study on 2008 U.S. presidential election data found that NFO was a stronger predictor of attention to political news than sheer frequency of news media exposure, and that media attention was a better predictor of the relevance of presidential candidates than media exposure. It appears to be the top practical strategy for orienteering attention. This finding is also consistent with results of a second study by Matthes (Matthes, Kohring, 2008), who concluded that, "NFO does predict that individuals will turn to news media in order to gather information, but it fails to predict which specific issue attributes will be chosen as orienting cues."

Agenda setting has expanded to include many other channels of communication–political advertising, conversations, and social media (Kliger-Vilenchik, 2011). In the context of agenda setting, the development of new media has not significantly weakened the traditional impact of media agenda on public agenda. The strength of that influence remains at the same level in a situation where new forms of information flow between senders and recipients are used.

(b) Multitasking strategy

Multitasking is discussed from a wide number of perspectives. Various interruptions (emails, phone calls, casual conversations) can be seen as triggers for activity switching (Pattison, 2008). Multiple factors occur to encourage multitasking in the digitally enabled workplace: the abundance and ease of accessing information, the number of different working spheres, the workplace environment, attentional state, habit, and social norms. Empirical work is available on the nature of multitasking, relationship between different types of interruptions and stress, and patterns of attention focus (Fried, Hansson, 2010).

(c) Life/time management (time shifting, life hacking)

The fourth type of approach to managing attention is more focused on time management, especially in human life cycle. These includes individual and personalized schemes for a 'deferred life plan', *front-loading* of professional career and personal life, postponing procreation, midlife change, thus making time (and attention) available at earlier stages in life, similar strategies of *life-shifting* by taking a sabbatical, quarter life, three quarter life breaks, active use of *time deepening* strategies (accelerating activities, substitution with time-saving activities, multitasking, detailed planning and budgeting), switching from consumption of goods to *consumption of experiences* (Pine, Gilmore, 1999) and various 'life hacks' allowing to make available blocks of uninterrupted discretionary time with potentially flexible and varied attention schemes (Southerton, 2006).

(d) Commonsense strategies

The last group of strategies cannot be ascribed to a specific area or body of scientific knowledge. They rather refer to common wisdoms and pieces of good advice. Their denominator is common sense of how to manage various aspects of life under growing hybridization of time and generalized feeling of time squeeze and living under a deficit of time (Schor, 1999). Their main objective is learning how to avoid distractions and shortening attention spans as these are widely regarded as attention killers, as well as being stressful and costly.

Given technology's addictive nature, policies to control media use at work or at home are rarely effective, as it's hard to enforce rules about what people can look at on their own devices. Rather than policing, commonsense strategies for attention management appeal to users' understanding of the need to manage the attention challenge themselves (Herlle, Astray-Caneda, 2013) by agreeing to put away one's phones for a certain time during the day, schedule e-mail checking time, deliberate choice of "low productivity" times for distractions and interruptions (including use of social media and instant messaging, browsing), saving one's peak attention hours for high-value work and family life.

These strategies also recommend using a brief personal browsing session as a reward for an hour or two of high-quality, focused work (such as in the Pomodoro Technique) (fransecocirillo.com, 2022).

Most of this common sense advice refers to avoiding biological barriers to attention deficit, such as not enough sleep, dehydration, lack of fresh air and physical activity, avoiding heavy meals and sugar-laden snacks, which are reported to result in a drop in concentration during in the day.

Recent empirical studies also show that human attention span is highly flexible and contextual (Stothard, 2014). We seem to be observing a whole range of attitudes towards managing our attention as the amount of time available to us is fixed and cannot be expanded. Even though various temporal strategies are devised and practiced by today's consumers to increase time available for various activities (including media consumption), the global daily time frame of 24 hours cannot be stretched.

These attention deficits had serious implications for business communication. As the online reader spends about 70 seconds a day, while the average amount of time spent reading the physical newspaper is about 25 minutes a day, the advertisers are willing to pay more for their share of readers' attention during those 25 minutes of offline reading than during the 70 seconds of online reading. As an example, the number of brand interactions that it used to take for a customer to feel comfortable doing business with a brand was 3 to 5 times in the 1970s. It moved to 12 around 2000, and as of 2013, the number was 28 or more times. That statistics became quickly antiquated, as just a few years later a study was conducted in which It was found that it took 900 interactions to instil confidence in a particular brand

in the mind of a consumer. Also, the consumers shunned higher level of concentration of attention, requiring more pages and words to be read.

Table 1. Page views by time viewed and number of words Internet Browsing Statistics (taken from 59.573-page views)

Activity	% of views respondents
% of page views that last **less** than 4 seconds*	17
% of page views that lasted **more** than 10 minutes*	4
% of words read on web pages with 111 words or less*	49
% of users who spend only 4.4 seconds more for each additional 100 words	28

Source: National Center for Biotechnology Information, U.S. National Library of Medicine, The Associated Press, 2014.

Given that 7% of the interviewed sample of the NCBI 2014 study sometime forget about their own birthdays and that average number of times per hour office workers check their email inbox is 30 and that the average length watched of a single Internet video is only 2.7 minutes, it is not surprising that shortening attention span is also visible in short time bursts allocated to viewing Internet pages and preference for pages with very few words, requiring little attention. This is confirmed independently by recent statistics on allocation of consumers' time across the media. Allocation of time can be in this case regarded as a rough measure of consumers' attention (in economics there's a formal assumption that choices are a measure of *revealed preferences*). With overall growth in the amount of time devoted to all forms of media consumption, we see that contemporary media consumers manage to devise ways of stretching their attention a little. However, this was done by shifting media consumption into areas requiring relatively less attention.

This has a number of implications for occupations well beyond the media and reception of advertising (Qualman, 2011). For example, in an era where much of our security is dependent on remote monitoring by cameras, we see evidence that their operators' attention is dropping rapidly after 20 minutes of high attention (dashdoor.com, 2021).

Today the dynamics of the attention economy pushes companies to draw users into spending more time on apps and sites. Users also learn to manage their attention by developing what is called 'banner blindness' (tendency to ignore advertisements when placed in the right rail or at the top of the page). Users have also coped with the assault of multiple notifications on mobile devices by learning to ignore many of them (Pernice, 2018).

Some companies are producing habit-forming designs that entice users to dedicate more of their attention. While the basic initiative in this area remains on one hand within the designers' competence of successful balancing act between business needs (i.e. the need for new subscribers, advertising revenue, and profit) and, on the other hand, long-term interests of their users. However, in our opinion, a much more likely future scenario for attenuating attention deficits is in the expansion of hybrid time, which will allow to re-allocate attention from other time slots in life (such as work, sleep, obligations). This process is already visible in the blurring of boundaries between work and leisure, between private and professional life, between education and entertainment, between production and consumption (as in user-generated content). The spill-over of work into our private time is already beginning to be fairly well documented and researched (Mark, Klocke, 2008), another manifestation of hybrid time, such as the disappearing dividing line between leisure and obligations are likely to be explored soon (Jung, Kowalski, 2020).

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