

## PERCEPTION OF PANDEMIC ILLUSTRATIONS IN THE TIMES OF HOMO VIDENS AND HEIGHTENED HEALTH RISKS

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**Purpose:** The objective of the article is to verify the degree of fulfilment (in the perception of recipients) of individual functions of pandemic illustrations. Secondly, the objective is to establish to what extent pandemic illustrations involve all modules of the so-called experience economy.

**Design/methodology/approach:** As part of the research procedure, a CAWI questionnaire was used, and the study covered a representative sample of 1 000 adult Poles. The conclusions were related to the changes in the impact on the perception of homo videns during times of covid, which is particularly important in the conditions of current pro-health campaigns.

**Findings:** The potential of pandemic illustrations has not been fully exploited. Pandemic illustrations fulfill a preventive function, i.e. they have a functional meaning. The deficits concern not only the use of the pandemic illustration functions, but also the experience modules they represent.

**Research limitations/implications:** Survey research according to a questionnaire developed by the authors. No comparison possible, because pandemic illustrations only appeared in connection with COVID-19.

**Practical implications:** Illustrations should find wider use in economic sciences due to their impact on the speed of acquiring knowledge, motivation and stimulating creativity.

**Social implications:** Pandemic illustrations will generate not only economic but also sociocultural value in the form of: aesthetic, spiritual, social, historical, symbolic and authentic values.

**Originality/value:** The research issues undertaken regarding pandemic illustrations include influencing their recipients through strategic experience modules (sensory module, emotional module, intellectual module, behavioural module and relational module).

**Keywords:** functions of pandemic illustrations; experience modules; experience economy; homo videns; world risk society.

**Category of the paper:** Research paper.

## 1. Introduction

Illustrations constitute a universal communication code, in which the word and the image remain in a complementary relationship. They provide a wealth of information about the passing world and their creators influence the lives of other people who are recipients of their works (Robersts, Zeegen, 2014). At the time of COVID-19, illustrations related to SARS-CoV-2 were constantly present in traditional and social media as well as in the public space. They related to such things as drawings depicting closing industries, companies, school closures, performing work at home. The analysis of the illustrations serves a documentary function. Illustrations also fulfil many other important functions, which generates the following research question: Has the potential of pandemic illustrations been fully utilised? Do pandemic illustrations have functional significance? This question is important at the time of the current pandemic. It is essential to get the message across to various social groups about the need to comply with recently introduced behavioural norms and to get vaccinated. Due to the fact that the illustrations may involve the so-called experience modules, it also seems advisable to look at pandemic illustrations through the prism of these modules, which fit into the experience market, governed by the mechanisms of customization and commoditization.

A research question was formulated asking whether pandemic illustrations involve all the modules of experience i.e., sensory, emotional, intellectual, behavioural, and relational modules? Diversity of these experiences can be obtained by activating various processes and by selecting various stimuli (Schmitt, 1999). These stimuli may suggest a certain way of perceiving illustrations. However, this perception is subjective (Lindstroem, 2000), and could deviate from the intentions of those who created or distributed the illustrations. This affects the effectiveness of the impact of pandemic illustrations. Also, an answer (hypothesis) was formulated in the negative before the study, relating to the question about this effectiveness, i.e., the equal involvement of various stimuli.

Pandemic illustrations should be considered in the context of the era defined as *homo videns* (Sartori 2005). *Homo videns* means a being that gives priority to what is conveyed visually, iconically over what is conveyed verbally or in writing (Schnetter, 2008). The domination of messages by visual communication is a return to the condensation of content and holism in the ways of communication. This allows for faster assimilation of knowledge, stimulates creativity and has strong persuasion.

Section 2 presents the state of the knowledge in terms of functions, including pandemic functions, of illustrations and experimental modules. The methodological issues formulated on this basis are included in Section 3, while the research results and the attempted interpretation, followed by the conclusions, are presented in Section 4 and 5 respectively.

## 2. Literature review

### 2.1. Illustration functions and experience modules

The functions of illustrations are described relatively well in the literature on the subject. The positive impact of combining text with an illustration on the process of remembering and learning was proved by research on students. The use of illustrations thus helps to reduce individual learning inputs, making the process more efficient (Winn, 1987). The verbal and image presentation harmonizes with the “whole-brain learning”. It results in the need not to impose a specific learning style and to adapt it to situation conditioning (Lemke, 1997). In times of the pandemic, it is important to keep in mind the restrictions that protect health. This contributes to the prevention of diseases and the possibility of more accurate forecasting of the dynamics of infections (as it takes into account “patterns” of behaviour). The longer retention of information in memory allows the information to be transformed into action at any time, taking account of the situational circumstances.

Watching illustrations can also be a form of entertainment and fun, therefore, this can be referred to as their therapeutic and ludic function. Illustrations of this type can be sent to others, which builds ties and acts as an affiliate function. These are, in particular, memes (a concept introduced into linguistic use by R. Dawkins (Finkelstein, 2008), author of the “Selfish gene”) (Dawkins, 1996). In the literature on the subject, they were distinguished and named by B.H. Schmitt (1999). The sensory module includes combining visual, auditory, tactile, olfactory, and taste stimulation (Zimbardo, Johnson, McCann, 2016) in order to achieve a synergy effect or use the influence on at least one of the senses. In the case of illustrations, also pandemic-related, obviously the sense of sight is involved. Pandemic illustrations evoke specific emotions. The intellectual module is associated with facing recipients, e.g., illustrating pandemic challenges in the form of increased mental effort as well as non-standard, creative, divergent thinking. The behavioural module is related to activities constituting a reaction to experiences in connection with the contact with given products of work (Schmitt, 1999) e.g., pandemic illustrations. The relational module may apply to relations to persons or objects. These may be pandemic illustrations, which – for example, out of concern for people with whom social capital is created (Bourdieu, 1984) – are communicated to them as a warning against certain behaviours.

All experiment modules have a specific value (Schmitt, 2010), which may be higher if the experiment modules are combined (Tynan, McKechnie, 2009). For example, the behavioural module can be combined with the emotional module (Cachero-Martinez, Vazquez-Casielles, 2017).

## 2.2. Types of Pandemic Illustrations

The COVID-19 pandemic is a period of reorganisation of daily life, both in terms of contact with other people, functioning in a different way in society, and the need to be selective about the information provided by the media (sensory module). The scope of communication is affected even more by the Internet and social media (behavioural module). One of the means of expressive activity (emotional module) in the media are illustrations related to the pandemics (Szulich-Kaluza, 2021). During the pandemic period, pandemic illustrations became a creative way (intellectual module) to humorously depict experiences and reactions related to the pandemic situation, the activities of healthcare and uniformed services, authorities implementing restrictions, and observance of the sanitary regime. Pandemic illustrations use the cultural potential accumulated in people's minds to show the hope and solidarity of the community (relational module), which has survived various difficult times, but is strong and determined to fight the pandemic (Chłopicki, Brzozowska, 2021), (Glaveanu, de Saint Laurent, 2021). Pandemic illustrations can be divided into four groups, as shown in Table 1.

**Table 1.**

*Classification of pandemic illustrations.*

<b>Pandemic illustrations</b>	<b>Examples</b>	<b>Experimental module</b>	<b>Function</b>
Structure of coronavirus	Mona Lisa in a mask and latex gloves, known as Corona Lisa	-sensory -emotional	-preventive -motivational -attention grabbing -humorous -affiliative
Activities of daily life in times of the pandemic	Illustrations showing a person working remotely; in the first days the employee is in impeccable business attire, while with each subsequent day his/her attire is getting more casual.	-emotional -behavioural	-therapeutic -motivational -attention grabbing -humorous -affiliative -attention grabbing
Sanitary (quarantine) regime	Black and white image of a caged animal in the zoo.	-sensory -emotional -relational	-motivational -attention grabbing -humorous -affiliative -therapeutic
Activities of uniformed services and healthcare services	Pandemic illustrations showing uniformed services controlling super heroes.	-sensory -emotional -intellectual -behavioural -relational	-preventive -motivational -attention grabbing -humorous -ffiliative -therapeutic

Source: the authors.

The nature and topic of pandemic illustrations directly depend on the stage of the pandemic situation and how it is understood by the public. Pandemic illustrations include humour, reflections, global emotions, social and cultural messages to mitigate the negative consequences of the pandemic (Hussein, Aljamili, 2020).

### 3. Methodology

In order to verify the accuracy of the answers to the two formulated research questions, the CAWI (Computer Assisted Web Interview) questionnaire was used (Stanisławski, 2017), which included a representative sample of 1,000 adults living in Poland (i.e., corresponding to gender and age and territorial distribution by Polish Provinces - the structure of the general population). The choice of CAWI was determined by:

- the possibility of obtaining reliable research, avoiding the social desirability effect, thanks to ensuring a sense of anonymity,
- relatively low research expenditure,
- willingness to provide convenience to the respondents (the ability to choose the time to complete the survey),
- the ability to encode data and its statistical evaluation,
- the possibility of real-time detection of formal errors, contradictions in completing the questionnaire.

The survey questions could not be modelled based on comparable studies due to the fact that pandemic illustrations and their reception only occurred in connection with COVID-19. When constructing the questions, however, the following were used: the functions of generally understood illustrations mentioned in the literature on the subject and the types of experimental modules that pandemic illustrations may induce.

In relation to the attention grabbing function, the question was asked: “What attracts your attention most in the pandemic era as a source of information about the coronavirus?” (sensory module).

Three questions were addressed to examine the perception of the cognitive function of illustrations:

- “Do you consider a drawing of the coronavirus (“spiked ball”) as a product of the artist's imagination or an approximate representation of its actual structure?” (sensory module).
- “Did any of the coronavirus drawings bring you closer to understanding the mechanism of its getting into the human body?” (intellectual module).
- “Have the pandemic illustrations made it easier for you to recognize the relationship between certain behaviours and the risk of infection?” (intellectual module).

The following question was devoted to the determination of pandemic illustrations fulfilling the preventive function: “How do you perceive the drawings relating to wearing masks/social distancing at entrances to public buildings?” (behavioural module), whereas their ludic function was assessed by the following question: “What impact do memes about the coronavirus (e.g., depicting the necessary social distance in terms of a certain number of elephants that should separate people) have on you?” (emotional module).

The last question on the questionnaire was constructed in order to determine whether pandemic illustrations fulfil the affiliate function. Its content is as follows: “Would you give your family/friends drawings illustrating the risk created in the event of not being vaccinated?” (relational module).

The questions posed are to answer not only the question of the degree of fulfilment of specific functions by pandemic illustrations but also the use of various modules of the experiences they generate.

#### 4. Findings and their interpretation

The research covered 526 adult women and 474 adult men living in Poland, which corresponds to the structure of the general population. The shares of the respondents according to age categories also correspond to this structure:

- 169 people – 18-29 years old,
- 197 people – 30-39 years old,
- 180 people – 40-49 years old,
- 148 people – 50-59 years old,
- 306 people – 60 and older.

The largest number of respondents: 139 people and 122 people came from the Mazowieckie and Śląskie Provinces, which corresponds to the spatial diversity of the population in Poland.

The research shows that words rather than drawings attract attention as a source of information about the coronavirus (Table 2). However, if we add the answers regarding visualization as the source of such information, they give a total of 33.5%. Nevertheless, the thesis about the primacy of homo videns in this respect cannot be confirmed. This can be interpreted in the context of the need for a more precise recognition of the given content, which is difficult when presented only through the graphic message. It is interesting that the choices of individual answers among women and men are similar. When it comes to age, homo videns takes precedence in the youngest age groups.

**Table 2.**

*Distribution of answers to the question about the place of the illustration among the sources of information about the coronavirus - overall and by gender (in%) and by age (in %)*

Source of information	Total number (percentage)	Percentage of women	Percentage of men	18-29	30-39	40-49	50-59	60 and older
Drawings	58 (5.8)	5.1	6.5	7.1	9.6	3.3	4.1	4.9
Visualized warnings	95 (9.5)	8.9	10.1	14.2	14.7	7.2	8.8	5.2
Visualizations along with comments	63 (6.3)	5.7	7.0	5.3	6.6	6.1	6.1	6.9

Cont. table 2.

Memes	80 (8.0)	7.2	8.9	14.2	13.2	10.6	4.1	1.6
Articles and other publications, including those posted online	234 (23.4)	22.2	24.7	27.2	20.8	23.3	20.3	24.5
Statements of politicians, people responsible for the protection of public health	86 (8.6)	10.8	6.1	4.1	8.6	9.4	115	9.2
Information from companies	21 (2.1)	2.3	1.9	2.4	3.6	1.1	2.7	1.3
Friends' insights	85 (8.5)	6.8	10.3	95	76	7.8	8.8	8.8
Descriptions of experiences of people who themselves or their relatives experienced the infection, disease	239 (23.9)	27.4	20.0	13.6	14.2	24.4	27.7	33.7
The above-mentioned descriptions are accompanied with visualization	39 (3.9)	3.4	4.4	2.4	1.0	6.7	6.1	3.9

Source: the authors.

The somewhat eye-catching feature of pandemic drawings is evidenced by the fact that the choice of the answer “interest” was generally in second place among responses for the primary feeling caused by a coronavirus drawing (Table 3).

**Table 3.**

*The primary feeling caused by the drawing of the coronavirus (in %) and by age (in %)*

Type of emotion	Number (percentage) of total respondents	18-29	30-39	40-49	50-59	60 and older
Delight	16 (1.6)	1,8	2,0	2,8	0,0	1,3
Disgust	156 (15.6)	22,5	15,7	15,0	12,2	13,7
Interest	249 (24.9)	26,0	27,9	22,2	25,7	23,5
Sadness	122 (12.2)	8,9	9,6	13,3	16,2	13,1
Excitement	11 (1.1)	1,2	1,5	1,7	1,4	0,3
Anger	82 (8.2)	10,7	8,1	9,4	5,4	7,5
Astonishment	80 (8.0)	7,1	5,6	8,9	7,4	9,8
Concern	284 (28.4)	21,9	29,4	26,7	31,8	30,7

Source: the authors.

Slightly more than one-third of the respondents do not treat the drawing of the coronavirus as a visualization approximately corresponding to its morphology. This means that for 62.1% of people, this type of pandemic illustration performs a cognitive function. It is characteristic that almost half of the youngest respondents treat the drawing of the coronavirus as something created by the imagination, which can be explained by their fascination with the world of games (in the case of people aged 60 and over, this share is only 34.3%).

For 52.4% of all respondents, none of the pandemic illustrations influenced their understanding of the mechanism of coronavirus getting into the human body. When it comes to age, the youngest people are the most polarized age group in this respect. The measure of this polarization is the difference of percentage points in positive and negative answers (Table 4).

**Table 4.**

*Distribution of answers to the question: “Did any of the drawings bring you closer to understanding the mechanism of the virus getting into the human body?” (in%) (A) “Have pandemic illustrations made it easier to identify the relationship between certain behaviours and the risk of infection?” (in %) vs. age.(B)*

Answer/Age	18-29		30-39		40-49		50-59		60 and older	
	A	B	A	B	A	B	A	B	A	B
Positive	43,2	51,5	51,8	57,4	46,1	55,6	48,6	60,8	47,7	58,5
Negative	56,8	48,5	48,2	42,6	53,9	44,4	51,4	39,2	52,3	41,5
Percentage point difference	13,6	3,0	3,6	14,6	7,8	11,2	2,8	21,6	4,6	17,0

Source: the authors.

The cognitive function of pandemic illustrations was fulfilled for more than half of the respondents in terms of recognizing the relationship between certain behaviours and the risk of infection. The greatest polarization in this respect occurs in the group of the oldest people (Table 4).

As for the prophylactic function of pandemic illustrations, this is only not fulfilled for 16.8% of people. According to the results, almost every fifth person does not convert the information from the illustrations into adequate actions, effectively ignoring this information. Among those for whom it is not fulfilled, there were 20.3% of men and 13.7% of women. This result corresponds to that found in various studies (Charness, Gneezy, 2012; Cobey, Laan, Stulp, 2013) and the higher propensity of men than women for risk which is only questioned sometimes (Nelson 2016). As for age, the literature on the subject shows that it correlates with the perception of risk (financial, physical), e.g., in connection with learning about possible threats over time (Barsky, Kimball, Shapiro, 1997; Dohmen, Falk, Huffman, Sunde, Schupp, Wagner, 2011; Dohmen, Falk, Golsteyn, Huffman, Sunde, 2018). The conducted research confirms this relationship (Table 5).

**Table 5.**

*Distribution of answers (in%) to the question: “How do you perceive the drawings regarding wearing masks/social distancing at the entrances to public utility buildings?” vs. age*

Answer	18-29	30-39	40-49	50-59	60 and older
As a warning	66.9	79.7	85.6	85.8	91.8
As nothing significant	33.1	20.3	14.4	14.2	8.2

Source: the authors.

For only about a third of people, coronavirus memes have a ludic function. This means not using this kind of pandemic illustration to reduce the stress present during a pandemic (Galea, Merchand, Lurie, 2020; Lui, Luthopoulos, Zhang, Garcia-Barrera, Rhodes, 2021). As for the implementation of the ludic function in terms of age, it is fulfilled to a greater extent for the youngest age group (Table 6).

**Table 6.**

*Distribution of answers to the question: "How do memes about the coronavirus affect you?" (in %) vs. age*

Answer	18-29	30-39	40-49	50-59	60 and older
They ensure a sense of relaxation	43.2	44.2	26.7	31.8	26.8
They cause nervousness	19.5	20.8	27.8	22.3	19.9
I don't browse memes	37.3	35.0	45.6	45.9	53.3

Source: the authors.

Only about half of the respondents would provide pictures of the health risk related to not being vaccinated to their relatives and friends. From the comparison of the distribution of responses, it can be concluded that, in the opinion of adult Poles, pandemic illustrations to the greatest extent fulfilled a preventive function, which can be associated with a motivational, persuasive, and educational function. The affiliate function was fulfilled to a much lesser extent. The definitely unused potential of pandemic illustrations, according to the respondents, is related to their functions: attracting attention, ludic, and cognitive.

The distribution of responses to the questionnaire also indicates that pandemic drawings strongly affect the emotional module. The negative emotions evoked by these drawings (disgust, sadness, anger, concern) occur more than twice as often as positive emotions (delight, interest, excitement) and more than eight times more than neutral emotions (astonishment). There are no major differences between the responses of women and men, except for: women more frequently indicating concern, and men – astonishment (Table 2). When it comes to the oldest people, delight is less common, and more often – concern, and the youngest – disgust (Table 3).

The results already presented show that pandemic drawings in relation to almost 4/5 of the respondents affect the behavioural module. However, their impact on:

- the intellectual module (less than half of those claiming that thanks to them they understood the mechanism of the virus getting into the human body, and less than 60% of those claiming that they facilitate the recognition of relationships between behaviour and infections),
- the sensory module,
- the relational module (almost half of people, regardless of age (Table 7) do not share their knowledge with others).

**Table 7.**

*Distribution of answers to the question: "Would you give your family/friends drawings illustrating the risk created in the event of not being vaccinated?" (in %) vs. age*

Answer	18-29	30-39	40-49	50-59	60 and older
Yes	50.3	49.2	51.1	51.4	51.0
No	49.7	50.8	48.9	48.6	49.0
Percentage point difference	0.6	1.6	2.2	2.8	2.0

Source: the authors.

Therefore, there is a clear deviation from equal participation when it comes to engaging individual experimental modules through pandemic illustrations, which confirms the assumption made at the beginning.

## 5. Discussion and conclusions

The article presents the results of research identifying the strengths and “weaknesses” of the development and promotion of pandemic illustrations. The preventive function is relatively “strong”, which means that pandemic illustrations have a functional or utilitarian meaning.

Should the aforementioned failure to exploit the potential of pandemic illustrations be interpreted in the context of visual illiteracy? Although known research in the area of visual literacy (Braden, 1993; Avgerinou, Pettersson, 2011) did not regard pandemic illustrations, it seems that the reasons for the lack of primacy of illustrations over words should not be sought in the clarity of the message, but rather in the form of reaching the recipients. This is evidenced by the low percentage of people browsing memes in this area, and that they could be used to ridicule the attitudes of the primacy of one's own fears and anti-social attitudes.

Deficits relate not only to the use of pandemic illustration functions but also to the experience modules they represent. The knowledge obtained, confirming the hypotheses on this subject made at the beginning, should not be used only for programming further research, i.e., for cognitive purposes but also utilitarian purposes. In particular, it can be helpful in the conducted pro-health campaigns.

First of all, the above involves intensification of the fear of not being vaccinated in the form of individual consequences as well as general economic effects (the need to allocate the majority of budget funds to fighting the effects of the pandemic, and not to the development of a welfare society). Pandemic illustrations can more fully and expressively show these effects, using individuals and society as the basis. It is not about cheap propaganda, but about a pictorial image of the impact of certain behaviours (for example violating restrictions, resigning from vaccinations) on the structure of expenditure from the state budget and local budgets. Therefore, they can be used to perform an economic function.

Secondly, as part of positive motivation, illustrations can show the realities of functioning in a society of global risk related to delocalisation (interconnection of various forms of risk at the spatial, temporal, and social level), the inability of being calculated or repaired (inability to obtain full knowledge and the necessity of taking into account even those scenarios that are not likely to happen) (Beck, 2007). Thirdly, pandemic illustrations can and should show not only the individual benefits of certain behaviours but also the benefits of accepting the above correlation in the form of not deconstructing existing global supply chains and enjoying the company of people from other cultures. If you want to reach people with different expectations

and react to different stimuli through illustrations, you can use different illustrative styles and concepts as part of different experience modules (e.g., photorealistic or poetic convention), illustration techniques (e.g., traditional, digital), and also degrees of expressiveness and a combination of illustrations and text. In such reaching of wide social circles, it may be helpful to place pandemic illustrations in various places, e.g., editorial and social media, murals, everyday objects, gadgets, toys, etc. in the form of videos, storyboards, social ads, or occasional prints/leaflets. Exemplary illustrations (showing one object, representing a specific class of objects), extensional illustrations (showing the entire range of the object set), or intentional illustrations (schematic, systematically showing all the essential features of all the elements of the object set) can be used for this purpose. By fulfilling the above functions and at the same time affecting various modules of experience, pandemic illustrations will generate not only economic but also socio-cultural value in the form of aesthetic, spiritual, social, historical, symbolic, and authentic values (Throsby, 2010). Further research can analyze the broader importance of illustrations in economic sciences and their tide on social behavior.

Illustrations should find wider application in the economic sciences due to their effects on the speed of learning, motivation and stimulation of creativity, as well as the development of so-called aesthetic economics and the crystallization of Management by design, aimed at designing new experiences (Reckwitz, 2017). However, the effectiveness of their application requires the development of visual competence and visual literacy in the sense of using verbal-visual language (Braden, 1993; Ejgierd, 2010; Avgerinou, Petterson, 2011).

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