MODELING MULTIPLIER PROCESSES IN MEDIA AND SOCIETY. THE MOST PROMISING MARKETS.

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Abstract: The research is considered to be urgent due to increased scale, speed and nature of information process changes in media and society. So this article is focused upon revealing conditions for integration of new patterns of interaction with viewers and data analysis as well as determination of promising markets for the new communication model to be implemented. The macroeconomic analysis of variables served as the main research method, allowing full consideration of indicators of the markets and immersive audience involved into television watching (consumption) via the Internet and various second screen devices.

The article presents the rating of global markets, most promising and adapted to the introduction of the new communication model, involving big data collection, processing and analysis in various information modes. The article seems to have practical value, in particular, for media market representatives, planning to apply new communication methods in work with the mass audience within certain TV broadcasting and digital video-streaming.

Keywords: multiplier, immersive audience, TV digital market

Introduction

The modeling of the new multiplier communication system is chosen because of increased scale and speed of information processes, changes in media space, global society and national economies. According to our hypothesis, the data, obtained during collection, exchange, analysis of media users' reactions can be used in forecasting of social processes in different areas to solve urgent issues within the national economies, policies and cultures, assigned with "stress points" and "society polarization".

A dual structure, fragmentation and polarization appeared after digital revolution in the information space. Aggregators, recognizing and recording the media users' behavior and declaration, played a key role (Webster, 2010).

Internet, social networks and new media allowed to instantly measure communicative acts using multimedia technologies (hyper-textuality, interactivity, global scale, and real time communication) (Karpoyan, 2015).

So, technical and technological transformation of the social communication system affected the expansion of the space-time structure of media and the social and communicative processes in its development of digital information space increased the number of information channels, and consequently "consumption" of various kinds of information content and modes. The structure of consumption, perception, distribution and presentation of content is fundamentally changed and keeps changing: the audience consumes significantly more media, the content becomes more diverse, it can be played instantly and multiplier in different points (including outside of the media system).

These changes resulted in the new nature of the audience interaction within the communication, expressed in the increased competition between the groups of content users (vertical and horizontal). On the one hand, the social network individualism development (Castells) enhances the audience demand for virtual communication, increasing a sense of identity and belonging to a particular community. On the other hand, an easy access for the audience to shared media discourse and the development of new communication forms allow to identify the "immersive" core of the audience, ready to receive and respond to information in different "information schemes" which resulted in the concept of "immersive" and "latent" /"passive" media audience.

Easy and accessible creation, transmission and playback of the modern media content through the ''second screen'' technology simultaneously with the television watching (or "big screen") catch up view, forms the scientific concept of the new multipliers.

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Research methodology

In order to achieve the urgent research task, the conditions are required to be revealed and specified, so that to consider new schemes of communication with the audience within the traditional media system.

In this regard, at the first stage of the research, a mathematical formula of the variables analysis was introduced to determine promising markets in conditions when the audience accumulation and involvement into the TV watching and video viewing are considered to be a key indicator of the probabilistic profit for the media business (expansion of advertising and financial flows in the media).

The article is mostly based on public statistics database of economic and social indicators, as well as interactive trending keywords using Google Trends tools in 2011 to 2014 news in the context of TV media-brands and activity of TV media-brands and IT companies in the global TV market.

The most promising markets for the new communication model introduction were assessed by analysis of key macro indicators – economic, demographic, social. The assessment of the potential immersive audience of the TV interactive followed by specification of the results of the "second screen" use by the viewers during TV watching (formula No.1).viewing (involved with "second screen" media) in different countries was corrected by the introduction of new variables (formula No.2). The data of the author's formulas on assessment of the potential immersive audience of the interactive view can be used for calculation of the potential immersive audience in the media market.

So, the traditional media market and the interactive model of interaction with the audience can be described with the following main characteristics: level of GDP, total population, ages, income, and the people's readiness to this technology, and others.

AGE. As shown by studies conducted by British analytical company, the "second screen" technology is widely used among young people (19-25 years old) - 42%.

INCOME. In current conditions, to simulate the viewers' interaction, well-being is very important, as it allows them to purchase equipment required for participation in the interactive program part, as well as to find the time for creation, data exchange by its interactive part.

POPULATION. Knowing the audience size and using restrictive factors, the size of the potential online audience can be determined. For example, in such a low-income country as India, even 1% of the wealthy population forms about 13 million people of the potential audience for television watching by means of the "second screen" devices.

GDP. Assessing the countries successfully used the interactive interaction with viewers on TV, regardless of the level of the national corruption, we can see a definite correlation between the level of GDP per capita, and the average salary in the country. GDP is a kind of combination of the size of the country's population with the average income of each citizen of this country. Therefore, to further assess the market potential of the country, we can use as an initial point the statistics of these countries in the top of the world GDP.

1). The general formula No.1 for the market size analysis can be represented as follows:

$$N*p*a*q*k*r$$

N - the country's population

p - percentage of the population, in the right economic sector, allowing to spend time and other resources watching the program.

a – a coefficient, regulating the use of the technology required for active participation in the program.

q – a coefficient determining the immersive population, the part able to view the programs, and separating those unable (children up to 7 years, disable people).

k – an error rate, allowing the error in the calculations to lowering, and is critical for low-income countries, where wages are often paid unofficially.

r – a coefficient showing the percentage of the population not included in the group p by earnings, but having the necessary technical equipment and free time to view television programs.

Formula No.2. To determine the size of the potential immersive audience for "second screen" TV watching, the following formula is offered:

$$A = P*t*iu*a*i*n*p,$$

where
A = the interactive television audience (people (TV viewers) ready to actively participate in the program and to use the application, proposed by the developer).
P = the country's population
t = percentage of the population watching TV every day
iu = percentage of the population using the internet daily
a = a coefficient regulating the age limit for the program (e.g., children under 12 years of age are part of the population, but may not understand the offered format, and may not show interest in. Another situation is possible: an interactive format designed for children may not be interested for the population older than 18 years.
i - a coefficient of the people determining the population's interest in the given niche
n - a coefficient adjustable by similar capabilities to produce similar content. Comparative evaluation of the format quality in the given niche is compared to other (analog) programs currently existing.
p - a coefficient determining the percentage of the audience, ready to download an application and to participate actively while TV watching.

Results. Media viewers and consumers of new technologies gradually swift from the traditional TV services to watching digital channels.

Interactive media reality: media-brands and media-viewers.

At the same currently interactivity demonstration (options) in media are reduced to a limited type of interaction with the audience in the management studio (see Table 1. Activity of TV media-brands and IT companies in the global market). As a rule, this is the video content integration with social networks, mobile applications and vote platforms as well as platforms integrating the possibility of information creation, processing, sharing, and distribution by technical communication means.
The social TV, Voting Platform, Video on Demand, Streaming Video, Time shifted TV, and Live, on the Air, including digital technologies compatible with the live television broadcasting and supporting the geo-targeting with unlimited resources become the key interactive platforms, providing media content consumption, and SS technology becomes one of the leading technologies (GB data).
Currently 120 companies are represented in Media & Entertainment industry in the global TV market; 57 − media brands; and 65 − IT companies (see Table 1 and 2) allowing to select "immersive television audience."
The calculations can be carried out by the number of involved ("immersive" /"inactive") users. "Immersive" means viewers' participation in the content by mobile apps downloading through online vote programs or agree/disagree clicks, or the number of downloads of mobile apps.

Table 1: Activity of TV media-brands and IT companies in the global TV market

Regions	Social TV	Second screen	TV analytics	2nd screen	Audience response	Social media analytics	Sentiment analysis	Content discovery	Smart entertainment
United States	43	70	42	100	100	58	30	28	77
United Kingdom	80	84	85	94	73	51	26	25	100
India	25	31	53	72	85	100	100	100	0
Canada	43	80	0	89	0	48	24	23	0
Australia	45	100	0	77	0	0	0	0	0
Ireland	97	70	0	0	0	0	0	0	0
France	45	9	100	0	0	0	0	0	0

Italy	25	9	67	0	0	0	26	25	0
Spain	52	8	70	0	0	0	0	0	0
Germany	17	28	48	0	0	0	14	14	0
Netherlands	19	94	0	0	0	0	0	0	0
Brazil	67	6	33	0	0	0	0	0	0
Portugal	100	0	0	0	0	0	0	0	0
New Zealand	0	89	0	0	0	0	0	0	0
Belgium	29	52	0	0	0	0	0	0	0
South Africa	0	79	0	0	0	0	0	0	0
Turkey	7	0	63	0	0	0	0	0	0
Romania	22	40	0	0	0	0	0	0	0
Philippines	24	34	0	0	0	0	0	0	0
Venezuela	52	0	0	0	0	0	0	0	0
Colombia	50	0	0	0	0	0	0	0	0
Sweden	0	50	0	0	0	0	0	0	0
Finland	0	47	0	0	0	0	0	0	0
Pakistan	42	0	0	0	0	0	0	0	0
Argentina	37	0	0	0	0	0	0	0	0
Greece	34	0	0	0	0	0	0	0	0
Mexico	34	0	0	0	0	0	0	0	0
Peru	31	0	0	0	0	0	0	0	0
Indonesia	0	25	0	0	0	0	0	0	0
Poland	9	12	0	0	0	0	0	0	0
Thailand	11	0	0	0	0	0	0	0	0

Table 2: Joint projects in the market: Media-brands and IT (1/2)

Projects of media-brands and IT	Acapella	Apple TV	Applicaster	Beamly	Civolution	CogniK	ContentWise	ExciteM	Facebook	GetGlue	GoGoGab	Google	Google Chromecast	Grabyo	Instagram	iPowow	Jinni	Mass Relevance	Mobovivo	Next Guide	Quick Tally	Saffron Digital	Samsung	Screenz	Shazam Entertainment	Spredfast	Telescope	ThinkAnalytics	TiVo	Tumblr	Twitter Amplify	Viggle, Inc.	Vizrt	YuMe	
	1	2	5	1	2	1	1	1	2	1	1	1	1	1	1	3	1	1	1	2	1	1	1	7	2	1	1	1	1	1	14	2	6	2	71
NFL																															1				1
Red Arrow																								1											1
Red Bull																1																			1
SBS																																	1		1
Scripps Networks Interactive																															1				1
Sky D																																	1		1
Super Bowl																		1																	1
Talpa		1			1																														2
TDF Media Services						1																													1
Televisa Deportes																																	1		1
TF1 French TV																															1				1
Unitymedia																												1							1
Universal Music																										1									1
Univision			1																																1
USA Networks																			1																1
Viacom																														1	1				2
Virgin Media																													1						1
Warner Bros					1																														1
Weather Channel																															1				1
WIXT channel																1																			1

Different factors serve as the key to formation of the market for technologies of data collection and analysis in the traditional TV system. Here is our scheme of multi-aspect data collection and analysis in a real time mode. We fix a transition from linear to networking and two-way communication models.
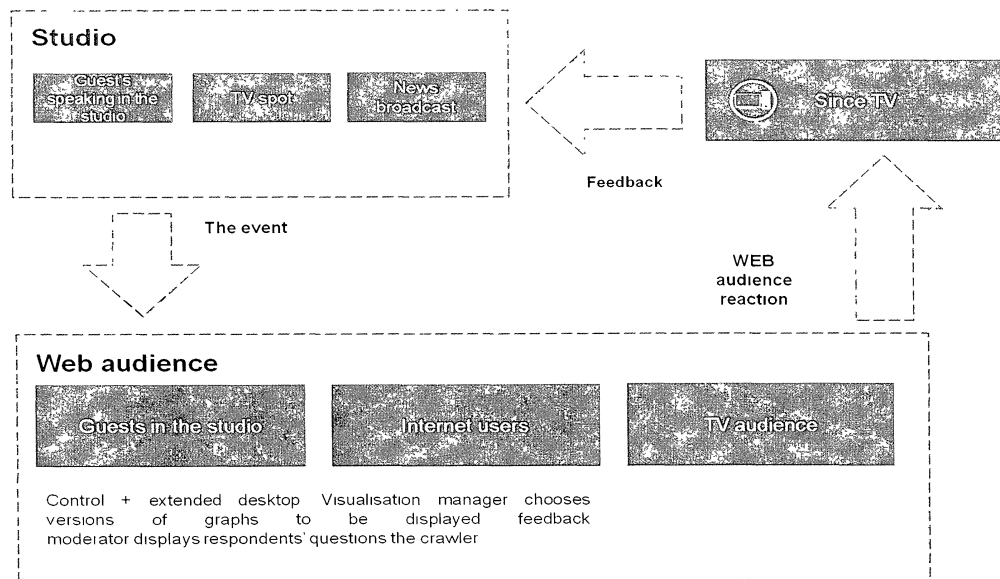

Figure 1. The interactive scheme of real-time collection and processing of multidimensional data and respondents' answers.

In the traditional model of the television monetization, viewers interest in the content and the rating are a key characteristic at watching a TV program to start using the interactive technologies of interaction with the audience in the media system. So, if the content is interesting for the audience, up to 50% of interactive connectivity can be expected, depending on the audience size and age.

Another important characteristic is the media brand size.

In the existing model of the television content monetization, where advertisement is still considered to be very important, the population wealth and size will have the greatest impact on development of the "second screen" technology. Therefore, to create a market environment, to attract more viewers and to integrate successfully interactive schemes of interaction with the audience, the media system should meet the following requirements:

1) the number of the country's population has to be large enough to ensure a mass audience accumulation even at high market competition;
2) the average income per capita should be high enough (to provide the possibility to use necessary equipment (smartphones, tablets), connection (Internet, 3G, 4G, TV) and free time, as well as to improve the purchasing power of the population (to make advertisement more cost-effective);
3) high GDP in the country.

Forecasting of the immersive audience for TV watching by example of Italy, Canada, Norway, Spain, United States, and Ukraine.

So, the video content, analyzed in our research of the highest priority markets for introduction of the interactive media technology, is also related to the entertainment genre, and was broadcast on the media channels in certain countries in prime time or in the other slot, limited by airing time. For example, the Norwegian audience is calculated basing on "My Dancing Crew", dance TV show, the Ukrainian audience is calculated basing on entertainment show "Inspector" and in Costa Rica – on the basis of "La Banda" show.

Let's try to show how the potential audience for interactive viewing is calculated under our formula (Tables 3-8):

Table 3: Characteristics of content users in Italy and GDP

Characteristic	Units	Value
GDP	US	2144
Population	People	60402000
GDP per capita	US$	35508
The population median age	Years	44.5
Percentage of the population using the Internet	%	53.83
The average salary in the country	US	3270
The number of people living at the poverty line.	%	29.9

In Italy, in the 44 year old group, about 28% of the audience will use the second screen technology for active participation in the program. Also it should be considered that among the audience, a certain percentage of people do not have stable Internet access, or use it too seldom to be active participants in the program.
The average salary in the country allows over 95% of the population to have access to the necessary technology for stable Internet connection.
Considering the inputs, the potential immersive audience of television in Italy is 9,442,200 people.
At the same time, the forecast should take into account the level of poverty in the country, as people living at or below the poverty line rarely can use technological equipment to participate in immersive viewing or cannot spend the time due to work or shift of the focus of interest. Thus the poverty percentage is 29.9 or 0.299 in Italy.
Converting the coefficient, we obtain the total number of the potential audience: 5,559,981 people.

Table 4: Characteristic of GDP and the potential audience for interactive television in Canada

Characteristic	Units	Value
GDP	US	2 144
Population	People	34 242 000
GDP per capita	US$	45 553
The population median age	Years	41.7
Percentage of the population using the Internet	%	81,6
The average salary in the country	US	3676
The number of people living at the poverty line.	%	9.4

In the 41.7 year old group, the percentage of people using the second screen technology, according to the British research company, is about 30%. Based on this information, we get a total number of the immersive TV audience: 6,407,537 people. where 0.3 - 30% of people using the second screen technology, and 8,382,441.6 people – the expected full audience.

Table 5: Characteristics of GDP and the interactive television audience in Korea

Characteristic	Units	Value
GDP	US	1 817
Population	People	49 773 000
GDP per capita	US$	36 511
The population median age	Years	40.2
Percentage of the population using the Internet	%	83,7
The average salary in the country	US	2758
The number of people living at the poverty line.	%	14.6

Using the formula, we get the following result:
The total audience of interactive television in Korea is 49,773,000*0.837*0.3*0.7*1.2*0.854 = 8,965,290 people.

Table 6: Characteristic of GDP and the immersive television audience in Australia

Characteristic	Units	Value
GDP	US	1 064
Population	People	22 450 000
GDP per capita	US$	47 389
The population median age	Years	38.3
Percentage of the population using the Internet	%	76
The average salary in the country	US	5209
The number of people living at the poverty line.	%	-

The total potential immersive audience in Australia is estimated as: 22,450,000*0.76*0.35*0.7*1.2 = 5,016,228 people.

Table 7:. Characteristic of GDP and the immersive television audience in Spain

Characteristic	Units	Value
GDP	US	1 569
Population	People	45 073 000
GDP per capita	US$	34 819
The population median age	Years	41,6
Percentage of the population using the Internet	%	66,53
The average salary in the country	US	2776
The number of people living at the poverty line.	%	21.1

45,073,000*0.6653*0.29*0.7*1.2*0.79 = 5,770,830 people.
The Spanish market and the Australian market of the interactive TV are virtually identical, despite the population in Spain is twice as much comparing to the population in Australia.
In relation to the Ukrainian market, the above formula can give the following results:

Table 8: Characteristics of GDP and the immersive television audience in Ukraine

Characteristic	Units	Value
GDP	US	90 615
Population	People	42 836 000
GDP per capita	US$	2115,4
The population median age	Years	40,4
Percentage of the population using the Internet	%	62
The average salary in the country	US	131
The number of people living at the poverty line.	%	80 (http://www.unian.net/society/1067371-za-chertoy-bednosti-v-ukraine-jivet-bolee-80-naseleniya-deputat.html)

In Norway, the popular dance TV show "My Dancing Crew" was supplemented with an application to actively use the social networks to discuss the TV shows and to receive additional information about the project.

Initial data:
The population is 4.902 million people.
Percentage of the population, watching TV every day - 74%
Percentage of the population using the Internet every day - 94.6%
Percentage of people defining the public interest in the given niche is assumed as 10%.
n - taken as 90% due to an insignificant number of similar programs and special popularity of the TV show in Norway (9 out of 10 people fond of dancing would be interested in this TV show).
p - taken as 37% (according to the research of the second screen technology application in the UK - a country with a similar development and well-being).
A = 4,902,000 * 0.74 * 0.946 * 0.85 * 0.1 * 0.90 * 0.37
A = 97,131
Entering the correction data into the formula, we get: 89,518 downloads.
Let's consider the potential US audience. The Spanish-speaking population in the USA - 91,308,400 people. The percentage of the population, watching TV every day, in the US makes 67%.
At the same time, the Spanish-speaking people watch TV by 13% less than at the average in the US, so we can get the following result: 67% * 0.87 = 58.36% of people regularly watching TV.
Percentage of the population using daily the Internet - 79.3%, but actually may be less because of less income in the Spanish-speaking part of the US population, and because mostly women are interested in the given niche.
The coefficient regulating the age limit is taken as 0.75 because most children under the age of 16 years are not interest in this teleformat, the average viewer of the show is over 20 years old.
The percentage of people with an interest in the given niche is conditionally taken as 50%.
n - taken as 5% because the market offers over 20 of similar products, and this show is neither unique nor better.
p - taken as 28% (according to the research of the second screen technology application in the UK - a country with a similar development and well-being)
A = 91 308 400 * 0.5836 * 0.75 * 0.5 * 0.05 * 0.28 = 279,759 people.

187000 * 0.9 - 187000 = 251783 * 1.1 – 307,735
n - taken as 5%, but may be less due to an unknown number of similar products and the lack of the product evaluation by the audience.
p - taken as 28%, but may be less because the target audience is likely over the estimated average age.
Let's recalculate this formula at the lowest possible coefficients:

121,107,480 + 91,308,400 = 212,415,880 - approximate number of the audience.
55,783 - estimated number of downloads.

Table 9: Characteristics of GDP and the immersive television audience in India

Characteristic	Units	Value
GDP	US	7988
Population	People	1 252 000 000
GDP per capita	US$	6380
The population median age	Years	27
Percentage of the population using the Internet	%	27,51
The average salary in the country	US	295
The number of people living at the poverty line.	%	54

In India, the percentage of Internet users who use the second screen technology is about 10%.
Expected full audience:
1,252,000,000*0,275*0,1*0.46*0.7*2 = 22,173,000
Where:
0,275 - Population rate, constantly using internet
0,1 - Population rate who use the second screen technology
0.46 (46%) - percentage of people, living above the poverty line
0.7 - correction rate poverty
2 - correction indicative rate of overlapping groups.
Thus conditional value of the potential audience is now equal to 22 million, and will grow at a high speed. Given the rapid pace of development in India it can be argued that it is a promising market for the introduction of interactive television technology.

Rating of the promising markets

Ranking of the countries considered to be the most promising for development of interactive communication with the audience regarding the existing model of monetization in the TV media information space.
According to our talking and our experts' analyzing, the markets in the United States, China, Japan, Germany, Britain, France, India, and Brazil are considered to be the most attractive countries for development of interaction with the TV viewers. The summary table is shown in Figure 2.

	GDP	Population thous.people	GDP per capita	Urbanization AGE %	BiMc Index USD/month	Int. users	Int. TV min/day
United States	17947	310 241	52 615	81.0	4.93	35.2 / 79.3	282	37.6
China	10983	1 339 450	14 107	53.2	2.68	13.5 / 42.3	157	36.7
Japan	4123	127 390	38 054	92.5	3.11	18.4 / 86.25	264	46.1
Germany	3358	81 802	46 893	74.2	3.86	24.1 / 82.35	221	46.1
Britain	2849	62 008	41 159	79.9	4.22	32.3 / 87.48	220	40.4
France	2422	65 447	41 181	86.9	4.41	26.6 / 81.4	221	40.9
India	2091	1 187 550	6 162	32	1.9	11.9 / 12.58	183	27
Brazil	1773	193 467	15 615	85.2	3.35	25.8 / 48.56	224	30.7

Figure 2. Rating of the promising TV markets for immersive TV watching

The multiplier communication and interactive communications

In this situation, it is important to distinguish the concepts of "interactive communication" and "multiplier communication." For example, social TV integrates a social communication platform, and interactive television, involving interaction with the audience by means of active (interactive) feedback in different forms of the multichannel interactions with audience (post, telephone, microphone, video camera, network).

The multiplier communication exists under the condition when the current (target) value of the world and its augmenting of multipliers in time and space at different points, are possible and based on the generic unity of the systems, augmentation of multipliers in time and space. Accordingly, a certain situation with this key characteristic is considered to be an informative "multiplier."

The multiplier process is a communication process on the basis of assets of various generic systems, unlimited in time and space, with the augmenting diffusion nature of the interaction (iterations) in relation to all multiplier flows and elements of the system.

Resorting to the multiplier process modeling as an integral part of the socio-communicative reality of the information space, we take as an initial point the position where the information multipliers are a universal tool to arrange communication in media and society, and a form of expression of different cultural patterns in the global world as well.
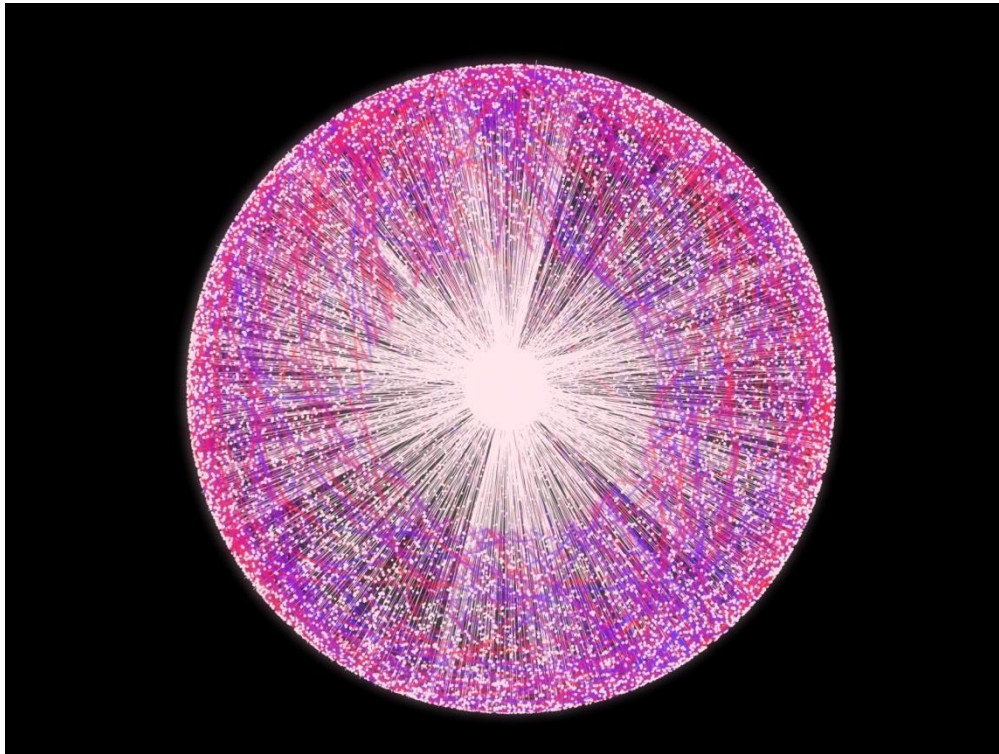
Figure 3. A multiplier communication model

The authors' view on the multiplier model represents a spherical diagram, with white and purple points, this is a visualization of the audience, and the web, spread data flows. Thus, the data flows have different colors. In our opinion, the red flow of information is information which has not yet had an influence on the audience. The purple flow of information is information which has already affected the audience. We see that the audience seems to be covered, and we can compare the coverage with a virus - information is covered (purple points), and so we can expect feedback from spread of multiplier reaction, required to the distributor of information. The authors' further researches will be devoted to assessment of the multiplier effect and impact in the multiplier model.

Discussions

The communication between the audience and the media has been formed since the invention of television and radio till the current Internet globalization.

Understanding of scientific concepts of communication has been limited to linear models of communication and evaluation of its effectiveness. For example, D. Laswell in his model identifies participants and elements of the communicative action: a communicator, a message, a channel, a receiver, effects (Laswell, 2014). Further, he defines the scope of the communication research: the research of management, of the communication content, the communicative environment, the audience, the communicative action.

The mathematical model of communication by K. Shannon (Shannon,2008) includes six components: a source, an encoder, a message (codes), a channel (possible obstacles), a decoder, and a receiver (phone). Wilbur Schramm introduced the concept of "noise" and interpreted the message as the process of connecting the two communication objects allowing to exchange messages (signals) and information. Thus, the connection becomes a dialogue.

The Newcomb's model allows to describe the communication process with indicators of the information source quality and the media impact on the audience.

 ++The concept of feedback in terms of efficiency of information transfer process was introduced in De Fleur's Communication Theory, as well as details of message transformation under the influence of noise.

At the present stage of technological media development, a category of "multiplier" ("accelerator") should be specified for the study of multiplier processes, taking into account that the multiplier theory was developed in the economic theory.. Scientific researches about the "multiplier" were carried out by J.G. Webster (Webster, 2010), S.M. Karpoyan (Karpoyan,2015.), S.A. Zakharova (Zakharova, 2009), V.O. Ilganayeva (Ilganayeva,2009), N. Luman (Luman,2005), G. Pocheptsov (Pocheptsov,2012), D.K.Bogolepov, D.P.Sopin, D.Y. Ulyanov, V.E. Turlapov (Bogolepov, 2012), J.M.Singh, P.J. Narayanan (Singh,2010), D.Sopin, D.Bogolepov, D. Ulyanov (Sopin,2011), H. Abels (Abels, 2000), M.G.Shilin (Shilin, 2014), M.N.Drobiševa (Drobiševa,2011), A.N.Mnatsakanyan (Mnatsakanyan, 2000), O. J.Moskvina (Moskvina, 2012), Ye.V.Strukova (Strukova,2015), D.A. Zolotarev (Zolotarev, 2011), A.G.Kachkayeva (Kachkayeva, 2010), M. Castells (Castells, 2007).

At the same time, the traditional communication models do not fully describe the multipler system and multiplier relations, introduced due to fast development of technical and technological factors (Sibiriakova, 2015), including the Internet, social networks of digital broadcasting, and automatic communication control systems.

The interactivity concept is believed to be common, basing on the concepts of multi-communication and new media, allowing to use several (many) channels of information perception by the audience and characterized by some scientists in the mass communication theory as "active" and "interactive audience" concepts.

The Immersive Audience theory has been studied from Hypordynamic Theory model, Limited Effect Paradigm, Gratification Theory, Concept of Resistance, National Theory, Reception Analyses, Polysemy of Communication and Media effect and New effect research.

One of the reasons for changes in the interaction between audiences of new media is the convergence process. Procedurally convergence is observed in several planes of the media industry. At the basic level, there is a convergence of technical devices for material collection and processing, and communication with the audience. Next, there is a convergence level as the shared use of several transmission media.

A convergent content creates preconditions for interaction and interpenetration into all levels of the media system components. At a higher level, the media system components converge with other social systems (via the big screen). Thus, the modern television and different mobile devices, integrated into interactive platforms, can be considered by the multipliers and determine the conditions for the scientific study of the new multiplier media discourse and preconditions for simulation of the multiplier communication system in the modern media market, where the "big screen" and "second screens" serve as the global multipliers at any Internet covered point.

Generally a multiplier (in macroeconomics) is a numerical factor, multiplying the growth of economic indicators while investments are grown; and a multiplier effect is a combined effect, occurred in the system due to the influence (change) in one of its elements. Influence on the element is taken as a direct effect, a multiplier is a ratio between the degree of the direct influence on the element and cumulative (multiplier) effect of influences.

During modeling, a multiplier communication system is offered to be considered as the controlled process going beyond the task of projecting of an efficient media system and

building of new models of media system monetization (today, in spite of new technologies, the television market still seeking to earnings with the ethereal advertising).

Certain scientific questions remain unresolved: can information multipliers be considered as an integral communication component, or only as a socio-communicative phenomenon with individual elements of multiplicity.

If it is legitimate to talk about separately existing national multipliers in communicative traditions of different societies (in particular, Ukrainian, American, etc.), or this is an interactivity and multi-channeling of the modern media caused by globalization of communication processes in society and media.

Conclusion and recommendations

1. Development and research of markets for implementation of a multiplier communication model are associated with a flexible response of all participants in the communication process to world events, and cause a new conceptualization of communication processes in society.

2. Development and research of markets for implementation of the multiplier communication model are associated with a flexible response of all participants in the communication process to world events, and cause a new conceptualization of communication processes in society.

3. The media market today is formed under impact of general economic, social and technology factors within the traditional model of media content monetization, where rating, considering the viewers' age and media-brand size (programs), are believed to be the key characteristics. Other characteristics, describing the traditional media market within the (inter-) active model of the media interaction with the audience, are as follows: total country population, prosperity, and also the population's readiness to interactive technologies, presence of large media-brands on the media-market.

4. At the same time certain quantity people can be determined in the media market who is ready to participate in interactive TV content watching, and the potential "immersive" core of viewers who are ready to participate in interactive media content viewing on the "big screen" through "second screens" can be calculated.

5. According to our experts' analyzing, the markets in the United States, China, Japan, Germany, Britain, France, India, and Brazil are considered to be the most attractive countries for development of interaction with the viewers.

6. The results of interactive communication data analysis for social and other systems can be potentially used in case of changes in the traditional model of television monetization. For example, no-cost interaction against background of growing population, increasing in number of "second screen" devices, channels, and content types can increase the social significance and reveal the possibility for multiplier researches in developing and third world countries.

7. The authors' view on the multiplier model represents a spherical diagram, with white and purple points, this is a visualization of the audience, and the web, spread data flows. Thus, the data flows have different colors. In our opinion, the red flow of information is information which has not yet had an influence on the audience. The purple flow of information is information which has already affected the audience. We see that the audience seems to be covered, and we can compare the coverage with a virus - information is covered (purple points), and so we can expect feedback from spread of multiplier reaction, required to the distributor of information. The authors' further researches will be devoted to assessment of the multiplier effect and impact in the media and social spheres.

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