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Advanced Surveillance and Security in the Social Media Regime: An Analysis of the Role of Information and Communication Technologies (ICTs)

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Abstract

The use of the information superhighway, which is enabled by Information and Communication Technologies (ICTs) has helped to strengthen and extend security surveillance and information sharing across the entire continents of the world. The potential of the Internet and its associated social media tools as an open communication system to create an alert on impending security problem and provide first-hand information/evidence when crimes are committed is high. It provides valuable opportunities for individuals, groups, and organisations to establish their own spaces and sites and report such cases. However, its net benefit depends strictly on certain factors such as the nature and number of ICTs installations and use security agencies' connection to and use of such equipment, and their willingness to synergise with the public. This paper, therefore, examines the role of information and communication technologies for security surveillance. The survey research design was applied for the study. Primary data were generated from a sample of 250 purposively selected security personnel. In the analysis of data for the study, both descriptive and inferential statistics were utilized. All analyses were done with the statistical package for social sciences (SPSS) version 22 while results were presented in tables. The results of the study showed a significant relationship between ICTs and effective security surveillance. The paper, therefore, recommends among others, the procurement and/or installation of security software, for effective security surveillance, security sensitization programmes for the public and the development of pro-masses security software and instrument that are accessible to the public through the social media.

Key Words: social media, security, internet, ICTs, information, Nigeria, surveillance

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Introduction

The security of lives and property is one of the global challenges facing world leaders. These security challenges include armed robbery, banditry, housebreaking, communal clashes, ethno religious conflict, kidnapping, assassination, terrorism, among others. There is also cybercrime such as Internet fraud, identity theft and hacking, piracy. The situation in Nigeria also includes the conflict between farmers and herds. These security challenges have threatened global peace. The latest report of the Institute for Economics and Peace (2018) revealed that the global level of peace has deteriorated by 0.27 per cent in the last year, marking the fourth successive year of deteriorations. The report said that Ninety-two countries deteriorated, while 71 countries improved. The report reveals a world in which the tensions, conflicts, and crises that emerged in the past decade remain unresolved, especially in the Middle East, resulting in this gradual, sustained fall in peacefulness. The four most peaceful regions – Europe, North America, Asia-Pacific, and South America – all recorded deteriorations, with the largest overall deterioration occurring in South America, owing to falls in the safety and security domain, mainly because of increases in the incarceration rate and impact of terrorism. Iceland remains the most peaceful country in the world, a position it has held since 2008. It is joined at the top of the index by New Zealand, Austria, Portugal, and Denmark. Syria remains the least peaceful country in the world, a position it has held for the past five years (Institute for Economics and Peace 2018). Overall, the report showed that peace has eluded the world for the past ten years. In particular, and that global peacefulness has deteriorated by 2.38 per cent since 2008, with 85 GPI (Global peace Index) countries recording deterioration, while 75 improved. It added that the index has deteriorated for eight of the last eleven years, with the last improvement in peacefulness occurring in 2014. In Europe, the world's most peaceful region, 61 per cent of countries have deteriorated since 2008. Nigeria had an index score of 2.873 and was ranked 148. It was classified among countries with high security challenges. Gever and Nwabuzor (2014) in describing the security challenges facing the world note: “For some time now, peace has remained elusive in different parts of the world. From Mali to Egypt, to Kenya, to Somalia, to Syria, to Pakistan, to Nigeria; the story is the same. Commenting on the particular challenge in Nigeria, they note: “The situation in Nigeria is particularly enmeshed such that a country which cannot boast of factories to cater for her teeming unemployed graduates, now has bomb manufacturing factories deployed against the citizens by anarchists/terrorists.”

Countries of the world have continued to troubleshoot ways of addressing the growing security challenges. Improvements in technologies and the emergence of Information and communication technologies (ICTs) and its features have raised hope regarding its potentials for security surveillance. Dike (2013) notes that ICTs are very cardinal for curbing crime in the world. He adds that sensitive buildings like banks, government establishments and the likes, should install monitoring equipment that surveys peoples' movement in the building to capture some form of data from people like time-in, time-out and bio-data which will greatly assist the security agents to trace and apprehend suspected criminals. Dike in stressing the important role of ICTs in security surveillance adds that government do not need 10,000 policemen to fight 10,000 criminals rather, it should computerize the police force; properly secure our borders; keep correct statistics of births, deaths and people in the country with the aid of capture machines and computers. Troubled spots should have surveillance cameras mounted in the area which should transmit live feeds to the security agents. Ibikunle and Bide (2013) aver that the world is in an era of law enforcement where ICT and other advanced technologies are becoming a powerful tool for responding to crimes, engaging in hotspots policing, solving violent crimes, monitoring employees' performance and many other functions. Ibikunle and Bide add that technologies, such as video cameras, data mining systems, heat sensors, biometrics, GPS (Global Positioning System) tracking, Internet and telecommunication systems are being used for the detection, investigation, prosecution and prevention of crime in the law enforcement community and that just like it was the case in the middle of the 20th century, technology is beginning to alter the nature of policing and to impact on

the management and delivery of police services. Therefore, in this study, the researcher sought to ascertain the role that ICTs could play in security surveillance in the 21st-century computerised world.

Nigeria's Efforts at Combating Security Problems

Nigerian government long recognized the need to address the country's security problems through the use of legal means. Therefore, the Origin of Criminal law in Nigeria is traced to Lord Lugard when in 1904, then as the governor of the Northern protectorate, introduced by proclamation, a Criminal Code which was made applicable to the whole of Nigeria in 1916 after the amalgamation in 1914. Following intense advocacy by the Northerners, the Penal Code Law, No. 18 of Northern Region was introduced in that Region. That exercise also restricted the Criminal Code of 1916 to apply only in the Southern part of Nigeria. The Penal Code was tailored against the background of the Code of Sudan which, itself, had its origin from the Indian Penal Code of 1860 (Essien 2009). In this study, crime will be examined in the context of the Criminal Code which applies to states in Southern Nigeria. This is so because the study is limited to South Eastern Nigeria. The Criminal Code section 2 defines an offence thus: 'An act or omission which renders the person doing the act or making the omission liable to punishment under this code, or under any Act, or Law, is called an offence.' The code further identified punishable offences to include, to disturb the public peace; (d) to be part of any association, society, or confederacy, formed for doing any such acts as aforesaid; (e) not to inform or give evidence against any associate, confederate or other person, stealing, killing, abduction, sexual assault, child abuse, among others. According to Nigerian Watch (2014), crime is one of the basic causes of violence. The Nigerian Watch further notes that crime is more in the South than in the North. This makes a study of the effectiveness of ICTs in curbing crimes in South-East Nigeria very essential. Based on this, therefore, this study investigated the effectiveness of ICTs in curbing crime in South-East Nigeria. South-East Nigeria has experienced different types of crimes over the years. The region has battled to address crimes and criminalities like murder, armed robbery, kidnapping among others. The region is said to have the highest number of crimes in Nigeria. A survey conducted by Sherrif Deputies (2014) revealed that the number of victims of crime was highest in Enugu State with 70%, followed by Ekiti and Ebonyi State (both 65%). The national average was 25%. Katsina State had 9%, while Ogun had the lowest score of 5%. The result also showed that an analysing experience of crime by regions in Nigeria, the South-East recorded highest with 44% while the North-West recorded the lowest score of 18%. Lagos State also recorded 18%. Further analysis by gender indicates that more men (27%) had actual experience than women (23%). A study by the CLEAN (2012) also showed that the South-East states of Nigeria had the second highest incidence of kidnapping in Nigeria, next to South-South Nigeria. Osuji, Obubu and Obiora-Ilouno (2015) found that the common crimes in South-East Nigeria are: armed robbery, murder, and grievous harm and wounding. The table below shows the crime rate in South-East Nigeria.

Table I: Crime Rate in South-East Nigeria

	Mean	SD	N
Murder	33.972	21.061	10
Grievous harm and wrongdoing	21.80	14.031	10
Rape	10.100	2.737	10
Armed Robbery	35.402	22.359	10
Kidnapping	13.190	3.028	10
Store breaking	17.801	7.448	10
House Breaking	13.409	3.591	10

Source: Osuji, Obubu and Obiora-Ilouno (2015)

The table above reveals the type of crimes that are most common in South-east Nigeria. Based on the table, armed robbery had the highest mean followed by murder while grievous harm and wrongdoing came third.

ICTs and Security Surveillance

Information and communication technologies describe the application of computer and telecommunication networks to create services or products which can fulfil man's information or communication desires. Adamu (2007) says that ICTs includes computers, ancillary equipment, software and firmware. (Hardware) and similar procedures, services, including support services and other related resources. The term "information technology" also includes any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control display, switching interchange, transmission or reception of data or information. In the views of Tihamiyu (2001) cited in Ekhareafu, Asemah, and Edegoh, (2013), information and communication technologies are now generally perceived as strategic activities and the management of resources for stimulating personal, organisational and national productivity, growth and development. Bature (2007) defines Information and Communication Technologies as those technologies that allow access to information through telecommunications. It is information exchange which facilitates the way information flows faster, more generously, and less expensively throughout the planet for decision-making and development (Ayuba & Aliyu, 2014). The essential features of the ICTs lie in their interconnectedness, their accessibility to individual users as senders and/or receivers, their interactivity, their multiplicity of use and open-ended character and their ubiquity. Thus, this affordability makes a person an instant publisher with access to an audience of millions of Internet users, creating a whole new class of mass communicators (Dominick, 2002). With the emergence of the ICTs, the traditional mass media i.e. print and broadcast, which were believed to have brought the age of the media to the highest point, began to dwindle (Sanda & Kurfi 2013). The technology was being replaced by an age of personal or participatory media – the ICTs. ICTs could be useful for security surveillance. Security surveillance describes closely monitoring events to ensure the safety of lives and properties. Daramola (2001) says the word surveillance means keeping close watch over someone or something. McQuail (2005) notes that police and intelligence services are paying more attention to the need of surveillance and control, especially in respect of potential trans-border crime, child pornography, terrorism, domestic disaffection as well as many new kinds of cybercrime. Zack (2009) holds that ICTs could be useful for crime prevention by gaining advance information about crime before they happen.

Ogunleye, Adewale, Alese and Ogunde (2011) conducted a study to find out the place of Closed Circuit Television (CCTV) in crime prevention. Ogunleye et al used a descriptive survey to achieve the study aim. The researchers studied fifty respondents and reported that most of the sample studied noticed the presence of a CCTV system and they clearly indicated the places. Also, most of the respondents agreed that the purposes of these cameras are for monitoring and some security reasons like: to catch people who commit a crime; to scare off somebody who might commit a crime and to make people feel safe.

Similarly, Ayuba and Aliyu (2014) surveyed the role of Information Communication Technology (ICT) in combating corrupt business activities in Nigeria. They studied a sample of 200 respondents, and reported that ICT helps in reducing organizations spending and increased earning, identification of ghost workers and elimination of corrupt practices of following files and cheques, as well as enhancing marketing practice and tracking of financial fraudsters and other fraudulent banking services which significantly helped in achieving greater transparency, accountability and effective management and reduce opportunities for corruption. Ibikunle and Adefihan (2013) examined the use of ICTs by the police for crime prevention and reported that the use of ICT and other technologies leads to a corresponding improvement in the performance and

effectiveness of the Police force. Tanui and Barmao (2016) did a study on the use of ICT in the detection and prevention of crime in Kenya. The researchers employed a mixed methods research design of qualitative and quantitative approaches. A total of 40 respondents from police officers, court officials, bank employees and civilians were purposely selected for the study from Eldoret town. Using simple random sampling the police officers, court officials, bank employees and civilians were stratified into strata and the total study respondents were 40. The questionnaires were administered to police officers, court officials, bank employees and civilians and whereas interview schedule was administered to magistrates and police in charge. Data collected was processed, coded and analyzed to facilitate answering the research questions. This was done using descriptive statistics. It was found that ICTs are critical for crime prevention. The researchers suggested that regular training of law enforcement agents could be beneficial regarding the uses of ICT in prevention and detection crime. Quarshie (2014) examined the ICT tools available to law enforcement institution to fighting crime in Africa. It was found that the police in developed countries have come up with ICT methods of crime detection and combat. The result also revealed that legislations have equally been amended to allow the police to gather evidence on the criminal activity carried out via the Internet but Africa is yet to take advantage of ICT in fighting crime. Quarshie (2014) further said that ICT tools such as CCTV technology, tracking technology, social media and mobile phone are efficient in fighting crime. Uchenna, Chukwuemeka and Chukwuka (2018) examined the use of ICTs among officers and men of Nigerian Civil defence and reported they do have the required ICT tools in combating crime, and that information gathering is beneficial to Corps in the discharge of their duties. Based on these studies, the researcher hypothesized:

H1: ICTs tools application is significantly associated with effective security surveillance.

H2: Challenges to ICTs acquisition are significantly associated with the application of ICT tools for effective security surveillance.

H3: Challenges to ICTs use are significantly associated with the application of ICT tools for effective security surveillance.

Theoretical Framework

The researcher used two theories in this study. They are the Uses and Gratification theory and the Technological Determinism Theory. The gratification theory was propounded by Katz in 1970 (McQuail, 2005). It is concerned with how people use media for the gratification of their needs. The theory holds that people use media for many purposes and that the audience is active and its media use determined by goal. People have various needs they seek to satisfy through media. Audience members take initiative to link need gratification to a specific media. It propounds the fact that people choose what they want to see or read and the different media compete to satisfy each individual's needs (Suresh 2003 and Katz, Blumler, and Gurevitch (1974) in Asemah (2011) In general researchers have found four kinds of gratifications:

1. **Information** - People want to find out about society and the world- they desire to satisfy our curiosity. This would fit the news and documentaries.
2. **Personal Identity** - People may watch television to look for models for their behaviour. So, for example, people may identify with characters that they see in a soap.
3. **Integration and Social Interaction** - People use the media to find out more about the circumstances of other people. Watching a show helps them to empathize and sympathize with the lives of others so that we may even end up thinking of the characters in the programme as friends.
4. **Entertainment** - sometimes we simply use the media for enjoyment, relaxation or just to fill time.

In this study, ICT features were regarded as media options with the potential of meeting the needs of users. In the study, such users were considered to be security agents who will deploy ICTs for

security surveillance. Though this theory is good, it does not address the technology aspect of the study, hence, the need to augment it with the Technological Determinism theory. The theory according to Nwanwene (2010) posits that the global village so eloquently forecast by Marshal McLuhan in the 1960s has arrived. White (1990) cited in Nwanwene (2010) posits that it is a revolution which has brought us nearer to the universal understanding which McLuhan and others hoped for. The theory states that media technologies shape how we as individuals in a society think, feel act and how a society operates as we move from one technology age to another. This theory is relevant to the study because it explains how improvement in technology has led to a change in the approaches towards crime-fighting in Nigeria and the world at large. Before the improvement, curbing crime was solely done with the use of human power, but in the contemporary society, combating crime also includes the use of ICTs. This is made possible as a result of advancement in technology.

Method

The survey research design was used for this study. The survey research design was used because it is usually the most applicable design when a study aims to describe, explore or explain a phenomenon (Anol 2012,p.73). The study was conducted in Enugu State, South-East Nigeria. South-East Nigeria is the area with the highest number of criminal activities in Nigeria. A total of 250 security agents was sampled for the study. The details of those sampled are presented as follows:

Table 1: Sample details

Security agents	Sample
Police	50
Army	50
NSCDC	50
Air Force	50
Navy	50
Total	250

It should be noted that the essence of the sample was not to get a representative sample of security agents within the study area but to gain insights into the application of ICTs for security surveillance. The purposive sampling technique was used to select the sample. The questionnaire was used as the instrument for the study. The questionnaire was self-developed for the study. The questionnaire was validated by three communication experts at the department of mass communication, University of Nigeria, Nsukka. The reliability of the instrument was ascertained through a test re-test approach. Therefore, earlier 20 copies of the drafted questionnaire were administered to 20 persons in Enugu State. After two weeks, the same persons were again administered the instrument. The correlation coefficient of .89 was arrived at. This suggests that the instrument was reliable.

In the analysis of data for the study, the researcher used both inferential and descriptive statistics. All inferential statistics were tested at 0.05 level of significance.

Results and Data

There was 100% returned rate for this study. This could be because the researcher administered and retrieved the instrument immediately. The sample was 81% male and 19% female. The dominance of male could be because the security agencies in Nigeria are dominated by male. The mean age of the respondents was 41 (range 34 and 47). The respondents were largely junior officer as senior officers could not be reached.

Table 2: Relationship between ICTs and security surveillance

Item	$\rho_{X,Y}$	p. value	Decision
1 Closed Circuit Television	.783**	0.001	Sig
2 Access Control and Detection System	.783**	0.001	Sig
4 Video cameras	.769**	0.001	Sig
5 Security alarm to detect unauthorized access	.830**	0.001	Sig
6 Biometrics capturing devices	.756**	0.001	Sig
7 Use of telecommunication services to trace criminals	.721**	0.001	Sig
8 Use of social media	.921**	0.001	Sig

The result of table two above sought to ascertain the relationship between the use of ICTs and effective security surveillance. The result tested ICTs features like Closed Circuit television, video cameras, Global Positioning System, Access Control and Detection System, security alarm, social media as well as biometrics capturing devices. Security surveillance was used as a one-dimensional measure. The result showed that all the ICT features studied are significantly associated with effective security surveillance.

Table 3: Challenges to ICTs acquisition and effective security surveillance.

Item	$\rho_{X,Y}$	p. value	Decision
1 Insufficient up-to-date ICT tools	.712**	0.001	Sig
2 Complete absence of state of the art ICT tools	.883**	0.001	Sig
3 Poor budgetary allocation for ICT tools	.821**	0.001	Sig
4 Government lack of interest in the acquisition of ICT tool	.668**	0.001	Sig
5 Siphoning of funds for ICT tools	.732**	0.001	Sig

The result of table three above sought to ascertain the relationship between obstacles to ICT acquisition and effective security surveillance. The result showed that all the obstacles to ICT acquisition are significantly associated with effective security surveillance. That is, challenges to ICT acquisition negatively affect effective security surveillance.

Table 4: Challenges to ICTs use and effective security surveillance

Item	$\rho_{X,Y}$	p. value	Decision
1 Challenges of skilled manpower	.912**	0.001	Sig
2 Absence of regular training on ICTs use	.681**	0.001	Sig
4 Poor motivation of personnel	.961**	0.001	Sig
5 Problem of constant retraining and retraining of personnel	.933**	0.001	Sig
6 Poor maintenance of ICTs tools	.851**	0.001	Sig

The table above sought to ascertain the relationship between challenges to ICT use and effective security surveillance. The result showed that all the items presented significantly correlate with

effective security surveillance. That is challenges to ICTs use negatively impact on effective security surveillance.

Test of Hypotheses

The researcher tested three hypotheses. In the first hypothesis, it was assumed that ICTs tools application is significantly associated with effective security surveillance. The assumption was supported ($P, < 0.05$). Consequently, the researcher concludes with 95% confidence that ICTs tools application is significantly associated with effective security surveillance. In the second hypothesis, it was assumed that challenges to ICTs acquisition are significantly associated with the application of ICT tools for effective security surveillance. The assumption was also supported ($P, < 0.05$). Thus, the researcher concludes with 95% confidence that challenges to ICTs acquisition are significantly associated with the application of ICT tools for effective security surveillance. In the final hypothesis, it was assumed that challenges to ICTs use are significantly associated with the application of ICT tools for effective security surveillance. The assumption was equally supported ($P, < 0.05$). Therefore, the researcher concludes with 95% confidence that challenges to ICTs use are significantly associated with the application of ICT tools for effective security surveillance.

Discussion of Findings

In this study, the researcher examined the role of ICTs in security surveillance. The objective was not to look at public perception but to ascertain the role ICTs have played in security surveillance. Therefore, security officers and men were examined. The study tested three hypotheses. The result showed that the sample reported that ICT tools like Closed Circuit Television, access control and detection system, Global Positioning System (GPS), video cameras, security alarm, social media, biometrics devices, and telecommunication have been variously deployed for security surveillance. The result of the hypothesis testing also showed a significant relationship between the application of these ICT tools and effective security surveillance. The result of the current study is in agreement with that of Dike (2013) who noted that ICTs hold the key to curbing crime, In the views, 'with the latest ICT equipment available in the market now, we can now use names, thumbprint or even date of birth of individuals to apprehend criminals and reduce crime.' The result of this study is also consistent with the submission of Adegoke, Phillips and Keshinro (2015) who reveal that Access Control and Detection System ICTs devices are useful in curbing crimes. They note:

In some public places (such as worship centres, banks, airports, stadia etc) where a multitude of crowd is inevitable, security cannot be efficiently contained through physical checking. Rather, a more robust approach through the use of ICT should be adopted. Access control systems are systems that protect by establishing a checkpoint at entry points to a location through which only authorized persons may pass while detection systems look for dangerous objects and agents on persons, their belongings, and their vehicles at entry points (p.19)

These results have shown that ICTs are critical for security surveillance in the current dispensation. The world is becoming more complex than ever before. The population is increasing, people are finding it more difficult to get a job than ever. People now face hunger problems than before, their house rents are becoming more expensive, their desires and wants are increasing but access to finance is more difficult than ever. These complexities breed security challenges. Crimes like armed robbery, kidnapping, housebreaking, assassinations, among others are on the increase because people are adopting criminal means of survival. Security surveillance is important under such a situation and ICTs could be beneficial in that regard. However, the acquisition and use of ICTs are limited by challenges. The result of the current study showed that challenges to the

acquisition of ICTs for security surveillance include: insufficient up-to-date ICT tools, a complete absence of state of the ICT tools, poor budgetary allocation for ICT tools, government lack of interest in the acquisition of ICT tool, siphoning of funds for ICT tools. The result of the hypothesis testing showed that these challenges significantly have negative impacts on the application of ICT tools for effective security surveillance. This result is consistent with that of Nwosu and Soola (2007) who found that absence of ICTs policy or implementation, lack of infrastructure, , poor knowledge of ICTs at all levels from suppliers to users, corruption and political instability, few trained or skilled ICTs personnel financial constraints, wars and fear of insecurity that may be caused by cyber or ICT fraudsters or hackers, poor ICT regularisations are limitations to the application of ICT tools for security surveillance. It was also found that the use of ICTs for effective security surveillance is limited by challenges like lack of skilled manpower, absence of regular training on ICTs use, the poor motivation of personnel, the problem of constant retraining and retraining of personnel and poor maintenance of ICTs tools. The result of the hypothesis testing also revealed a significant relationship between challenges to ICT use and application of ICTs for security surveillance. This result is partly similar to that of Nwosu and Soola (2007). Quarshie (2014) in making a case for the use of ICTs for security surveillance notes that the fight against crime in Africa needs a cohesive and coordinated strategy supported by a virile ICT security system. Quarshie adds that as a result, security agencies deserve full support.

Conclusion/Recommendations

In this study, the researcher has examined the role of ICTs for effective security surveillance. Based on the result of this study, the researcher concludes that ICTs are essential for security surveillance. The researcher, however, adds that effective application of ICTs for security surveillance in Nigeria has been limited by challenges related to acquisition and use. This study has practical, scholarly and theoretical contributions. Practically, the result of this study could be useful to government agencies who are responsible for the acquisition and use of ICTs for security surveillance in Nigeria. Such agencies could, therefore, be guided on how to ensure that up-to-date ICTs tools are made available for security agencies for security surveillance. Theoretically, the result has contributed to our understanding of the uses and gratification and technological determinism theories. Concerning the uses and gratification theory, the result has shown that ICTs has some security-related gratification that could satisfy the security surveillance needs of security personnel. Regarding the technological determinism theory, the result has shown how improvements in technologies have changed approaches to combating security challenges. The results also have scholarly contributions by providing empirical evidence on the relationship between ICTs and security surveillance. Based on these result, the researcher recommends:

1. The government should improve on budgetary allocation for the acquisition of modern ICT tools for effective security surveillance.
2. There is a need for the training and retraining of security personnel on how to use ICTs for effective security surveillance.
3. The government should remove all barriers to acquisition and use of ICTs for effective security surveillance.
4. It is also suggested that there is a need for security sensitization programmes for the public, the development of pro-masses security software and instrument that are accessible to the public through the social media.
5. Further studies should be conducted in other countries to enrich literature in this regard.

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*The Discussion of Still Frames and Motions on Timing Value – A Case Study of
Some Awards Best Animated Shorts*

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Abstract

The sense of accomplishment is seeing these still images come alive in the linear spatial reality in which we live, the restored concept of time reenacted amid stop-motion frames brings about the static consecution and dynamic reconstruction of moving images. Amid stop-motion frames where time can either pause or move forward, we are given a chance to rethink the definition of the recurrence of temporal consciousness. Therefore, in addition to the physical definition of time, the sense of time reshaped in space and the space constructed in time mark the instant when animated life is created. Within linear time structure, animated life and actual noumenon often form multiple overlapping senses of present space-time amid the spatiotemporal cycle of reconstructing and retracing past time and memorized moments aroused by the subconsciousness. This research essay focuses on exploring and expounding on the observation of temporal flow and spatial sense through frame by frame, as well as the observation of infinite from memory and memory points through life. The illusions created still images and frames and existing in space and time, and by discussion the subject of time-space and ponder the extension of image structures to satisfy viewers at a spiritual level. In addition, an echo can be aroused in viewers with the universal value of human activities, so that the viewers can gain an insight into this subject matter.

Keywords: Frame, Visual Images, Animated Short Film

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Introduction

Animation begins with the continuity of speed composition from frame to frame. This “persistence of vision” achieves the expression of time and speed in screen motion and image, that is, achieving a virtual motion known as animation through interactions among timeline, space, and the laws of physical motion based on a specific number of flat images.

The control of human visual behavior is determined by speed. The speed of time produces a continuity that links the images in the left and right brain, while corresponding to the concept of time on a mental level. In reality, time and space timeline exhibit a linear and consistent speed, and we continue to move forward in the flow of time. However, by creating a new view of time through the interaction between frames in animation, we can autonomously determine the speed at which time proceeds. In addition, different methods can be used in the story’s narrative rhythm, such as montage expression from shot to shot, to control viewers’ sense of lapses in time. Regarding the view of time in animation and the alternation and connection of time described in this paper, we can express another view of time in the frame’s shaping time.

Thus, animation uses the smallest unit in a film (a frame) and the persistence of vision principle to gradually produce visual image motion by connecting the flat composition in different frames. From the “scene” in a flat construct, we can build visually aesthetic and picture-balanced elements based on the frame concept, then extend this to the screen’s narrative, and integrate the picture’s entire scene scheduling. As a moving image art form, animation uses the shaping and broadcasting of moving images to enable viewers’ mental exchange, and interpret and discuss the meaning of the work via the processing of forms, regardless of the inner context, external meaning, or symbolism of the moving image work. Therefore, the advancement of the aforementioned elements forms the important structure of the basic moving image form.

1.1 Background and Objective of the Research

Important animation film festivals and related broadcasting platforms provide animation creators with venues for mutual exchange and the ability to expand visibility for their work. Currently, there are many large and small international animation-related film festivals. The following is a list of large, indicative international film festivals with animation categories hosted by Taiwan:

- Golden Horse Film Festival
- Taichung International Animation Festival
- Taipei Film Festival
- Kaohsiung Film Festival

Golden Horse Film Festival, which is the most important event for animation in Taiwan, added an animated short film category in 2016, reflecting the effects and importance of independently created animated short films. In addition to the aforementioned four animation-related festivals, Taiwan also has the Women Make Waves Film Festival Taiwan, the South Taiwan Film Festival, the Youth Film

Festival, the Annual Screwdriver International Student Short Film Festival, and other regional/student/ documentary-related film festivals. These international platforms organized by Taiwan enable the themes of independent animation creators to receive local attention. Broadcasting in these film festivals not only delivers the image information in these animated short films to the public, but also enables animation industry professionals to review these works and recognize the expressed topics or media forms.

The goal of broadcasting animated short films in film festivals or in other venues is to induce a dialogue with society and the public. Viewers can obtain information expressed in the film through the moving images and gradually understand the story themes/meanings that the creator wishes to express, as well as make their own determination of the creator's thinking and perspectives towards people, things, and events. A mature viewer will often carefully examine the context and underlying ideas that the creator is trying to express behind the scenes. Detailed clues in the images can induce viewers to explore and discover the creator's interpretation in the creative work. After watching the film, viewers' satisfaction comes from their experience and understanding of the intention that the creator wishes to express.

In this study, we compiled the media genre and performance topics that creators have been recognized for from the winners of the aforementioned four indicative international animation festivals in the last three years. The compilation is based on the following two dimensions:

1. The mutual effects between animation media and the overall performance of the work
2. The time difference between the view of time and life course in the animation topic

The two aforementioned items are the overall analysis and comparison of the time and space that an animated short film creator used in his/her animated work. This is done to determine the similarities and the differences. The broadcasting of the image work can produce different feelings, interpretations, and perspectives in viewers. Therefore, the receiving and return of image information from the moving images will also create many different interpretations of the work. We aim to determine the factors that make animated short films popular and recognized. The results of this study can serve as a reference for future independent animation creators.

1.2 The importance of The Research

The display of moving images (the creation process of the work) is the very start of life for an animation. This process often originates through creators' own growing experience, feelings, or psychological cognition of their experiences. After these feelings and experiences have been objectively and comprehensively reflected upon, the creators then decide to express their feelings, thoughts, and experiences in an animated short film form. In addition to trying to create resonance between their own feelings and the external world, the creators also hope to explore topics/feelings or gain recognition and attention. These animated short films and their content on a certain level represent the aspects of social structure from the countries that the creators come from. The animated films can also highlight feelings toward universal

life values that have no borders. This means that the reasons for creation and the culture value of a complete animated work are worthy of exploring.

Three directions are used to define this study's necessity and importance, and to conduct the analysis and exploration in sequence:

1. Rendering from animation creators' perspective: expressing their own life experience/topics or the appearance of contemporary society
2. Special reasons and values that have been recognized: discussing universal life values, cultural perspective, or media expression
3. The feeling and cognition of common viewers: the delivery clarity of the work's information and the resonance

Therefore, the frame's stopping time and dynamic lapse speed in animation and the time multiplication relative to spatial performance involve social and cultural values triggered by the topic itself. This study comprehensively categorizes, analyzes, and discusses animated works and creators recognized at the previously mentioned animation festivals.

2. Animation Structure and Theme Mode

Before discussing the animation creative forms, we must first explore movie image language. Animation has been categorized as movie art in the more than one hundred years of movie history. Therefore, an animation's creative form can also be a movie's creative form. People have listened to stories since ancient times. The content of these stories takes the listeners into plots that exist in an imaginary environment. From mythology to fables and small plots that exist in conversation, people learn to comprehend truths beyond what is on the surface from these stories, i.e., the deeper meaning of these stories. Thus, stories are the pre-narratives of an animation.

A narrative emphasizes the cause and effect of elements in the story, their relationships, features, and direction. The narrative also describes the time flow and the spatial construct, as well as the overall rhythm; it is closely related to viewers' understanding of the complete story image. These elements are all linked into an organized structure that viewers can understand. The plot is similar to the starting and closing structures in an article.

Animation narrative theory and structure can be divided into orthodox animation and experimental animation (Paul Well, 1998). Orthodox animation uses a certain narrative structure. The three-act structure (Syd Field, 1979) has a clear start and transformation linearity where the story starts, the conflict transforms, and the story ends. The performance of representational characters is used to integrate the content. The animated short films produced by most independent creators are developmental animation that is between orthodox animation and experimental animation on the spectrum. Although developmental animation still has a story linearity and rhythm, its creator uses art style or scenes, scene transitions, or the changing and switching of the lens or lines to narrate a certain ideology. This type of animation is based mainly on imagery expression of the picture, and media are added for interactive use. Pictures are often used to drive or stimulate viewers' visual sense and to express feelings towards a certain topic. Developmental animation does not focus on the story

description structure, or only uses certain things or items as a symbolic representation. This method is often used in animated short films to explore human consciousness and the value of our existence.

In a broad range of animated short film topics, subject matter that can relate to viewers' similar experiences or universal value can often touch people's hearts. Thus, regardless of whether the material takes an action form and conscious behavior that hides a creator's own unconscious intention, or whether the topic is about human self-awareness, family conflict, love or hate, or social criticism, most people use their own life experiences as the starting point and expand to the feelings and responses of the group.

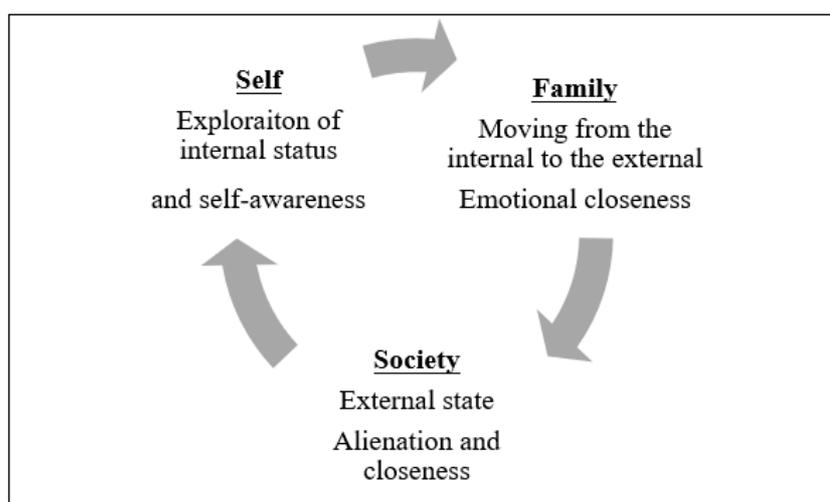


Figure 1. Animation expression topic that corresponds to life experience

As people, we use our self-awareness to gradually feel our existence at the moment and realize the relationship between ourselves and others. We use self-awareness to repeatedly consider awareness in our minds, and use this type of exercise to explore and get to know ourselves, and to move from getting along with ourselves to relationships with others. In the process, we gradually contemplate the meaning and value of our own existence. This exploration of the aspects of human nature forms the topics in animated short films that have an impact on viewers and that display universal experience. In this study, we explored, compared, and analyzed the use of time in animation by using the nominees and winners of the Golden Horse animated short film award in the last three years based on the three following topical aspects:

- A. Awareness of self-awareness and life experience: rendering and highlighting our own self-awareness with time and space
- B. Temporal view and temporal difference in the life course in animation subject matter: looking at an exploration of inner dilemmas, searching for balance, and a desire from a loneliness perspective
- C. Physical time flow and corresponding persistence of visual time feeling: from self to harmony and coexistence with the world

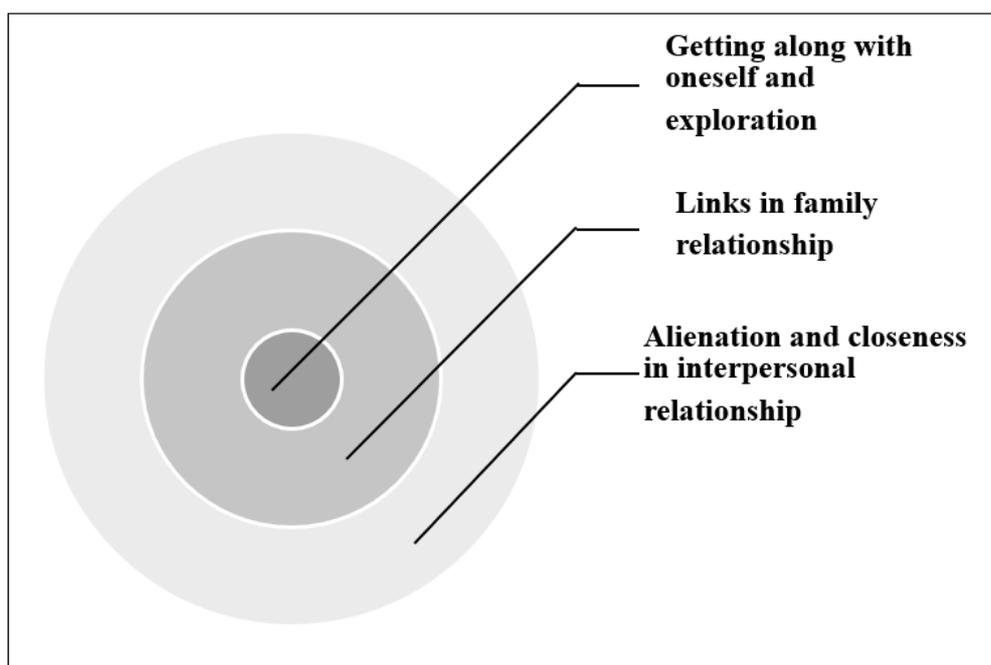


Figure 2. Analysis of animation topic dimensions

3. The Connection Between Animation Performance and Time/Space

After the cut-and-paste concept developed by the father of American movie (D. W. Griffith; *The Birth of a Nation*, 1915), the term “montage” was proposed by Russian director Sergei Mikhailovich Eisenstein in the 1920s. Montage uses a large combination approach to edit different image materials (such as shots taken at different times and locations or series of split shots of far and near distances) to joint editing or staggered action. This type of front and back scene succession will produce a third type of interpretation and meaning, which can be used to emphasize or affect viewers’ emotions towards the narrative story. Thus, montage became an important narrative method in movie history and animation performance form that continues to affect us today.

The montage theory builds an inseparable relationship between scenes and provides the audience with picture meaning of the scene. Montages also provide new meaning through series of edited scenes; this is the mise-en-scene method that requires exploration. The longitudinal depth in multi-level space in a scene and translational motion axis, the scene’s 2D flat composition, and the interweaving of these pictures are all operated by the mise-en-scene. The purpose is to trigger viewers’ viewer meaning association towards the work and understand the intrinsic meaning of the picture arrangement.

The long scene theory, which is the opposite of the montage theory, was introduced by the father of French new wave movies, Andre Bazin. In the montage method, the result of the images after they are shot to the edited material involves a compression of time flow. The seconds displayed in the picture and the result, as well as the shooting time and the playing time, cannot be restored to a near-reality time flow. What viewers see is the temporal and spatial construct after a director is done with the editing. Bazin had a realistic attitude towards the rendering of images so that they do not manipulate viewers’ emotions. Bazin also attempted to reproduce the real

temporal and spatial environment and objectivity. He used moving images closest to reality as the rendering form. Although Bazin had the lofty goal of recording the most truthful time, and the camera films in real recording time: by the time the moving images are restored and broadcast to the audience, the time in the moving images has long turned into the past tense of real time and space. Even thus, Bazin's theory corresponding to the truthfulness of time and structural aspects in the restored time flow in a creator's short film had a deep impact on image action creators.

Because animation is created through a series of continuous flat images that are played in real time and space, the moment the images stop, the animation life ceases to have temporal motion at that time point. This special feature allows animation and spatial relationship axis to exist in a type of special multilayered relationship. That is, the animation's specific rendering and life relies on temporal and spatial broadcasting. However, once the broadcasting stops, the existing real time and space continues to move forward in a linear fashion. Therefore, animation uses the time created through the existence of the frames to re-render the passing of time flow in real time and space. Once the curtain falls, the frames return to their initial state and we continue forward in real time and space. However, we continue to reflux in the created time flow and use multiplicity time architecture to correspond to the existence of space.

Furthermore, constructs such as "time flies" or "days wear on like years" in real time and space make people feel time is flowing especially fast or especially slow. These feelings can extend to, or compress, our awareness of real time; they come from people's awareness of emotional time, not real time in real life. When the two interact, they create a time illusion and a movie's repetition of perceived time, giving us a cognitive perception point on time and life.

This study aims to explore many aspects based on the winning animated short films within the last three years, for example, the choice of media for an animated short film and how this media highlights the topics in the film, whether the animated short film narrative method emphasizes the representational structure or abstract editing ideology, whether the topic of the animation starts from its creator and moves towards social exploration, how the dynamic image form displayed for the animation topic affects the grasp of the time narrative, how the temporal view affects viewers' awareness, and how the illusory time frame in animation interacts with the physical recreated time and space.

4. Analyses of Winning Animated shorts

This study focuses on four international movie festivals from Taiwan that are indicative of the industry: Golden Horse Film Festival, TIAF, Taipei Film Festival, and Kaohsiung Film Festival, to study animated short films that have won awards in these festivals in the past three years. The subject matter, genres, and content of 16 award winning animated short films will be analyzed and studied. The following are the initial data:

A. Golden Horse Film Festival’s animated short film category:

	2016	2017	2018
Name of winning short film	Wander in the Dark	Losing Sight of a Longed Place	Where Am I Going?
Animation stills			
Director/creator	Redic Hsu	Ka-Chun Shek, Chun-Long Wong & Tsu-Ying Wong	Yun-Sian Huang & Yi-Chin Tsai
Country	Taiwan	Hong Kong	Taiwan
Media	Hand-drawn animation	Hand-drawn animation	Puppet animation
Subject matter	A life that lost its name and identity	LGBT rights based on a true story	Taiwan craftsmanship and the lives of local elderly people
Source of inspiration	Shannon Johnstone's Discarded Property photography series; Natsume Soseki's I Am a Cat	Anca Damian's The Magic Mountain	Local Taiwan dough art

Figure 3. Winners of the animated short film category in Golden Horse Film Festival for the last three years

B. TIAF:

	2016		2017		2018	
Award item	Taiwan award	Taichung award	International short film group: Taichung's first prize award	Best Taiwan short film award	Short film competition: first prize	Taiwan short film competition: first prize (total of two films)
Name of winning short film	20	And Then	Negative Space	Stories About Him	The Fall	1. Si So Mi 2. Where Am I Going?
Animation stills						 
Director/creator	Chu-Ying Chiang	Tzu-Hsin Yang	Max Porter & Ru Kuwahata	Yung-Shiuan Yang	Boris Labbé	1. Xu-Zhan Zhang 2. Yun-Sian Huang & Yi-Chin Tsai
Country	Taiwan	Taiwan	France	Taiwan	France	Taiwan ,Taiwan
Media	Hand-drawn animation (transfer)	Hand-drawn animation	Puppet animation	Hand-drawn 2D paper cutting and clay mixed media animation	2D hand-drawn animation	1. Puppet animation 2. Puppet animation
Subject matter	Links between people	Interruption of rhythm in a rhythmic society	Father's love	Land, memory, and family	Cycle and sequence of heaven and hell	1. Story of life and death 2. Taiwan craftsmanship and the lives of local elderly people
Source of inspiration	Growing experience	Paris terror attack in November 2015	Adopted from the short poem of the same title by American poet Ron Koertge	Exploring grandfather's story from an oil painting on grandmother's living room wall	Dante's Divine Comedy	Love song soundtrack from the German poetry: Ach wie ist's möglich dann to the name for Taiwan's funeral team Si So Mi

Figure 4. Winners of the animation category in TIAF for the last three years

C. Taipei Film Festival:

	2016	2017	2018
Name of winning short film	Crash Testing	Stories About Him	Neon
Animation stills			
Director/creator	Yu-Ting Hsueh	Yung-Shiuan Yang	Sz-Yu Pan
Country	Taiwan	Taiwan	Taiwan
Media	Experimental animation	Hand-drawn 2D paper cutting and clay mixed media animation	Hand-drawn animation
Subject matter	Using impact to discern people's value of existence	Land, memory, and family	Using light and shadow as the subject matter to reveal various depths of feelings towards love and the different aspects of love
Source of inspiration	Using mannequin car crash testing to echo life	Exploring grandfather's story from an oil painting on grandmother's living room wall	Inspired by the films: Chungking Express, Fallen Angels, and Café de Flore

Figure 5. Winners of the animation category in Taipei Film Festival for the last three years

D. Kaohsiung Film Festival:

	2016	2017	2018
Award	Animation award	Animation award	Best VR narrative short film award
Name of winning short film	In The Distance	Catherine	Battlescar
Animation stills			
Director/creator	Florian Grolig	Britt Raes	Nico Casavecchia & Martin Allais
Country	Germany	Belgium	France & the United States
Media	3D computer animation	Hand-drawn animation	VR computer animation
Subject matter	Forced immigration/displacement crisis	The feelings between animals and people	Paying tribute to the end of the 1970s
Source of inspiration	British animation director Phil Mulloy and Russian animator Igor Kovalyov	The definition of "home"	Punk poet Patti Smith

Figure 6. Winner of the animation category in Kaohsiung Film Festival for the last three years

The above data are from 16 winning animated short films from 2016 to 2018. Two of the works won different awards in different film festivals. *Stories About Him* won the best Taiwan short film award in the 2017 TIAF and the 2017 Taipei Film Festival. The film: *Where Am I Going?* won the 2018 Golden Horse Film Festival's animated

short film award and first place in the Taiwan short film category in the 2018 TIAF, there are a total of six foreign creators and eight domestic creators. The Internet platform and email were used to contact and communicate with them. This can provide more contexts for the contents of the creations and the perspective that the works try to express.

Directors from Taiwan	Wander in the Dark, Where Am I Going?, 20, And Then, Stories About Him, Si So Mi, Crash Testing, Neon
Directors not from Taiwan	Losing Sight of A Longed Place, Negative Space, The Fall, In the Distance, Catherine, Battlescar

Figure 7. List of creators for winning animated short films in the past three years

The implementation not only can help us understand the different aspects of an animated short film that moves viewers, but can also help us understand the correlation between media and subject matter rendering, the application of aesthetics on the subject matter, and whether animation aesthetics achieves the level of pursuit that media should have. In addition, this study also explores whether animations have an effect on others and whether viewers receive and recognize the delivered message once a film has been completed. The results of this study will be turned into a report and be presented at seminars. They can also be used as a reference for animation-related academics, industry, beginner animated short film directors, and students, as well as points for conducting exchange.

5. Conclusions

Work rendering that starts from an emotional basis is the nature of creation. An animated short film starts with a precious concept, which is rendered with suitable media, and then finally broadcast. The value of the work comes from the topics explored in the subject matter that are central to people or society, and the emotions involved.

Through their works, creators continuously redefine and inspect themselves. The shaping of a work is a dialogue with the outside world and the objective is to trigger a shared resonance on humanistic and mental levels. The emergence of digital platforms provides animations with greater visibility and helps to spread this broadcasting form. Digital devices and video platforms can be used by viewers to see the works. The rendered animated works are also rapidly being delivered to, and seen by, the public. After this rapid dissemination is achieved, whether creators can use a slow attitude to ponder the intentions rendered in their works is a space for reflection for both the creators and viewers. In this alternating speed, we realize the true meaning in this time space, not only in the works themselves, but also in their life philosophy and reflections.

In the dialogue between a creator's work topic and the outside world, we use our own awareness to gradually obtain the meaning of our own existence and the meaning of

the relationship between ourselves and other people around us. We use our own self-awareness to repeatedly consider so that we acknowledge ourselves through this type of activity and exploration. The framework of our own treatment and the relationship with others is used to gradually move towards defining and understanding what the work is trying to advocate.

To a creator, the artistic expression of an animation is not just expressed by the media, but also extends from the theme to familiarity with the view of time. Animated works often go from rational real time and space to the created emotional virtual time and then back. Thus, in the animation framework, we can autonomously stop the frame and magnify the emotional level through internal life feelings. The layering of time and the definition of time/space in rational reality and the created frame mean that we should deeply consider viewers' view of time and the impact that the hidden context and view of time in animated work have on their inner emotional life.

Thus, we hope that the collection, exploration, organization, and dialogue conducted for this study can interpret and give new meaning to winning animated short films, and equip the public with the ability to understand and feel what the films are trying to express. Exploration done for this study can influence people's care for society and humanity, as well as let people feel spiritual value and hope for the future.

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*Adapting Modern Technology into the Public Relations Classroom:
An Analysis of Pedagogy in the Classroom*

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Abstract

This study further assesses instructional pedagogies utilizing public relations technology in classrooms and how it heightens student success. Habitually, a healthy learning environment with independently successful students does not always come from a serious solemn classroom, but that is what our society leads us to believe. Instruction can be humorous, fun, or advanced in technology, which can lighten the classroom climate, empower students, increase comfort and should be tools that every instructor has at their disposal. Predominantly, this study dives into defining research associated with the use of consumer grade and professional grade technology in the classroom and the types of different resources (i.e. live polling, animated video presentations, socials, etc.) a person may want to apply in the classroom that is significant not only to public relations as a practice but also as a pedagogical tool, accomplishing two goals at once for students. Particularly, this study connects learning in the classroom with Arousal Theory. The literature review shows many benefits come from utilizing technology and fun in the classroom, however, this study will be among the first to analyze the benefit of PR technology in the public relations classroom, through primary and secondary research by two PR practitioners and instructors. Technology used in the field of PR used as learning tools can persuade students to be more interested and participate more in content, which creates a healthy collectivistic classroom climate.

Keywords: Pedagogy, Public Relations, Communication, Technology

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Introduction

When asked, Public Relations practitioners may share memories of PR classrooms that felt strict, serious, solemn, or distant in comparison to future work in the field. Instructors can change this association through a blend of professional and pedagogical methods to offer a new experience in the PR classroom including “fun, clear, and useful” by altering the delivery of course content and the utilization of professional technology as a pedagogical tool.

Public relations is the process of professionals helping a business or individual cultivating a positive reputation for publics in various communications, including “traditional media, social media, and in-person engagements” (Forsey, para. 1). A public relations instructor has a duty to ensure students understand how to reach these publics in an effective manner. And may involve social media, newspaper, ads, and events, yet time and time again we do not see multiple mediums utilized in the public relations classroom. This study further assesses instructional pedagogies utilizing public relations technology in classrooms and how it heightens student success.

Chari indicated in her (2017) article titled “The 10 characteristics of a successful PR professional” that successful practitioners have the following qualities “flexibility, meticulous learning, collecting information, seeing the bigger picture, building relationships, knowledge, strong writing, honesty, attention to detail, and a thick skin” (p.1). The idea is that, instructors can teach the tools critical to the field more effectively if, simultaneously, they are also modeling those same tools by putting them into practice. Says Chari, “As the public relation scene continues to evolve, new professionals must possess all the cards to have the best chance of winning” (2017, p.2). As instructors it is a duty and a wonderful opportunity to model for their students, best preparing them for what lies ahead. This research is going to explain how fun and technology in the classroom can help model these characteristics to students.

Particularly, this study connects learning in the public relations classroom with Arousal Theory. This study illuminates the effects of fun in the classroom and students learning outcomes caused by technology. Presently, research suggests that technology in the classroom can heighten students interest in information being provided (Ball, Eckel, & Rojas, 2006; Jansson, 2007; Lajoie, 2017). To understand this correlation a person must first understand what public relations is.

Literature Review

Historians explain that the origins and foundation of public relations can be traced back to Classical philosophers or even Ancient Greece, however, the contemporary public relations we see today is believed to be connected to two men Edward Bernays and Ivy Lee (Siddiqui, 2014). Bernays was a man that believed political propaganda created by the government could influence different publics during World War Two by manipulating the message. “Bernays is notable for approaching the topic of public relations as a science, and for uniting Freud’s theories on psychoanalysis with other sociological theories to develop his pioneering public relations methods”(Siddiqui, 2014, para. 7). Bernays is believed to have refined the art of press releases to how it is used today. Lee on the other hand began his career as a journalist for the New York

Times, the New York American, and the New York World, however, “It was when Lee advised the American industrialist John D. Rockefeller Jr. and his company Standard Oil in 1903 that many believe marked the birth of public relations as a professional practice” (Siddiqui, 2014, para. 5). Both of these men are responsible for what we now know public relations to be today.

Today, public relations is defined as “a strategic communication process that builds mutually beneficial relationships between organizations and their key publics” (Forsey, para. 3). This means that many times members of the public relations field are the intermediary between an organization and stakeholders which may include investors, the public, employees, or members of the press. It is important that each member group comprising the key publics be communicated with in a way they find compelling, understandable and collaborative, thereby creating many opportunities for those in public relations to communication across many channels and using many types of new communication technology.

Arousal Theory. Arousal Theory is defined as the theory that human beings respond best to a regulated amount of stimulation and will seek a level of stimulation that best suits the individual or task (Arousal Theory, n.d.). This means that learning might be able to take place under the best conditions for stimulation and regulation.



Figure 1: This is an image representative of those commonly used to depict arousal theory principles showing the polarity of too much or too little stimulation. (Arousal Theory, n.d.)

Arousal Theory originated over 100 years ago with the Yerkes-Dodson Law, finding a relationship between arousal and the performance and behavioral curve when applying different levels of stimuli to a mouse (Yerkes, 1908). With extensive testing, it was found that with just the right level of arousal appropriate for the task, the mice were significantly more responsive.

Says the findings, “The relation of the strength of electrical stimulus to rapidity of learning or habit-formation depends upon the difficultness of the habit, or, in the case of our experiments, upon the conditions of visual discrimination” (Yerkes, 1908, p. 481).

This quote says something useful and interesting for this study, saying that tasks demanding more learning may require more stimuli. Something that continues to be echoed and can be particularly relevant for the levels of persistence needed for the repetition in revisions and persistence needed in quality Public Relations writing.

So important to human learning, NASA went on to conduct a significant conceptual framework of arousal theory. (Staal, 2004) Perhaps this endeavor was to have the best understanding learning, repetition and human performance in space through attaining the proper level of arousal in order for this to occur. The study discusses the continuum of awareness from unconscious or sleeping to fully alert, acknowledging that “arousal mobilizes and regulates the human stress response” and that it became understood through multiple studies that “moderate levels of arousal will result in optimal performance” (Staal, 2004). Humor’s relation to arousal theory in the classroom have also been studied as an “enabling mechanism for thought” (Attardo, 1994). Meaning that perhaps this is one delivery mechanism more the optimum level of arousal, or that perhaps the arousal levels needed may be higher than previously thought in a standard lecture classroom.

Critique of Arousal Theory. For over 100 years it has been commonly accepted that because a mouse responded to an optimum stimuli for a mouse, therefore a human response must be similar, though new research shows a few considerations worthy of examining further.

However, the common acceptance of this correlation of arousal does not necessarily mean that this is how the human brain works with relation to “cerebral activation.” Says a study, “since there are many exceptions, these generalizations have only limited validity”(Vanderwolf, 1981).

Going back to Figure 1, the polarization of arousal and the tropes surrounding arousal may need more clarification, since on one side is death and depression and the other side is life and energy and determination (Arousal Theory, n.d.). This seems to be more anecdotal and less grounded in study, for instance, great work can be done in a lower energy state, and a person can be in a high energy state without determination or happiness. So it is important to acknowledge what may be more infiltrated from popular culture or stock images accompanying wide ranges of articles and what comes from legitimate study.

Echoing the sentiment of the need for increased and greater understanding, the understanding of arousal and the actual arousal levels may be significantly different (Picard, 2016). This means that an individual might understand arousal differently than the physiological levels of arousal shown, calling into question what a level of arousal is or where it may come from.

Using “big data” from sensors worn continuously outside the lab, researchers have observed patterns of objective physiology that challenge some of the long-standing theoretical concepts of emotion and its measurement. One challenge is that emotional arousal...can sometimes differ significantly... We show that traditional measures...may lead to misjudgment of arousal. (Picard, 2016)

Arousal theory shows that arousal and regulation must be considered, but where and how to consider arousal continue to evolve and be reevaluated as time continues past the original studies.

Pedagogy. Although it has been hypothesized that technology can enhance learning, it is hard to make a causation claim, because most findings are directly related to students perceived learning experience. So, students believe they learn more in a classroom that has a high amount of technology and a high amount of stimulation, but it does not necessarily follow that they learn more in these classes. Although it is clearer as to why technology is beneficial, all findings are based on student perception of their active learning, which is not a sufficient way to evaluate these findings.

In one classic pedagogical study, it was found that success expectancy paired best with incongruencies between feedback and expectations, producing higher overall success when incongruent rather than alike (Means, 1979). This finding is related to arousal theory because, while a strong type of feedback, the input can also be seen as a type of increased stimulation or arousal. The student can be surprised, shocked, encouraged, or engaged to a greater degree because of these incongruencies between expectation and result. Of course there are many additional methods to increase arousal that may be utilized in the public relations classroom, but anecdotally all instructors know of times where they or their colleagues may utilize this method towards the start of a term with new students, to set a tone for expectations.

Technology. Technology in the classroom creates an excellent environment in which people can learn. For a person to be aroused a feeling must be evoked within them. Technology can be utilized to evoke a message or feeling within an individual. If the act does not elicit a positive feeling, a person will not be aroused. Arousal theory rationalizes the use of technology in the classroom as a complex interaction, which connects emotion and cognition.

Studies have shown that the creation of a “third culture” mixing culture and identity from multiple sources bonds individual and may also bond knowledge (Vierra, 2019). In the study of PR technology in the classroom as a pedagogical tool, perhaps the third culture would be a blend of PR professional technology with traditional classroom learning.

Similarly, it has been found that peer groups reinforce messaging, and are safe spaces to counter conflicting messaging (Nerren, 2018). Therefore, technology that may be stressful, overwhelming or confusing if exposed in the work environment, may become stimulating, engaging, useful and familiar if utilized and challenged in a peer group setting in a classroom.

It is worthy of mention that the level of optimum arousal in the classroom appears to continually increase and this is observed in many recent studies (Chang 2017). Modern classrooms compete with multiple screen experiences, two-way symmetrical communication models on social media and streaming as just a few of the media uses students engage with and seek outside of the classroom.

Arousal theory also suggests that individuals have motives to counteract insufficient or excessive environmental stimulation. People

engage in various behavioral activities to increase or decrease their level of arousal and to reach optimal level of arousal. Individuals are different in optimal level of arousal at which they feel most comfortable (Reeve, [34]). People tend to expose themselves to media content that can reach optimal level of arousal. For example, high sensation seekers tend to expose themselves to more novel and varied media content, whereas low sensation seekers tend to use more familiar media because they have high and low optimal level of arousal respectively (Calvert, [4]; Donohew et al., [7]). Similarly, U&G theory suggests that if needs for media use continue unsatisfied, the psychological discomfort becomes a motivational condition that energizes an individual to actively seek exposure to or consume media content from various sources to gratify the psychological deficit (Chang 2017).

When the student is not in their optimal state, it creates a sense of discomfort and motivates the student to seek out exposure to resume being in the optimal state of arousal (Chang 2017). That arousal level needs vary is an important element to take into account, that instructors may have people seeking widely diverse arousal states in the classroom, and that the motivation is inherent to consume media to meet the need for the preferred state of arousal.

In a recent conference presentation, large data sets were examined for the effect of casual speech on student learning in higher education with great effects. Students absorbed and retained more through dissemination of information using common language (Wagner, 2019). It could be argued that this use of common language was found to be more in line with a preferred arousal state, thereby regulating the environment for optimum learning.

In relation to universal design and serving the unique needs of unique students, it was found that in a classroom for students with profound disabilities, “communication and interactions in the classroom setting can significantly affect the scoring of arousal” (Richards, 2005, p. 11). This study deeply ties the effects of communication to the state of arousal in arousal theory. So instructors may choose how they communicate and what technology they use to create they classroom experience to significantly affect the state of arousal in their own classrooms.

The pedagogical practice related to arousal theory can be met through PR technology in the classroom as a pedagogical tool and also offering a professional benefit.

Research Question

As the public relations field continues to grow, as researchers, it is our duty to understand how arousing our students will increase their affective learning. Because of the questions surrounding arousal theory specific to the public relations classroom, the opportunity exists to explore these questions more in depth.

RQ1: Does the use of public relations technology in the classroom regulate arousal and/or increase student success?

RQ2: Does an increase in regulation of arousal through technology create opportunities for greater persistence and stamina for instructional tasks relating to public relations?

Methods

Methods for this research took place over two years of refining and developing a course, Comm 344 Public Relations Communication by Professor Nerren, culminating in the shadowing of the course by Instructor Vierra and the initiation of the writing of this paper.

Over this duration, the course changed dramatically, always with the goal of student success, bridging any disparities present (the university is an HSI with over 80% first generation students) in the effort to make the course student centered, universally designed, scaffolded, and inclusive of all types of learners. In an effort to understand the use of technology in the classroom and its effectiveness we will be analyzing students comments presented to the instructor anonymously.

Learning Public Relations. While it is well documented that learning through technology is only as effective as the instructor designing the curriculum and the implementation of the technology when learning new skills or acknowledging writing as a process rather than a product tying it to learning objectives and pedagogy, presenting unique elements to Public Relations curriculum which are deserving of a closer examination. Our research, displayed the importance of understanding the audience and catering to the students needs.

Technology. No matter where a person goes there is technology; from cell phones, computers, tablets, projector systems, to stereo systems. Technology is present throughout most college campuses. Although technology is present in most public relations classrooms it does not necessarily follow that it is being used in a beneficial manner, however, “as we sail through the 21st century, technology in the classroom is becoming more and more predominant” (Cox, para. 1). As public relations instructors their focus is usually on content, but technology can clarify content and allow students to be responsible for their own learning. Also, allowing them to connect content to the real world and what is currently happening in today’s society. The adoption of technology into classrooms has completely changed how students learn and how teachers teach content.

When technology in the classroom is introduced students active learning increases. Active learning is a broad term which comprises different instructional methods to help keep students engaged in their learning, improve retention, and provide a higher level of learning. By utilizing technology, students are seen taking control of their own future and their ability to learn content. “Active learning requires moving away from teacher-centred instruction where the teacher controls what gets taught, when it gets taught and the pace by which it gets taught to a student-centred approach. Student-centred instruction holds students accountable for their own learning, pacing learning to their own rhythm and learning with peers” (Nicol et al., 2018, p. 254).

Although active learning is student centered, instructors remain in control of the classroom. “Student-centred instruction holds students accountable for their own

learning, pacing learning to their own rhythm and learning with peers” (Nicol et. al., 2018, p. 254). Technology fosters student motivation and their ability to engage in material making learning student-centered.

Technology also intrigues students to want to be involved in discussions. In fact, there are computer programs such as menti and kahoot that help create discussions via technology. Individuals can comment back and forth or answer questions allowing instructors to create a discussion from the comments or answers. “The impact that technology has had on today’s schools has been quite significant” (Cox, 2016, para. 3). Programs are continually growing and adapting to intrigue students to want to learn more. This can be seen by the technology programs created for instruction (i.e. kahoot, menti, biteable, doodly, etc.). Teachers are adapting to the ever changing instructional changes and learning how to effectively emerge technology (tablets, iPads, Smart Boards, digital cameras, computers) into the public relations classroom. Students are using technology to shape how they learn and study and are able to use other mediums other than notes to prepare for any obstacle they are faced with. “By embracing and integrating technology in the classroom, we are setting our students up for a successful life outside of school” (Cox, 2016, para.3). There is numerous benefits that come from adapting technology into the public relations classroom.

Cox (2016) outlined the benefits of technology in the classroom as “making learning fun, prepares students for using technology in the future, improves retention rate, helps students learn at their own pace, and allows students to connect in a diverse way” (para. 1). Benefits are not just limited to these areas. Students report having higher interest in content due to technology (Jansson, 2007). Technology allows for students to receive instantaneous gratification. In fact, even when students seem like that are not engaged it has been reported that they “soak up just as much information as those who appear completely engaged” (Hicks, 2011, p.189). Students everyday life revolves around technology, which has shifted them to become more visual learners. Since students are now changing the way they learn it only makes sense that teachers adapt and change the way they teach, but how?

Results

Results from this pedagogical approach were significant, increasing many of the strengths needed by students for success in the study and practice of public relations. Student familiarity and use of PR technology increased, helping students in the field and in future interviews for work. Both student engagement and instructor satisfaction increased. Importantly, because of the active learning approaches involved in the use of this technology, the introduction of PR technology also bridged disparities within the classroom helping to increase course content understanding across all learners in the classroom to a greater extent. Concurrent with this study and based on student success and student feedback, availability to technology increased, with the PR writing course being offered in a computer lab, and being studied for future active learning spaces.

Adapting Different Types of Technology in the Classroom. There are a variety of methods that an instructor can adapt their teaching methods such as utilizing technology, activities, or group projects in the classroom. Numerous programs are available across the internet, however, the programs that we will be discussing are

biteable, doodly, Instagram, mentimeter, and kahoot. This is not to say that these are the only programs that an individual can utilize, but as experienced public relations practitioners we believe that these programs brought clarity and fun into the classroom.

Biteable and Doodly. Both digital animation programs where students can tell their stories, later utilizing this same tool they used for reflection for social posts, company videos and animated infographics. It allows public relations students to have another tool at their disposal for their future career. Allowing students to practice alternative ways to create a presentation.



Figure 2: This is an image representative of biteable and doodly. Programs utilized to create informative videos or presentations.

Canva. A free graphic interface offering many useful branding and sharing tools, allowing students to practice their PR writing in a modern, stimulating and updated way. Allowing students to enhance their portfolio. This program allows students to create flyers, programs, etc.

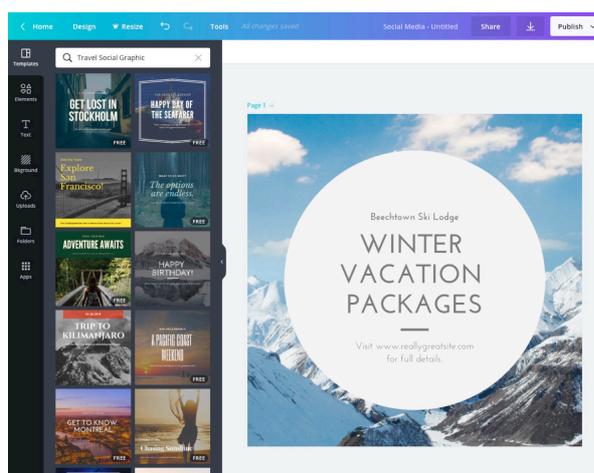


Figure 3: This is an image representative of canva. A computer program used to create media kits, flyers, brochures, etc.

Instagram. Used in the classroom as a live feed, students can anonymously share and post their ideas, answers to questions, thoughts and questions on a topic sharing on a

platform they are familiar with and already have available to them, also practicing their PR skills for the future of fast thinking, writing and posting. Instagram is a common public platform that most public relation students will have to face at one point in their career. Although we are familiar with instagram for personal use it is important that students adapt their use of instagram for professional use. Classroom instagram allows students to learn how to manage social media networks.



Figure 4: This is an image representative of the very popular application and social media platform instagram. This is a social media platform where individuals can post pictures or content.

Mentimeter. A platform that live feeds students thoughts and ideas to the screen, this is an invaluable tool that can also be used in public speaking, speechwriting, and presentation creation.

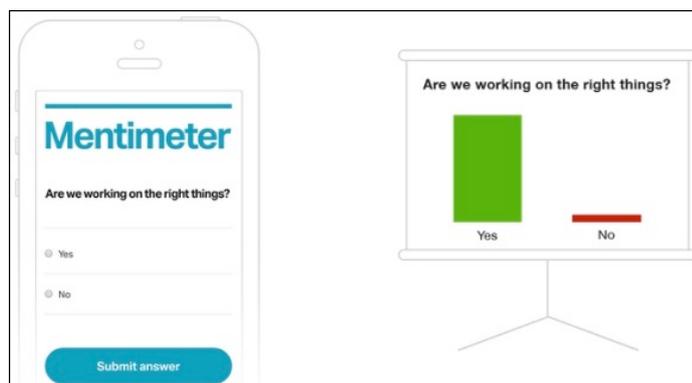


Figure 5: An image that displays how mentimeter would be utilized. Propose the question and students are able to respond directly to question while utilizing their cell phone.

Kahoot. A pedagogical tool that quizzes students in low stakes opportunities and create opportunities for students to lead this activity themselves. This activity is also great to display immediacy and create a positive rapport with your students.



Figure 6: This is an image representative of a kahoot quiz. A program students can participate in while utilizing their cellphones.

Fun and Humor. An instructor can also introduce fun into the classroom by hosting workshops. These workshops allows students to peer review each other's work and embrace each others styles of writing. Allowing students to learn from one another and not just from the instructor; thus, creating a collectivistic environment. Whether introducing fun into the classroom or technology they are both tools utilized to arouse students, making them more intrigued to want to know more.

Modeling is defined as showing students how to do something by demonstration. For instance, if a person is asking students to write a press release an instructor might present an example press release to show them what they are looking for, but how can this model become more intriguing instead of just a paper filled with words. The answer is bring fun into the classroom and turn the model press release into a “mad lib”. Since it is the instructors duty to model for their students, individuals should also model the qualities businesses look for in the public relations field, such as seeing the bigger picture, building relationships, attention to detail, and flexibility.

The delivery of course content can be done in a variety of methods such as activities, group work, or even discussions, however, when teaching how to write a press release it can be fun and still be content driven. Teaching how to write a press release can be introduced by creating a “mad lib” press release. This allows students to see how important word choice is when it comes to creating an effective press release.

Fun in the classroom can be adapted in a variety of methods “whether simply using an Onion news headline as a quick warm-up in history class or creating a full unit in which students write and perform comedic works of their own, humor can be woven in across the curriculum — to enrich literacy skills, spark creativity, teach critical analysis or just to have fun” (Doyne, Ojalv, & Schulten, 2011, para. 2). As experienced public relations practitioners we believe that adapting technology to the classroom can bring a layer of fun to learning.

Overall, the increased levels of arousal prompted greater persistence, leading to greater student success. The PR technology created opportunities for students exposure time to future worthwhile tools to be increased, while also providing the increased stimulation students were seeking, regulating learners and assisting with the comprehension of PR writing comprehension. Future studies could include quantitative calculations of student success per PR technology tool, quantitative

analysis of student polling and surveying, and qualitative analysis of student comments.

Conclusion

Overall, it is important to adapt the PR classroom with our ever changing world. If the world is changing then so should our classrooms. This research displays the importance of arousing our students in an effort to enhance learning. Students are in charge of their learning, but it is our job as instructors to make learning intriguing. By increasing how intriguing content is we are increasing students want to learn.

The pedagogical practice related to arousal theory can be met through PR technology in the classroom as a pedagogical tool and also offering a professional benefit. Instruction can be humorous, fun, or advanced in technology, which can lighten the classroom climate, empower students, increase comfort and create an optimal level of arousal for learning. The use of consumer grade and professional grade Public Relations technology in the classroom connects learning in the classroom with Arousal Theory. PR technology used in the field of PR used as learning tools can persuade students to be more interested and participate more in content, which creates a healthy collectivistic classroom climate.

The Spectator Facing the Cut: A Neurocinematics Review

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Abstract

The cut defined as filmic articulator and how the dialectical conflict of the shot change is assimilated by the spectator were the main topics in the origins of the cinematographic theory in the last century 20s. That theoretical production was focused on the event of the cut as semantic articulator of the film. After the neurocinematic discipline, through biometric measurements, we have a new methodological access to the analysis of the cut as cognitive articulator of the filmic message. Nowadays, thanks to techniques such as the electroencephalogram or magnetic resonance, we can study the neuronal reaction to the cut as a way to determine the cognitive processes in the spectator. The study of the shot change by cut has been approached from the neurocinematics as a cognitive gap that the spectator assimilates naturally, analysing the event of the cut from the cinematographic cognitive ecologism, affirming that the cinematographic perception must be analysed in the same way as the perception of reality. However, the theoretical concept of the cut as suture developed by Oudart in the past 60s, as well as defining a first perceptual level that fits perfectly with the proposals of cognitive ecologism, it also adds a symbolic and textual level, which discriminates filmic perception from the perception of reality. Therefore, we believe that the neurocinematics should be developed from the concept of the cut as a suture in order to develop a cinematographic theory based on the cognitive system of the spectator without forgetting its semantic dimension.

Keywords: Neurocinematics, Cut, Edition, Suture, Spectator, Cognitivism

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Introduction

Going back to the origins of cinema, due to the viewing of the film *L'Arrivée d'un train en gare de La Ciotat* in the first public exhibition of the Lumière's Cinématographe that happened in the *Salon Indien* of the *Grand Café* in Paris in 1895, it was founded the legend which says that when the spectators watch on the screen the train arriving at the station, stood up and scampered out of the screening room. That legend was recreated, a few years later, in a view made, in 1901, by Robert William Paul, one of the most important british pioneers (belonging to that named by film historian Georges Sadoul -1959- as Brighton School), and that was titled *The Countryman and the Cinematograph*.

In fact, this legend around the Lumiere's view it's a fake. Nobody ran out of the room, because not even this film was projected in this first session, as it is evidenced by the original program of views that was published for this first public session. *L'Arrivée d'un train en gare de La Ciotat* was filmed a year later of this first session, in 1896, and nobody ran out when it was projected to the spectators. However, the fact that the legend has arisen around this event shows the impressive and evocative experience that those spectators lived. Something strong enough happened to originate the legend. The coeval audience who attended this first public film screening, undoubtedly, they were not used to manage correctly the emotions produced by the cinematographic projection. This happens with the children in a similar way, who are also not used to the cinematographic experience. It is typical to tell a scared child when they are watching a movie: "Don't worry, it is just a movie...". However, this does not happen with the rest of the arts. Nobody says to a child: "Don't worry, it's just a painting", "...it's just a sculpture" or "...it's just a song". The same that these spectators experienced in the first cinematic public projection is what happens with children, who are also unaccustomed to the cinematographic experience.

The child's example is used by Joseph D. Anderson (1998) in his book: *The Reality of Illusion: An Ecological Approach to Cognitive Film Theory*, from 1998. What Anderson proposes, in this work, is to approach the film studies from the concept which he called *cinematographic cognitive ecologism*. This concept is based on the spectator's brain processes the inputs generated by the film in the only way that it knows. The brain processes the film stimulus as if they were a stimulus from the reality. The cinema differs from other arts because produces a huge amount of inputs which are collected by different human senses. This fact originates a greater suspension of the feeling of unreality than the rest of the artistic disciplines. This phenomenon, well known from the 18th Century, when the poet Samuel T. Clleridge in his book *Biographia Literaria* (1817) alluded to what he called the *willing suspension of disbelief*. This one it is easier and stronger in the cinematic experience than in many others artistic experiences due to the huge amount of inputs generated by a film. From this theoretical concept of cinematographic ecological cognitivism is that the neurocinematics researches are based on. The fundamental objective of the neurocinematics is to develop a cinematographic theory based on the cognitive system through biometrical measures that give us objective information from the viewer neuronal processes.

From naturalism to neurocinematics

The origin of this theoretical perspective can be traced back to the researches made by David Bordwell and Noël Carroll (1996). Between 80s and 90s, Bordwell (1989; 1990; 1992) and Carroll (1992; 1988) analysed the cinema from the concept that they called cognitive naturalism. According to their postulates, the viewer is assumed as an interrogative or interlocutive agent. As David Bordwell said: "The text is inert until a reader or listener or spectator does something to and with it. (...) The sensory data of the film at hand furnish the materials out of which inferential processes of perception and cognition build meanings. Meanings are not found but made" (Bordwell, 1989, p. 3).

From this premise, Bordwell challenged the prevailing establishment of the interpretive exercise developed within the structuralist and post-structuralist hermeneutic universe, remarking that: "Any interpretive practice seeks to show that texts mean more than they seem to say. But, one might ask, why does a text not say what it means?" (Bordwell, 1989, p. 64-65).

From the postulates defended by Eisenstein (2006) proposing that the cinema should be read as a language and from the postulates defended by another coevals theorists arising from formalist positions, up to these cognitivist expositions self-named posttheorist (Bordwell & Carroll, 1996), the movie has usually been considered as a suggestive treasure map, designed on a human scale, without compromising those mechanisms that govern our thinking in order to provide access to the reward that the meaning entails, as all that can be expressed in linguistic terms.

Bordwell claims a humble theoretical performance defending the "piecemeal theorizing" in favour of which Carroll (1996) accepted from an eclectic position, embracing the field of cognitive science, linguistics, anthropology and psychology, endow his hypothesis with a solid empirical substrate. In the same way, at the beginning of the next century this empirical philosophy boarding the cognitive system would be undertaken by the neurocinematics researchers.

Neurocinematics researchs

Neurocinematics is a recent birth scientific discipline. It started in 2008 with the article called *Neurocinematics: The Neuroscience of Film* (Hasson, y otros, 2008). This paper shows the research made by Hasson about the similarities and differences in the neuronal process among different spectators watching the same film though magnetic resonance. Neurocinematics is a scientific discipline which has a clear object of study, which is the film, and a specifically methodology, which are the biometric measurements on the spectator who observes the film. The approach to the cinematographic media takes place through this methodology in an indirect way: through the study of the cognitive system of the spectator who observes the film, the conclusions show the functioning of the film in itself. The neurocinematics has supposed a huge change in the cinematographic research paradigm, giving rise to a new way of accessing to the knowledge of the filmic media, which had already begun to be explored within the scope of Filmology (Cohen-Séat, Gastaut, & Bert, 1954).

In the last 10 years, several researchers have used different methodologies in this discipline. The neurocinematics allow to provide new concepts such as Heimann (2014) and his study about how the activation of mirror neurons varies according to different camera approach techniques or also to revise classic cinematographic theories, like Smith and Henderson (2008) about the concept of invisible edition defined by Bazin (2004) in the 60s or Nakano (2009) about the poetical theory about the blinks by Walter Murch (2001), the editor of the film *Apocalypse now* (Coppola, 1979) or *The English Patient* (Minghella, 1996) among many others moderns classics. The most commonly used methodologies are magnetic resonance (Hasson *et al.*, 2008), electroencephalogram (Heimann, Umiltà, Guerra, & Gallese, 2014) and ocular scanner (Smith, 2012), although there are also interesting experiments through facial recognition, heart rate, breathing rate and galvanic measurements of the skin.

Neurocinematics tries to consolidate a cinematographic theory based on the study of the cognitive system of the spectator. From various researches we can start to build a theoretical corpus. Hasson (2008) defined cinema as a structured and guided audio-visual system of inputs as the essence that differentiated a cinematographic recording from a random scene filmed without a narrative intention. Moreover Gallese and Guerra (2012) proposed a cinematographic perception very close to the concept of diegesis in a cognitive level, based on the fact that the brain can only process the external images of the film through the emotional and motor system from itself as reference, which is called the *Embodied Simulation Theory*.

Zacks (2015) takes the postulates of the cinematographic naturalism and the cinematographic cognitive ecologism further by stating that the perceptual system does not differentiate between real inputs or filmic inputs. Carroll and Seeley (2013) extend this positioning with their postulate of the *Uncluttered Clarity*, affirming that the cognitive system acts more effectively processing a film than processing the reality, because the film supposes a structured and orderly system, and the opposite happens in the perception of reality, which is chaotic with lack of order and categorizing structure.

Regarding the event of the shot change by cut, neurocinematics has focused especially in this topic considering it a gap in the cognitive system that the spectator is able to assimilate with absolute naturalness. For Smith (2012), this cognitive gap is processed in the same way that the brain processes the blindness that occurs during a blink or a saccade. Smith also relates the techniques of invisible editing to get a called *smooth cut* (Reisz & Millar, 1971) with the mechanisms of the change blindness (Simons & Levin, 1997) and the inattentional blindness (Simons & Chabris, 1999). This possibility of masking the cut through strategies of the cognitive system is called edit blindness by Smith and Henderson (2008). Smith (2012) compiled his proposals in an Attentional Theory of Cinematic Continuity.

Heimann (2016) focused on researching what difference are induced in the neuronal processing between a cut considered invisible and an abrupt cut with an axis jump. The results of his research showed that the cut with axis jump is processed in a neuronal level as if it were a syntactic or semantic incongruence of the language, relating the assembly process between shots with the process of decoding and understanding the text.

Ben-Yakov and Henson (2018) concluded that the main responsible area of the brain for processing the shot change is the hippocampus, detecting these results through magnetic resonance. The fact that the hippocampus is fundamental for the processing of the cinematographic cut, it links the strategies to understand the edition in a film with the neuronal processes related with the short and long term memory. Involving in these processes of memorization and recovery mechanisms.

Calbi (2017) focused on researching about the Kuleshov effect (Kuleshov, 1994; Mariniello, 1992), concluding that the shot after the cut must maintain the same emotional valence as the context, in order to not produce perceptual inconsistencies. Specifically, they defined the Kuleshov effect as an incongruence in the emotional valence of the incoming shot before the context, but, as it is a neutral shot, it does not modify the emotional value of the context, so it does not produce variation in the value of the previous emotion, passing this shot to be included in the context without modifying the emotional valence.

Neurocinematics and Classic Film Theory

The neurocinematics results about the event of the cut mainly reflects neuronal processes located in the hippocampus. The results found are related to processes of short and long term memory (Ben-Yakov & Henson, 2018) and also to semantic memory access (Heimann *et al.*, 2016). It is through memory processes that spatial and temporal perception is generated. Through small memorisations we are able to register the space in which we place ourselves (Eichenbaum, 2017; Olton, Becker, & Handelmann, 1979) and have a feeling of passing time (Eichenbaum, 2014; Howard & Eichenbaum, 2015). In addition, the accesses to semantic memory represent neuronal reaction patterns typically related with the message encoding and decoding processes (Klimesch *et al.*, 1996). These results lead us to inspect the previously existing cinematographic theory, that relates the edition of the film with the generation of the filmic time and the filmic space (Burch, 1969) and also with those theories who defined the cut as a semantic articulator (Eisenstein, 2002).

The results from neurocinematics researches are clearly related with classic cinematographic theories about edition, specifically with the shot change by cut. Burch (1969), Deleuze (1996; 2003) and Tarkovski (2005; 2017) theorized about edition and the cut as articulators and generators of filmic space and filmic time. According to Burch (1969), the cinema is based on the articulation of spatial and temporal *découpage* through the assembly of the shots that are units of continuous space and time. Through the assembly of this units, it is generated in the film the space and time.

In the same theoretical line, Mitry (2002) and Eisenstein (2002; 2006) consider the edition as an articulating axis of the cinematographic discourse. Mitry relates the generation of the cinematographic discourse with the articulation of signifiers, while Eisenstein affirms that it happens by means of the syntactic connections between the units. In the 20s, Soviet theorists such as Eisenstein (2002; 2006) or Sklovsky (1971) theorised about a cinematographic language and specifically put the focus in the cut as a syntactic element. In the 60s, the great debate about the existence of cinematographic language came after the linguistic perspective, from the hand of Jean Mitry (2002), Pier Paolo Pasolini (1972) or Christian Metz (1973; 2002). Whereas

Mitry affirmed the existence of a cinematographic language, Metz denied it, defining that the cinema is an articulation of different languages. Pasolini does not hold that the cinema articulates a language, but an idiolect, from which emanate parables constituted on an essentially abstract cinematographic discourse, but never literal concepts. As Pasolini explains in "Il 'cinema di poesia'" (1976), the cinema has forged a dictionary of its own, a sample of conventions (which, curiously, is stylistic before being grammatical), through which a true and enigmatic "scrittura. della realtà". This discussion has continued with no resolution until nowadays. It is an essential discussion, because it is a discussion about what is the structural essence of the film.

We pay special attention to the concept of suture developed by Oudart (2005), assuming the cutting concept overcomes the event of shot change as a cognitive gap or an articulation between units, to project the shot further away, invoking the dynamics of duplication and the overlapping that come by activating the absence and performance of our memory.

According to Oudart (2005), the experience of the subjective cinema happens through the shot change by cut as a suture, where the cut implies absence. Thus, the cut generates an empty space that is projected onto the incoming shot, constituting itself as a signifier from this projection of the previous shot when it is displaced. Consequently, the shots around a cut are superimposed from the absence of the previous shot, producing a semantic change between the present frame and that one that is already absent. From the concept of suture, the space between the characters is in a cognitive level eliminated through the reverse shot, giving rise to a virtual space purely filmic, impossible to be in reality. In addition, the absent character remains present despite of having stopped being contained in the frame.

Conclusions

The neurocinematics has supposed a change of paradigm in the way of accessing to the filmic knowledge. When a new paradigm emerges (as was explained by Thomas S. Kuhn -1962-, in the 60s of the past century) it involves on the one hand to review the previous theorization to verify its adjustment to the current methodologies and on the other hand, it starts to create an own theoretical corpus. The neurocinematics has begun an approach to classical theories such as the Kuleshov effect or the invisible edition, given scientific explanations about them. Neurocinematics had based on the human cognitive system to understand why definite structures, schemes and technical characteristics produced a determined effect on the viewer. On the other hand, neurocinematics has begun to develop its own filmic theorization that proposes a new point of view of the cinematographic media through the film-spectator relationship that is established through the premises proposed by the cinematographic naturalism and the cinematographic cognitive ecologism about how relates the viewer with the film.

Nowadays, the shot change by cut is one of the main focuses of attention of the neurocinematics, analyzing the cut as a cognitive gap that is perfectly assimilated by the spectator and also analyzing as a sequential combination between different units. Based on the perceptual system proposed by the cinematographic cognitive ecologism, neurocinematics propose the analysis of the perception of the shot change from a

mechanical and linear cognitive mechanism, relating it to the way in which we perceive the reality that surrounds us.

In our opinion, the concept of the cut as suture of Oudart is interesting to propose a suggestive and productive starting point for overcoming a neurocinematic theory based on a mechanical cognitive system, inviting us to research into a more complex neurological processes previously treated by psychology. The relationships between the shots that are established in the cut as a suture are based on the filmic spatiality, which, as the cognitive naturalism affirms (Anderson, 1998), can be processed in a cognitive level in the same way that it happens with reality, but which is also decoded in a symbolic and textual level, situation that does not happen perceiving the reality. This incidence on the symbolic and textual level that happens during the film, differencing it to the reality perception, make the suture proposal by Oudart, an ideal point to advance in the development of the neurocinematic theorization about the shot change by cut.

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***Designing the Stereoscopic 3D Media Soundscape:
An Exploration of the Perceptual Effects of Auditory Cues on Stereoscopic 3D
Presentations***

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Abstract

Assisted by the technological advances of the past decades, stereoscopic 3D media are currently making another attempt to be established as mainstream forms of entertainment. Arguably, the main focus of this effort is placed on the creation of immersive 3D visual worlds. However, with few exceptions, little attention has been given so far to the potential effect of the soundtrack on such media forms. The potential of sound both as a means to enhance the impact of the 3D visual information and to expand the 3D world beyond the boundaries of the visuals is large. In this context, we highlight some of the challenges 3D content producers face. Then, we propose a number of ways in which the soundtrack can be used to complement 3D media productions. These propositions are based on the unique spatial characteristics of stereoscopic 3D media and cover considerations on the spatial orientation of the soundtrack, the use of audio cues to direct visual attention, to support camera and 3D object movements as well as 3D material editing. Finally, we report on the results of a series of experiments we ran exploring the effectiveness of specific auditory cues in 3D audiovisual presentations. Results, although not conclusive, indicate that some of the studied auditory cues can influence the audience judgement of depth and immersion in 3D animation scenes, sometimes in unexpected ways. We conclude that 3D media content creation can benefit from further studies on the effectiveness of specific sound design techniques to enhance space perception and immersion.

Keywords: 3D, audio, sound, soundscape, soundtrack, stereoscopic

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Introduction

Stereoscopic 3D media have a long and rather troubled history with many failed attempts to be established as a mainstream form of entertainment. Supported by the vast technological advances of the past decades, the format seems to be gaining traction and finding its place in the broader media and entertainment context. From the perspective of content creation, the introduction of stereoscopic visual cues brings its own unique requirements and challenges that could also affect the soundtrack. In a broader context, this study is an exploration of possible sound design approaches and techniques that could be used in the context of stereoscopic 3D media content creation in order to support and enhance the unique characteristics of the visual format.

The research question of the study was the following:

- Could sound designers utilise auditory cues as a means to affect the perception of the stereoscopic 3D visual space?

In relation to this, the aims set for the project were:

- To investigate possible ways of constructing soundscapes that support and enhance the unique spatial characteristics of the stereoscopic 3D media environment.
- To investigate the effectiveness of the proposed ideas through a number of experimental perceptual tests.

During the early stages of the study, we proposed that the unique spatial characteristics of the stereoscopic 3D visuals should be taken into account and we focused on the spatial orientation of the soundtrack. Some of the ideas we explored were the use of auditory cues to support or influence the perceived sense of depth of stereoscopic 3D environments or objects, to direct visual attention, to support camera and 3D object movements as well as to support 3D material editing and scene transitions.

In order to evaluate the effectiveness and validity of some of these ideas, a number of experiments were carried out studying whether the alteration of specific auditory cues within the soundtrack could influence the perceived sense of depth and distance of stereoscopic 3D objects and environments (Manolas & Pauletto, 2014). The parameters studied in these experiments were volume and high frequency content alteration. The results, although not conclusive, indicated that under certain circumstances a volume level increase of the soundtrack could affect the perceived depth of the stereoscopic 3D scene positively. Although this was in contrast with the initial assumption it was an interesting finding, as such a correlation could be a useful depth perception tool when designing soundtracks for stereoscopic 3D media.

This observation led to another round of comparative tests that is currently in progress. The tests were designed to further explore the effectiveness of volume level alteration as a means to influence sensory immersion in the stereoscopic 3D environment from the perspective of the audience. Preliminary results indicate that under certain conditions, increased volume levels are perceived to have a positive effect on the overall spatial perception of, and sensory immersion in, the stereoscopic 3D environment.

The ideas and auditory cues studied so far are only a few out of a large number of parameters that can be explored. As such, we propose that future work may expand upon these ideas and study a larger number of temporal, spectral or spatial auditory cues and alternative sound design techniques in the context of stereoscopic 3D media production. The effects of musical cues may also be an interesting area for further study. Finally, we propose that some of the ideas related to sound design for stereoscopic 3D content could be also studied in the context of virtual reality, an inherently stereoscopic medium.

The Resurgence of Stereoscopic 3D Media

The idea of adding the illusion of realistic depth to visuals has been a prominent and long-lasting obsession of cinema inventors for a long time. Such a feature had been already achieved for still photographs long before the invention of cinema in the form of *stereoscopy* and it did not take long for early cinema inventors to introduce this technique to the moving images of cinema (Zone, 2007; Thompson & Bordwell, 2003). Leading early cinema figures, such as Thomas Edison and the Lumière brothers, appear to have been interested in giving *a stereoscopic effect to the pictures* as early as in the 1890s (Zone, 2007).

From these early experiments and until the early 1950s, a number of attempts were made towards the production and exhibition of stereoscopic 3D movies using various techniques. However, as *'the short stereoscopic films of the novelty period [1838 to 1952] were characterized by an emphasis on the technology of 3D or the "gimmick" of the off-the-screen imagery'* (Zone, 2007, pp. 1-2) they failed to be established as a long-term, commercially viable form of entertainment after their novelty value faded.

The next significant collective attempt to introduce the stereoscopic 3D format to the masses can be traced to the early 1950s (Cousins, 2004; Zone, 2007). Between 1952 and 1955, a *'protean 3D movie boom'* (Zone, 2007, p. 2) took place in Hollywood, with more than fifty stereoscopic films being released. However, stereoscopic 3D cinema failed again to be permanently established, for various reasons, such as the *'cumbersome, extremely hot filming conditions'* (Cousins, 2004, pp. 223-224) caused by the large amount of lights needed on the sets for such productions and the awkwardness of the glasses.

Despite the fact that stereoscopic cinema failed to become established as a widely accepted cinematic format on several occasions, the idea of using the stereoscopic medium for creative purposes survived. Over the past decades, stereoscopic 3D cinema made a strong commercial comeback that may be more than just a fading trend. At the same time, other forms of media utilising stereoscopic 3D visual cues, such as bespoke multi-sensory attractions and virtual reality systems have entered the mainstream media sector (DisneyWorld, 2019; CJ4DX, 2019; Merlin Entertainments, 2019; HTC Corporation, 2019). Supported by the power of modern digital systems, stereoscopic 3D technologies have overcome most of the major drawbacks of the past and seem to be gaining momentum. In this context, questioning whether such emerging stereoscopic 3D media formats would benefit from production techniques and approaches that are different to the ones used in traditional 2D media becomes relevant.

Unique Characteristics of the Stereoscopic 3D Medium

In order to consider new and creative ways to support storytelling in stereoscopic 3D media through sound design, one may need to consider the spatial characteristics of the stereoscopic 3D environment. The stereoscopic effect is based on stereopsis, the use of differences between the visual information on the left and right eyes ‘*to get a strong impression of depth*’ (Snowden & Troscianko, 2006, pp. 200-204). In terms of the physical delivery of stereoscopic 3D content in its more common form (e.g. through projection or display of images on a screen), as the two different stereoscopic image streams (left and right eye) are actually projected onto the screen, the stereoscopic 3D space is shaped by the screen borders. The result is a viewing space ‘*more like a pyramidal box*’ (Mendiburu, 2009, p. 27) in front of the viewer frequently referred to as the *Stereoscopic Window* (Clark, 2010; Autodesk, 2008) (Figure 1).

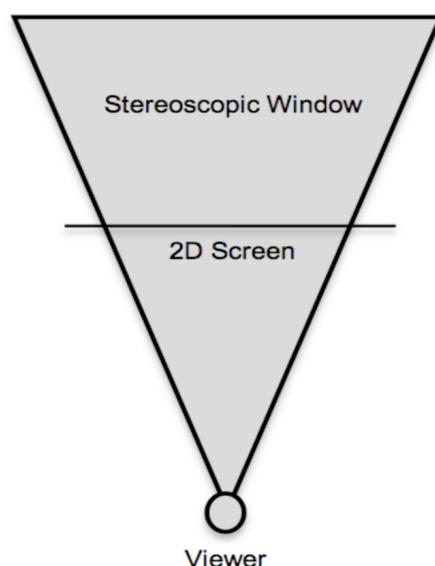


Figure 1: The Stereoscopic Window

One of the reasons that make this unique spatial layout important is that it greatly affects decisions regarding shot composition, camera placement and camera movement. In 3D ‘*you have to think in terms of volume composition, instead of picture composition*’, as ‘*you will box the action more than you will frame it*’ (Mendiburu, 2009, p. 92). For example, in order ‘*to take advantage of the unique capabilities of 3D, scenes may be composed in a way that emphasizes the depth of the set*’ (Clark, 2010, p. 8). This might include shots consisting of more depth layers or particular camera placements in order to stress the enhanced depth of the visual environment.

Another important concept related to the spatial characteristics of the stereoscopic 3D media production is that the use of selective focus to ‘*direct the viewer’s eyes to the key point*’ does not work in stereoscopic 3D in the same manner as it does in 2D (Bayon, 2010; Lelyveld, 2009). Subtle use of selective focus is possible and it is

successfully utilised in commercial 3D media releases (Gardner, 2009). However, out-of-focus portions of a 3D scene could also create *visual confusion* and *discomfort* (Bayon, 2010; Lelyveld, 2009). This results in content creators frequently avoiding the use of selective focus as an attention-guiding device. In such cases, other visual means are commonly used, such as stronger lighting and color cues or drastic changes in the structure of the shot composition (Bayon, 2010; Clark, 2010). In this case too, the reduced effectiveness of selective focus can affect creative and aesthetic decisions.

Finally, post-production, and in particular editing, could be affected by the introduction of stereoscopic cues (Mendiburu, 2009; Autodesk, 2008). Traditional editing techniques that work well in 2D are not guaranteed to be as effective in 3D, while new ones, specifically designed for 3D editing, could be established. For instance, the presence of stereoscopic depth cues creates the need for longer playing time of particular scenes or sequences (Clark, 2010; Bayon, 2009) that should also be *'blended together at a slower pace'* (Mendiburu, 2009, pp. 26, 151). This is in sharp contrast to the increasingly faster editing pace commonly used in modern 2D productions (Kerins, 2006). Additionally, scene cuts or transitions have to conform to certain rules related to stereoscopic depth, a concept commonly known as *depth continuity*. Viewers have to readjust their point of focus (or convergence) between scenes that employ different stereoscopic depth, which has to be matched during editing (Clark, 2010; Lelyveld, 2009). This is something that could make stereoscopic 3D editing different to 2D.

Soundscape Orientation

While setting the context for this project, one of the main ideas we explored was that soundtrack mixes for stereoscopic 3D content are likely to be in need of a pronounced front-to-back orientation (Figure 2). In addition to matching the visuals orientation, such an audio spatialisation approach is less likely to draw the viewers' attention towards the borders of, or outside, the stereoscopic window.

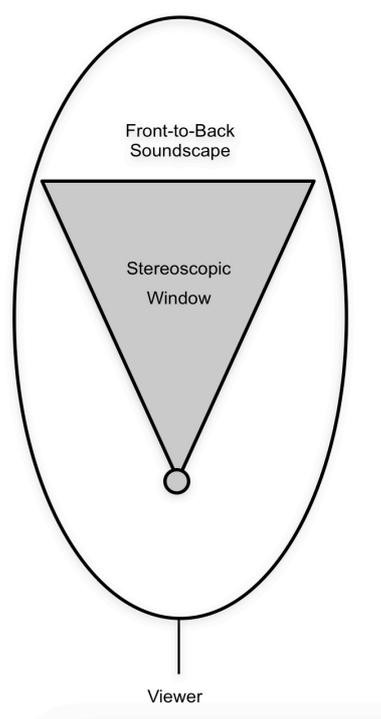


Figure 2: Soundscape orientation

Distracting the viewers/listeners' attention from the screen is a heavily discussed concern in 2D filmmaking (Chion, 1994; DeLancie, 2000; Kerins, 2011). In stereoscopic 3D these effects could be even greater, as the edges of the stereoscopic window '*are dangerous places where images can be painful*' (Mendiburu, 2009, pp. 27, 87, 92). A front-to-back sound spatialisation approach is likely to keep the viewers/listeners' attention to the safer parts of the stereoscopic 3D space: the front and centre of the stereoscopic window and, possibly, the rear where the viewer/listener is unlikely to turn and look at as long as the visual content is projected on a screen in the front.

Observer-target Distance

We propose that a possible way to expand the sense of depth (e.g. front-to-back orientation) of the soundtrack mix is to introduce sound objects with strong or exaggerated distance cues (Turner, Berry & Holliman, 2011; DeLancie, 2000). By altering the timbral and dynamic characteristics of audio objects their perceived distance from the viewer could be increased or decreased as required (Kaye & Lebrecht 2009; Mastoropoulou, 2006). As distance perception is a multimodal process greatly affected by auditory cues, it is proposed that this audio processing technique could also affect the impression of depth of the stereoscopic 3D environment as a whole (Turner et al., 2011) (Figure 3). For example, let us consider a scene where characters are located around the viewer and at various distances. Characters appearing at a given stereoscopic visual depth within the stereoscopic window could seem more intimate to the audience if the sounds they produce are dry, loud and at their full frequency range.

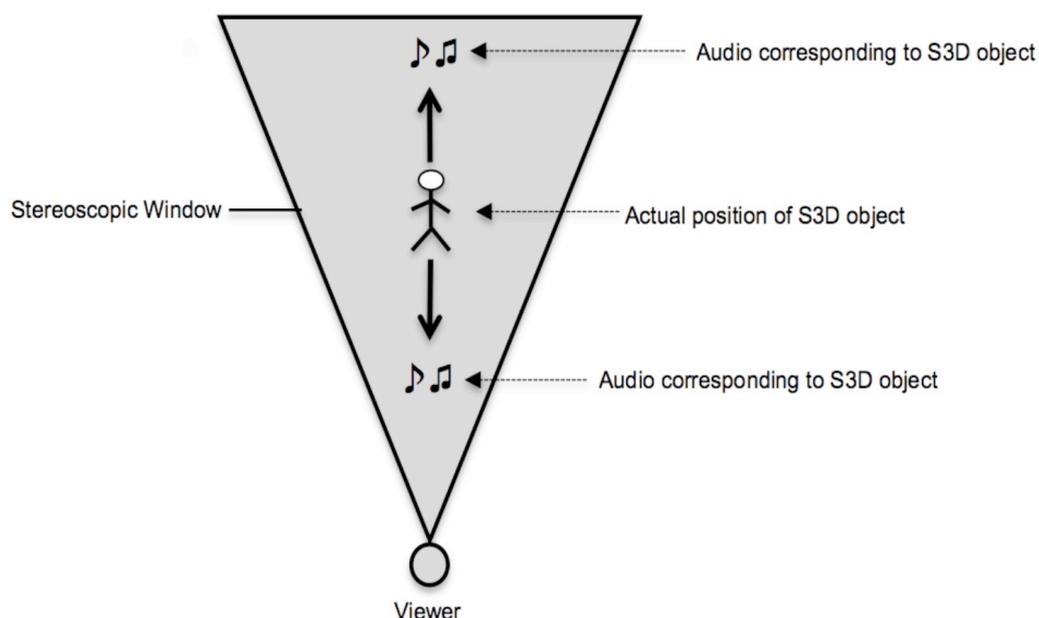


Figure 3: Auditory distance cues as a means to affect S3D object distance perception

Similarly, sounds produced by characters further away from the viewer could be filtered (e.g. attenuate high frequencies), quieter and with a certain amount of reverberation added (Kaye & Lebrecht, 2009). This is in line with relevant research exploring whether the introduction of distinctive audio samples could significantly affect the viewers' perception of stereoscopic visual depth of a given stereoscopic 3D object. Turner et al. (2011) reported results that indicate that audio depth cues have the ability to influence the depth perception of stereoscopic 3D visuals. Manolas and Pauledto (2014) reported that, in scenes with relatively simple stereoscopic 3D visual background, volume level alteration could affect the perception of depth of the scene from the perspective of the viewer/listener. Additionally, a mixture of sound objects representing characters located at different distances from the viewer can be panned to the rear. This could perceptually expand the cinematic world backwards enhancing the overall immersion of the scene.

The use of audio distance cues in cinema is not a new concept. Filtering, reverberation and volume level control have been consistently used in cinema for the enhancement of depth perception. However, such audio processes could be more important in an environment heavily based on visual depth cues, such as in stereoscopic 3D media, than they are in 2D.

Camera and Visual Object Movements

One of the most commonly exploited features of stereoscopic 3D media is the *viewer space* effect (Autodesk, 2008). This term refers to the creation of the illusion of front-to-back/back-to-front visual object movements between the viewer and the actual screen. It is suggested that this may also create a need for strong corresponding sound movements within the soundscape, in order for these visual movements to become more pronounced and imposing. Content creators and sound designers have been using appropriate sound spatialisation to create the broadly known *fly-over effects* for decades (Vanhoutte, Joris, Debackere and Wynants, 2010; Nudds, 2007). However, such uses of sound are rather limited and used selectively in contemporary stereoscopic 3D productions. In many instances, the *viewer space* objects are silent. The reason for this could be that fly-over effects can be distracting when viewing 2D versions of the visuals that use the same soundtrack of the 3D version. Admittedly, not every visual object or action within the story world needs to be consistently supported by a corresponding sound event. However, in the case of viewer space effects, the aesthetic intention is arguably to create the illusion that the objects are actually moving within the viewing space. This illusion could be enhanced and/or extended beyond the viewing space if the movement was supported by the corresponding fly-over sound effects, as '*our auditory experience of sounds commits us to the existence of objects.*' (Nudds, 2007, p. 37). We propose that viewer space visual object movements in stereoscopic 3D might benefit by the extensive and consistent accompaniment of corresponding and appropriate sound events (Woszczyk, Bech & Hansen, 1995).

The above concept could apply not only to the typical *viewer space* effects intended to surprise and impress the viewer, but also to various other 3D objects that have no particular narrative or emotional significance, and that appear to move within the viewing space as the camera moves through the stereoscopic 3D world. For example, let us consider a scene that takes place inside a forest. As the camera moves through

the forest with a forward direction, subtle symbolic or realistic sounds could accompany the trees movements across the theatre space (Figure 4). As the trees exit the stereoscopic window the sounds could be panned to the rear, expanding the

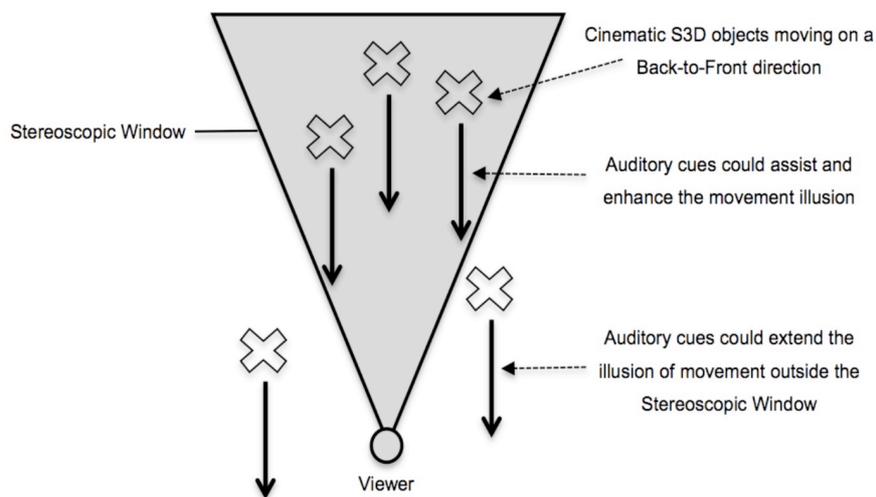


Figure 4: Auditory object movements

cinematic world backwards. This could be used to create a sense of the viewer actually traveling through the forest while leaving the trees behind. Such a use of sound could accentuate the apparent movement of the camera and enhance the overall sense of immersion of the scene (Woszczyk et al., 1995; Nudds, 2007).

Visual Focus Within the Stereoscopic Window

Guiding the viewers' attention to particular visual objects or areas within a scene is a different task in stereoscopic 3D than it is in 2D (Bayon, 2010; Mendiburu, 2009). To a large extent, this is because *selective focus* and *depth of field* do not work in 3D as effectively as in 2D (Clark, 2010; Lelyveld, 2009; Bayon, 2010), although such techniques have proven to be possible in stereoscopic 3D productions. From a practical perspective, a reduced control over selective focus is arguably an undesired feature. This is because content creators, in most occasions, need to guide the viewers' visual attention to particular areas or subjects of a given scene. Considering that human visual attention and localisation are multisensory perceptual processes that rely heavily on audition (Mastoropoulou et al., 2005), we propose that strong direction and distance audio cues could be used as a visual attention-guiding device. This is especially relevant when large-format projection screens or stereoscopic environments are used (Lantz, 2006; British Film Institute, 2019). Taking into account that modern cinematic audio systems have increased spatialisation capabilities, it is expected that the required level of control over the positioning of sounds across the stereoscopic window is possible. Additionally, modern audio technologies allow for detailed manipulation of the timbral and dynamic characteristics of the sound elements. This means that filmmakers could adjust not only the perceived position of the sound across the length of the viewing space, but also the perceived depth of these sources within the 3D environment. Therefore, the viewers' visual attention could be guided even more accurately towards the positions of visual objects within the 3D scene by means of appropriately processed audio cues.

In addition to position, what attracts attention is to make the sound of a certain object prominent in the mix. This can be done by choosing the sound carefully in relation to

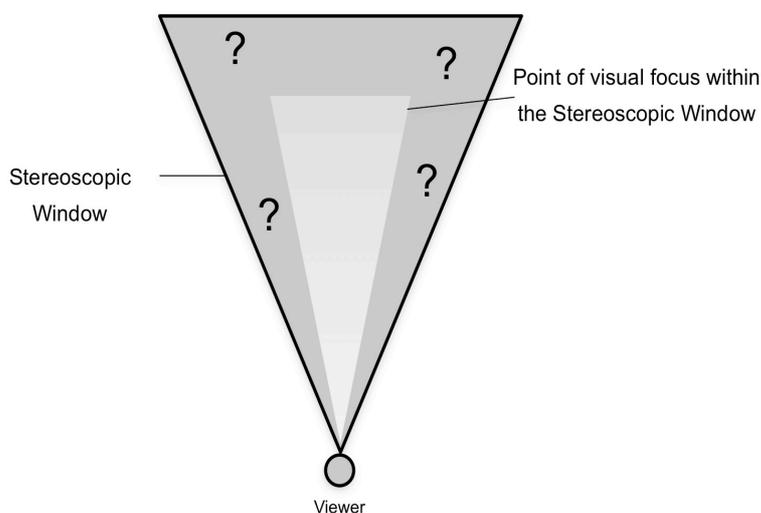


Figure 5: Visual focus within the Stereoscopic Window

what else is in the mix at the same time and balancing it appropriately. Although this is a rather common mixing task, it may become increasingly relevant in the context of stereoscopic 3D productions. In addition, increased levels of attention and detail may be required while working with this aspect of mixing for stereoscopic 3D media as opposed to 2D.

Scene Transitions

The introduction of stereoscopic cues affects decisions related not only to the spatial character of each scene, but also with how different scenes are combined together during editing (Autodesk, 2008; Mendiburu, 2009). For instance, a cut between a scene where the main object appears to be in front of the screen to one where it is far beyond it would be frequently avoided. This is because it can cause visual discomfort and confusion to the viewer (Mendiburu, 2009; Lelyveld, 2009). Stereoscopic 3D content creators usually take this into account during the preproduction and production phases and opt to adjust the depth of succeeding scenes according to a relevant *depth script* (Autodesk, 2008; Mendiburu, 2009). However, this compromises the options and the creative input of the editor, as direct cuts between existing scenes with great stereoscopic depth differences (commonly known as *jump cuts*) would be generally avoided. As an example, we propose that one possible way to achieve transitions between such scenes is a combination of visual fades with appropriate audio cross-fades. In particular, a gradual cross fade between the soundscapes of the two succeeding scenes can start before the first scene ends. The visuals of the first scene can then fade to black, while the soundscape of the second scene becomes prominent. The fact that the visuals fade to black is crucial here, as *‘once we remove visual stimulus and surround ourselves with appropriate auditory cues immersion into a virtual environment is almost guaranteed’* (Haines & Hooker, 1997, p. 3). It is possible that by creating an appropriate soundscape that includes strong distance and directional cues the viewers’ spatial perception of the cinematic

world can be manipulated (Chueng & Marsden, 2002). This could be viewed not merely as a transition from one soundscape to another, as is the case in many audio transitions in 2D, but as a transition from one acoustical space with its unique shape and dimensions to another. After the desired spatial expectation has been established by means of sound, the visuals of the second scene can fade in. This approach could assist in achieving two goals. Firstly, the creation of a more immersive and imposing transition effect. Secondly, the preparation of the audience for the change of stereoscopic 3D depth between the scenes, especially if the sound transition occurs slightly in advance of the visual one.

Experimental Perceptual Tests

In the context of this study, a number of perceptual tests were designed and carried out in order to evaluate the effectiveness and validity of some of the proposed sound design ideas. The first round of tests (Phase 1) focused on the use of auditory depth cues as a means of affecting the perception of depth within stereoscopic 3D animation presentations (Manolas & Pauletto, 2014). The tests studied two main distance-related auditory cues: high-end frequency loss and overall volume attenuation. Results, although not conclusive, indicated volume level alteration can influence the audience judgement of depth in stereoscopic 3D animation presentations, sometimes in unexpected ways. In particular, increased volume levels in some instances resulted in the stereoscopic 3D environment being perceived as having increased stereoscopic 3D depth. This was contrary to expectations, as in real life situation increased distance between the viewer/listener and the sound emitting object would result in a decrease of the volume levels of the sound emitted by the object. It is possible that the perception of stereoscopic 3D depth is influenced by a change in sensory immersion levels (Jones, 2018) caused by the increased volume levels of the soundtrack.

This observation led to another round of tests (Phase 2) that are currently in progress. These tests focus specifically on volume level alteration of elements, or the entirety, of the soundtrack with a view to influence the levels of sensory immersion and/or the perception of depth of the stereoscopic 3D visual environment. Preliminary results suggest that there may be substance to this claim, but this cannot be verified until the results of the tests are analysed.

In a broader context, these tests are aiming less at proving the validity of a certain idea and more on identifying general sound design approaches that seem to be efficient and useful in the context of stereoscopic 3D media production. As such, the tests should be regarded as a starting point for further experimentation with an increasing number of auditory cues and parameters that could be useful to stereoscopic 3D content creators rather than as a thorough study of specific audiovisual perceptual functions.

Further Work

In terms of potential directions for further study and the continuation of this work it is proposed that, in addition to volume and high frequency alteration, the effectiveness of other auditory cues could be tested. This could include spectral, temporal and spatial auditory cues, as well as their combinations. Such work would be valuable in

understanding and identifying the unique perceptual mechanisms that may be in place in the context of audiovisual presentations with stereoscopic 3D visual content.

In the same context, musical cues could be also tested, as there may be potential in utilising the musical stems of the soundtrack to affect perception of the stereoscopic 3D space. Such a relationship may not be instantly evident or obvious in a realistic sense, as our everyday life is not accompanied by relevant musical cues. However, previous observations suggest that in the context of audiovisual media presentations perceptual mechanisms could work in unexpected and unique ways. Testing the perceptual effect of musical cues on the perception of stereoscopic 3D content in a systematic manner may provide useful insights in this direction.

Finally, ideas similar to the ones presented in this study may be also relevant in the virtual reality context. This stems from the notion of visual representation in virtual reality systems being inherently stereoscopic. As such, sound design techniques or ideas that are effective in other stereoscopic 3D media could potentially translate well to the virtual reality environment. However, as this particular medium is both more complex and realistic in terms of spatial representation, there is no guarantee that auditory cues would work in exactly the same way as in stereoscopic 3D media that utilise projection or display on a 2D screen. It may be, therefore, appropriate to study some of the proposed ideas in this context in order to understand whether certain sound design ideas and auditory cue alterations may be also appropriate for a medium utilising stereoscopic 3D visual content but also incorporating a strong sense of spatial realism.

Conclusion

Stereoscopic 3D media are in the process of being established as mainstream forms of entertainment. The main focus of this effort is placed on the creation of immersive 3D visual worlds. However, with few exceptions, little attention has been given so far to the potential effect of the soundtrack on such media forms. The potential of sound both as a means to enhance the impact of the 3D visual information and to expand the 3D world beyond the boundaries of the visuals is large.

In this context, we proposed a number of ways in which the soundtrack can be used to complement 3D media productions. These propositions are based on the unique spatial characteristics of stereoscopic 3D media and cover considerations on the spatial orientation of the soundtrack, the use of audio cues to direct visual attention, to support camera and 3D object movements as well as 3D material editing.

Finally, we report on the results of a series of experiments we ran exploring the effectiveness of specific auditory cues in 3D audiovisual presentations and on our current work in this direction. We conclude that stereoscopic 3D media content creation can benefit from further studies on the effectiveness of specific sound design techniques to enhance space perception and immersion and we identify potential areas for future work.

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Design/Science Fictions: Worldbuilding as Landscape Practice

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Official Conference Proceedings**Abstract**

Design practices like Architecture and Landscape Architecture rely heavily on images to demonstrate agency through the re- contextualization of spaces, the transformation of environments, and hybridization of ecologies. Unlike earlier design agendas, sustainable practices face the challenge of quantifying proposals using scientific models (performance) in addition to qualifying them with cultural conventions (image). Given that these are proposals for the future, older modes of representation like drawing and painting are not as effective. These images are referential, referencing the past to communicate. Unlike static imagery, design fictions will enable the audience to experience in the story and environment. In contrast to film, television allows the for a long story arc of ecology and culture to evolve with complexity and nuance. In short, design fictions reveal future environments and model possible behaviors within these futures. Referencing worldbuilding and existing television series the author will describe a framework for television as a popular design media capable of revealing the agency of landscape architecture. The outcome will be an explanation as to how design fiction is a practice that involves the making of clients and patrons in response to future concerns and needs.

Keywords: Landscape Architecture, Painting, Worldbuilding, Science Fiction, Television

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Landscape Architecture and other contemporary design practices deal simultaneously with the process of compiling and data for decision making and compellingly presenting that content to a client or user group. Typically, this information is presented for projects in the near future when there are no significant changes to environmental conditions. The immediacy of most design project timelines omits the need to include complicated environmental projections as part of the decision-making process. However, there are instances in professional practice that require justifications for design decisions.

Mapping and diagrams are limited and require the audience to be capable of processing and synthesizing the information to understand the design process, and its impact. Renderings provide more insight into a design will look like when complete. As static images, they lack immersive qualities that explain the effects of change- designed and otherwise- on people who occupy the designed site or region.

My research explores popular television as a design medium, considering how narratives are used to represent landscape projects. I am also interested in how climate change and other environmental conditions complicate decision making. Finally, I am interested in contemporary television that may serve as design precedents.

Both landscape and television use images to reflect broader historical, political, and social trends. In the case of landscape, image production is grounded in making static images starting with perspective drawing and painting. Landscape painting evolved around narrative and perspective, given the complexities of scale and topography. These complexities are represented in *St. Elizabeth's Flood*, painted between 1490-1500.¹ The painting depicts the catastrophic flood in the Netherlands in 1421, and rather focus on one specific place or scene the painting depicts the entire region as a flooded landscape. As an image, the spatial accuracy is less important than the narrative that built into the image.

In contrast, the Red Books by Humphry Repton are precise constructions of landscapes. The Red Books were prepared to illustrate the impacts of a Repton's design proposal using two images. The first was an image of the existing conditions, and the second image represented the proposed changes. Painted flaps were used to fold over the image of the current conditions, allowing the client to see their property "before and after." Technically these were not animations, but they had the effect of engaging the audience in real-time as they turned the flaps.

Both of these are examples are illustrative narratives that rely upon imagination. In the case of *St. Elizabeth's Flood*, the painting narrates the effects of a flood that occurred seventy years prior. Other than historical records or storytelling, there are no records available to describe the impact of the events that occurred. Geographical cues are embedded into the architecture to reference places across the landscape, illustrating the entire region.

Repton's Red Books are fictions, given that they are descriptions of design proposals. The before and after images are designed to compel the client into executing the work described the book using illustrative plans and descriptive text. The precision used in making the images allow the client to "see" the designs as they will appear after the trees have fully matured.

Contemporary design decisions have more complicated trajectories. Most significantly, climate change has impacts on landscapes that evolve over long periods that are not always

evident. As an example, Matthew C. Fitzpatrick and Robert R. Dunn introduce a method for comparing climate data projections for 540 cities in North America with contemporary climate data.² Climate analogs have been prepared previously, but the Fitzpatrick and Dunn geographically reference locations, meaning you can visit the climate for a given city sixty years in the future. As an example, according to the modeling prepared by Fitzpatrick and Dunn, in sixty years New York City and the surrounding region will feel more like contemporary Jonesboro, Arkansas.³ The climate will be dryer, but the temperatures will be higher.

Compared to landscape paintings, this modeling completed by Fitzpatrick and Dunn is a different type of landscape fiction, that relies on immersion. These fictions are based on scientific projections instead of historical references or desired outcomes driven by aesthetics. The effect of this is that you can develop an immersive understanding of the environment in addition to seeing the changes in flora and fauna.

Use science to frame a landscape projection points to increased complexity when designing landscapes and also imagining them. Large amounts of discrete data can be challenging to process and organize to understand a problem. The economist and political scientist Herbert Simon described the problem of synthesizing information using three points called bounded rationality.⁴ Simon describes bounded rationality as the constraints applied to the decision-making process of any person, using three central points. The first is that information is often limited and unreliable. The second is that people have limited capacities to absorb and synthesize information. The third is that there is only a limited amount of time to understand to make decisions based on the available information.

These three points can be applied to evaluate *St. Elizabeth's Flood* and Repton's Redbooks. *St. Elizabeth's Flood* exemplifies the problem of limited information. The floods and place are represented inaccurately. The Red Books were devices to help synthesize all the content in the book. The illustrative foldouts synthesized the text and plan drawings understandable through the use of perspective. The Red Books also address this issue of time because they are illustrations of the proposed future landscape.

Unlike the paintings, Fitzpatrick's and Dunn's geographically cross-referenced climate analogs are immersive. However, they require that you physically occupy the space, which is a significant limitation. The models expedite familiarity with changes but traveling to the analog location to experience the difference is not something every resident.

The limitations of static images and physical travel make a case for other mediums that address the problem of how to convey information to an audience or user group. The ability to communicate content in a controlled and digestible manner is vital to help people make informed decisions. Science fiction writers used models that are similar to the one described by Herbert Simon to create frameworks for stories and is referred to as worldbuilding. Like bounded rationality, worldbuilding organizes what the audience knows so they may follow the story.

The science fiction writer N.K. Jemison uses a system of immersive levels to determine the level of specificity provided to the reader.⁵ High immersion refers to information that is implied and rarely mentioned in the text. Moderate-level immersive content is information that is mentioned periodically throughout the book, enhancing or changing the direction of the narrative. Low-level immersion content consists of information that is continuously

explained and makes up the meat of the story. Compared to the paintings, *St. Elizabeth's Flood* would be a medium level or high-level immersion, whereas the Red Book illustrative perspectives are low-level immersions.

The models provided by Simon and Jemison for understanding how to organize information are also relevant to design practices. Where Simon outlines how large amounts of data can be prohibitive for effective decision making, Jemison describes frameworks that curate information to enhance comprehension. Applying both approaches is where storytelling in the form of science- or scientific fiction- becomes a beneficial model for design practices.

There processes in landscape architecture analogous decision-making and worldbuilding. Landscape architecture is a discipline that deals with time and change. Photo-renderings limits descriptions of problems that deal with time, obscuring complexities that the audience or user groups will eventually confront.

In contrast, the serial nature of television is an immersive format that allows the audience and user group to synthesize issues related to change through empathy. Referencing Simon and Jemison, narratives built in a serial form enable the designer to reveal complex problems using an intentional process. Layered descriptions of the world the characters- and by association, the audience- will occupy. The explanation of the constraints that frame Simon's argument becomes the mechanisms that are used to create future scenarios according to Jemison's worldbuilding process.

There are examples in contemporary television that are applicable. In the United States, the Weather Channel used augmented reality in conjunction with weather updates during Hurricane Florence. The short clips were a supplement the standard weather forecast using charts and radar. The network also had reporters stationed in Charleston, South Carolina to describe the impact of the hurricane as it made landfall.

The augmented content illustrated the dangers of flooding. The level of information immersion was low, relying upon information provided in the forecasts. As the weather reporter in the studio discussed the importance of evacuating low-lying lands, the model was used to illustrate water levels. Showing the water level at incrementally higher levels allowed the reporter to describe specific dangers and impacts that the reporters in Charleston were unable to demonstrate accurately.⁶

In 2016 National Geographic Channel aired *Mars*, a series set in 2033 in which a crew of scientists establishes a base on Mars.⁷ Unlike the Weather Channel's augmented reporting, *Mars* explicitly address the science of space travel. The series shifts between the future and the present, interviewing contemporary scientists to reveal the complexities of space travel and off-planet settlements as background for the fictional story. The high levels of information coming from scientists educate the audience while preparing them to them for the evolving storyline.

Other examples are more story-based. In 2013 the Channel 4 aired *Utopia*,⁸ an alternate earth conspiracy thriller about food scarcity and conspiracies. At the low-level of immersion, we follow a group of average people who entangled in a plot with global implications. The assassins who chase them to facilitate our understanding of medium-levels immersion, providing information and incentives for the main characters to survive. High-level immersive information framed as storylines that are completely separate from the low-level

characters. The recently released series *Chernobyl* follows a similar approach of using interwoven layers to retell the story of the nuclear accident that occurred in 1986.⁹ In this short series, time is used as a device to both compress event that took place over several years and as a way to organize information.

While it is not an explicit part of the storytelling, both of these television series have links to landscapes. *Utopia* is about a world of food scarcity and people looking for places of refuge. Episode five of *Chernobyl* focuses on the long campaign to destroy radiated plant material within the nuclear exclusion zone. What would happen if a landscape architect became a design producer? How would they tell similar stories about places in the future? As the environment changes, the base for design patronage needs to expand and be educated. Television about design is one of the few ways to reach this expanding audience.

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Wild and Worldly: Redefining the 'Forest' in Thai Independent Cinema from Apichatpong Weerasethakul's Blissfully Yours to Anucha Boonyawattana's Malila

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Abstract

The forest is a familiar symbol in Buddhist and Thai folktales. It also appears in various art forms, especially in recent Thai independent cinema. Since Apichatpong Weerasethakul's *Blissfully Yours* (2002) and *Tropical Malady* (2004), the forest in Thai cinema has changed its meaning. It was often portrayed as either a fragile space that needed to be protected or a mythical space filled with ghostly spirits and fierce creatures. In *Blissfully Yours* and *Tropical Malady*, the forest became a space where desire could be explicitly and freely expressed with no constraints. Since then, the space of the forest has often been explored in Thai independent cinema as an alternative, reimagined space where the marginal can emerge and be liberated. However, in recent Thai independent films the space of the forest has been redefined. Instead of being a space free from constraints, it has been culturally coded, from a dense and wild forest to a cultivated one. In this paper, I would like to take a closer look at two recent films: Anocha Suwichakornpong's *By the Time it Gets Dark* (2016) and Anucha Boonyawattana's *Malila: The Farewell Flower* (2017), where the forest plays an important part, symbolising conflict and turmoil both in the human mind and in the current political situation of the country

Keywords: Thai independent cinema, Buddhism, Thailand political conflict, forest in film

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Introduction

The forest has long occupied a significant place in Buddhism and Thai folktales. It generates various implications which have been explored in Thai cinema. It was often portrayed as either a fragile, protected space or a mythical one. The first view is often associated with the conservation theme as deforestation has been one of the main problems in Thai society for more than a hundred years, and the government first attempted to address it by setting up the Royal Forest Department in 1896. The latter view is that the forest is filled with ghostly spirits and fierce creatures, often portrayed in popular horror genres, with humans violating nature and being condemned by it and the spirits within it. Both representations often feature outsiders as a threat that resulting from the modernisation of the country. In the past, as an agricultural country, its people were seen as living harmoniously with nature, until capitalism and technological advancement threatened this way of life. In this context, Apichatpong Weerasethakul's *Blissfully Yours* (2002) and *Tropical Malady* (2004) made a significant departure from the previous representations of the forest often seen in Thai cinema. In these two films, the forest became a space where desire could be explicitly and freely expressed with no constraints. The forest represents a wild and primordial nature. Since then, the space of the forest has yielded a rather different meaning from the interpretations of the past. The forest was then explored following this new line of thought. Over the last few years, the space of the forest has yet again been redefined, from the space where desire can be freely expressed to one that is socially and culturally coded.

For this paper I will examine the portrayals of the forest in recent Thai independent cinema, particularly Anocha Suwichakornpong's *By the Time It Gets Dark* (2016) and Anucha Boonyawattna's *Malila: The Farewell Flower* (2017), and how these portrayals signified the conflict and turmoil both within the human mind and in the context of the country's current political situation. The forest is no longer a place to escape to and freely express oneself but is instead where we encounter the ghosts of the past. In the following section, I will briefly discuss the symbolism of the forest in Thai culture and how it has been represented in the cinema from past to present. In the final section, I will look into the above two films and how each one constructs its meaning through the space of the forest.

The Forest in Buddhist and Thai Folktales and Its Place in Thai Cinema:

According to Thai belief, the forest is not just a natural setting. With the country situated within the confines of Indochina, the influences from both Indian and Chinese culture are overwhelming. The meaning of the forest in Thai culture is then rather rich and complex, with inherited aspects from various cultures and beliefs. This can first be seen in traditional Thai folktales, where the forest is often a main feature of the stories. In several of them, the forest is where an important journey will take place and where lessons will be learnt by the protagonist of the story. It is a place where many of the princes or kings in the folktales will have to prove whether they can complete the journey safely and with dignity. Moreover, in the folktales the forest is the place where sacred spirits have the power to help or hurt humans and can take on different forms to communicate with them. It is a power beyond any social structures. There are often gods or goddesses looking after nature who have the ability to transform into humans in order to test the humanity of the protagonist. This

narrative has been represented in many traditional performances, including Likay and Lakhon Nok. In Lakhon Nok, according to Jukka O. Miettinen, ‘the plays depict the trials of noble princes and adventures in demon-infested forests with Hindu deities and spirits taking part in the action’.¹ This has been transformed and incorporated into the Thai cinematic tradition in various ways. In mainstream cinema, the forest is used as background in different genres, whether adventure, comedy or horror. In the popular horror genre, the forest is often the place of a journey which the characters need to survive, surrounded by ghostly spirits and wild creatures, after they have violated nature in some way. In the same vein as May Adadol Ingawanij and Richard Lowell MacDonald (2010) refer to the rural-provincial as ‘a conventional trope by which to gauge social change and modernisation’, the representation of the forest is also an indication of the interference of the modernisation of the country with nature (p. 132).

Moreover, with its roots in Buddhist, Brahmin and Hindu mythologies, the forest has become a rather sacred space in many Asian countries, particularly India, with its legendary Himmapan Forest. The word ‘Himalaya’ in ancient Sanskrit means ‘abode of snow’ and is the likely source of the name Himmapan (Karnchanapayap, n.d.). It is also believed that the Himmapan Forest, located between heaven and earth, is where many of the mystical strange creatures live, including the half-man, half-bird being (Radhakrishnan, 2015, The Dancing Princess Section). It has a place in both Buddhist manuscripts regarding Buddha’s previous incarnations. The Himmapan Forest here is believed to be a sacred place and for many it exists in the present on another plane of reality. This has also been incorporated into films, for example *Vengeance* (Preaw Sirisuwan, 2006), an adventure-horror film featuring tiger bees, fruit tree maidens, and many monstrous animals in the forest where the criminals escape and need to be caught. The Himmapan Forest space only serves as a location for exoticising the film.



Figure 1: Himmapan forest imagined in Thai painting

Since *Blissfully Yours*, the depiction of the forest has become rather different in Thai independent cinema, with the forest now a personal space where the desires of each character can be freely expressed instead of a space for grandiose narratives about heroes as in the past. Similarly, Nicholas Mercer (2012) argues that the forest in

Blissfully Yours is a site of transgression and liberation: ‘affirming the characters’ libidinal impulses and affecting a brief existential respite to the alienating conditions of the modern world’ (p. 203). The forest in *Blissfully Yours* is like a private realm where the characters, Roong, a factory worker, Min, a Burmese migrant, and Orn, a middle-aged woman in an unsatisfying marriage, are drifting through the afternoon, day-dreaming amidst the dazzling sunlight and forest streams. The three marginal characters then soon turn the space of the forest into a setting for their sexual ecstasy. The forest here exists outside both the confining world of the city and the norms of storytelling. There are no sacred spirits or wild creatures but it is a place in which the primordial forces of nature bring out the beast in man.



Figure 2: *Blissfully Yours* (2002)

In *Tropical Malady*, on the other hand, Weerasethakul fuses the two different worlds together: the private world of personal desire and the ideological world of the forest inherent in Thai folktales. In an interview, Weerasethakul refers to the forest in his films as not a real place but a memory of his childhood where he listened to many tales about strange creatures, as well as being a place to hide (Saisongkhroh, 2018). The forest in *Tropical Malady* is a space with no rules where humans are no longer restricted or oppressed by social constraints, including sexual norms. It is also the Himmapan-inspired space where the Kinnaree, half human-half bird, who has become the wife of the king, lives among other supernatural animals in the forest. According to Mercer (2012), in the forest ‘Tong and Keng’s desire undergoes complete transmogrification as it flows through the animistic imaginary of the jungle’ (p. 204). The film is split into two halves, with the first telling the simple story of two young men, Tong and Keng, a soldier and a countryman, falling in love in a small town at the edge of the forest. The ending of the first half is when they stand on the edge of the forest as if it were a threshold between civilisation and the primitive world. The two halves of the film are divided by the image of a tiger and the words ‘once upon a time, there is a skillful Khmer shaman who can transform into various animal forms’. In the second half of the film, the two characters are seemingly metamorphosing into characters of the folklore tales of the primitive world, where human and animal can transform into each other. The character of Keng -or it might be someone else portrayed by the same actor - makes the journey into the dark forest in search of a tiger-ghost which can converse with humans.

The tiger-ghost or ‘seu-sming’ has appeared in various Southeast Asian beliefs and folktales. In Thailand, it is believed to be a person who has the ability to access the

world of spirits and can transform into a tiger, or a tiger that has eaten many humans, until the human spirits take over and it can finally transform into a human. The audience follows Keng's journey into the dark forest, where he gradually annihilates himself as a human in order to survive in nature. In the final scene, Keng encounters a ghost-tiger, who he believes to be Tong and surrenders himself to becoming one with the beast. Ingawanij (2013) suggests that this kind of forest cosmology is quite different from European fairy tales that 'represent the transformation of human characters into animals in the wild as a loss of humanity, impelling an ending whereby the characters return home and revert to human form' (p. 94). In Weerasethakul's forest, there is no demarcation between human and beast. The forest represents a world where the civilised identity needs to be annihilated and desire freed from any constraints, and where the two souls can join together as if the human is returning home.



Figure 3: Tropical Malady (2002)

The Ghost of the Past and Human Turmoil Amidst a Turbulent Political Situation:

In the period of authoritarian government after the coup d'état, independent films have become an alternative space in which to express the repressed subjects that remain an undercurrent in Thai society. With no financial constraints, as most independent films do not rely on local investment or the local box office, filmmakers have more freedom to raise the subjects that mainstream filmmakers dare not do. In many of the films, the forest has continued to be the main feature and has again been reappropriated by both filmmakers, as seen in the two recent films: *Malila: The Farewell Flowers* and *By the Time It Gets Dark*. The two films are more concerned with inner turmoil and attempting to bring the undercurrent to the surface.

Anucha Boonyawatna's *Malila: The Farewell Flower* is a gay romance between Shane, a farm owner, and Pich, a cancer-stricken craftsman who makes elaborate floral ornaments with jasmine flowers and banana leaves, used in various Thai ceremonies. After a short reunion and a passionate and melancholic night together, Pich bids his farewell. The main setting of the first half of the film is an orchard, which is in a way a cultivated forest in between the wild and civilisation. Shane intentionally grows jasmine trees in memory of Pich, as they are the main feature in flower ornaments. Flower ornaments and the jasmine orchard intentionally suggest the impermanence and delicacy of life, which is fleeting and easily fades away. There

is also a scene where Shane attempts to clear out the overgrown weeds in the spot where the corpse of the snake that killed his daughter still lies. In the same way, flower ornaments use the delicacy of jasmine and painstakingly attempts to put the flowers in order. It is an attempt to organise what naturally grows wild in nature.



Figure 4: Malila: The Farewell Flower (2017)

In the rest of the film, or the second part, Shane becomes a monk and goes on a pilgrimage through the Thai-Cambodian border forest with his mentor monk, seeking renunciation and solitude. In *Malila: The Farewell Flower*, the forest represents another dimension of meaning. In Buddhism, the Buddha has his moment of great awakening in the forest under the bodhi tree. The bodhi tree then becomes a symbol of the Buddha's awakening. The Buddha also spent most of his life in the forest practising asceticism before he achieved the awakening. Most of the important events in Buddhism relating to the Buddha's birth, awakening and death take place in the forest. The forest signifies a place of discovery for all those who want to follow the path of the Buddha. One of the important branches of Buddhism, known as Thai Forest Tradition, attempts to closely assimilate its practices to living in the forest and the pilgrimage to the forest is part of the practice. As a monk, one needs to sacrifice worldly desires, and being in the forest affords the time to ponder upon desires and finally let them go.

Shane and his mentor spend day after day in a rain-ridden forest to practise meditation. One of the practices is the corpse meditation as a way of becoming fully aware of the transitory nature of our lives and to conquer sexual temptation and fear of physical suffering. This practice is not for the fainted-hearted, and certainly not for a beginner like Shane. He is confronted with his inner conflicts as he practises the corpse meditation with the body he has found in the forest. The audience is left to speculate on whether the unidentified corpse might have been the victim of political conflicts. The corpse slowly turns into the body of Pich. Although the political message is unclear, Boonyawattana intends to question the role of Buddhism in the conflict, while the corpse only functions as a tool to serve the purpose of personal development (Settawilai, 2018).

The forest here is a stage for Shane's quest for the meaning of life after his loss. The duality of the living and the dead, permanence and impermanence, the physical and metaphysical worlds, plays on Shane's mind as well as that of the audience during the

second half of the film. It is not the place where desire can be freely expressed as in *Blissfully Yours* or *Tropical Malady*, but the forest here is where worldly desire is under the microscope and eventually needs to be annihilated. Before this can happen, it needs to be recognised in order to let it go. This is where the past has come back to haunt the present, just as Shane sees the corpse as Pich whereas his mentor sees it as someone from his past.



Figure 5: Malila: Farewell Flower (2017)

By the Time It Gets Dark relates to the political incidents of 6th October 1976 and refers to the massacre of student activists as they protested against the return to Thailand of a former dictator. They were accused by the military and royalists of being antimonarchical communists. The event still haunts those who were involved and has left a black mark in Thai history as no one has been held to account for the incident, which continues to be a sensitive issue in Thai society to this day. Instead of dealing with the event directly, the film, with its experimental narrative, same characters and similar relationships in different situations, sets a pattern of repetition. A different array of characters feature in the film, including a former student activist in her sixties who was involved in the 1970s political protest, her younger self as an activist in the 1970s, an actor, and a repetition of the same actor in the roles of a waitress, a janitor and a Buddhist nun. The film uses a structure of repetition, suggesting possible real and fictional versions, the past and the present revolving like a circle. It starts with the story of a former student activist and the documentary filmmaker who arrive at a house in the beautiful setting of the Northern forest, where the former activist agrees to be interviewed by the filmmaker. For almost the first half of the film, they try to bring up the memory of the past intertwined with that of the activist's younger self, which could be the filmmaker's fictional version, and the story then moves on to someone else after the filmmaker wanders off into the light and airy forest, where she tastes mushrooms, and the forest turns into a hallucinatory version in which she sees a youngster in an animal body suit. The forest also appears again in the story of the young student activist who has to flee the city and take refuge in the forest.



Figure 6: *By the Time it Gets Dark* (2017)

In the recent political history of Thailand, the forest offers another significant meaning. By the 1970s, the forest had become a place of refuge for many political protesters who were accused of being communists. ‘Escape to the forest’ has not only literal meaning of physically taking refuge but also fleeing from political ideology. The forest is then associated with the communist ideology. Many of the students joined the communists and set up camp in the forest on the edge of the border, before signing up for the government’s amnesty campaign “Leave the forest” in the 1980s, through Prime Minister General Prem Tinasulanonda’s policy of giving priority to political over military issues. Here the forest is infused with political ideology. The natural world of the forest is tainted and embedded with culturally coded meaning. However, Suwichakornpong uses the forest as a place where the past and the present could be reimagined at a time when political commentary is being suppressed by the junta regime. The forest of the past is more romantically portrayed and unreal when the younger self of the student activist and her activist boyfriend in their student uniforms are strolling in the forest. The present-day forest, on the other hand, is where the filmmaker slips into the hallucinatory scene of a fictional terrain where everything is questionable. With the impossible task of creating a film on political events at a time of political turbulence, the forest appears once again as a stage waiting to be reimagined, with history often repeating itself and being reimagined at different times, as the film carefully implies. Just as history is questionable and unreliable, so is the quest for one identity, especially in troubled times.

From Weerasethakul’s *Blissfully Yours* through to *Malila: The Farewell Flowers* and *By the Time It Gets Dark*, the use of the forest in Thai independent cinema has provided an alternative outlet for marginal subjects such as immigrants, working-class individuals, homosexuals, as well as political commentary through its use of the forest as a stage for questioning and transforming oneself. As one of the important symbols on many levels and dimensions in Thai society, the forest in the cinema, whether dark and mysterious, green and enlightening, imaginary or real, is a space through which to understand Thai cinema on a deeper level as well as a better way for Thais to understand themselves in a modernising and globalising world.

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***Digital Drivers of Russian Advertising Market:
Problems of Management***

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Abstract

The purpose of this study is to analyse the one of the most rapidly growing segments of the media-industry: the digital market and the drivers of its growth, as well as to identify the best ways of its management. The authors use the example of Russia: the country with the dynamically growing advertising market. The analysis of the relevant content-based Internet advertising classifications constitute the methodological importance of this work. The research includes the study of relations among the key market players (advertisers, media-companies, communication agencies and research companies), accompanying the changes happening at the advertising market as the evidence of their transforming impact. The authors find out that recent transformations intensify the development of the Internet communications by spanning all the traditional segments of the communication industry - television, radio, print press and outdoor communications. However, the absence of the clear control systems in Internet communications might lead to the downturn of interest to Internet advertising among the key advertisers. Only the coordinated actions of all the interested market participants will allow achieving the transparency of new communication formats. Thus, the consensus becomes an important goal of the modern Russian communications' management. This analysis is important by clarification of the transforming impact of the digital drivers under the influence of the social and economic factors. The efficient digital communication requires the complex managerial action that was deeply analysed in this study.

Keywords: Marketing Communications, Digital Technologies, Media, Advertising Market

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Introduction

The advertising industry is one of the intensively expanding segments of global as well as Russian economies. Therefore, the accurate forecast of its development determines the several important directions: the advertisers' communication strategies and the general state of the advertising management as well as the functioning of the various media, which considerable part bases its activity on the advertising business models.

The structure of the digital market.

In order to comprehend the situation on the digital advertising market we should consider the fact that globally and in Russia, the Internet industry represents the four markets (Runet Economics, 2016):

- digital communications' market (advertising and marketing),
- infrastructure (software, hosting and domains),
- electronic content market (games, music, books, mass media and video),
- E-commerce market (retail, e-payments and traveling).

The digital drivers changing the media-landscape and the structure of communications on the media-advertising market have the system-forming character proving the relevance of the study. On the one hand, the digital drivers intensify the development of the market of the Internet communications as part of the media-advertising industry. On the other hand, it is important to understand that digital drivers generate the competitive environment and affect the classical media, by contributing to their infiltrating into Internet and engaging the digital inventory. In many ways, these are the same media, but already in the digital medium (Chaffey et al., 2010). This results to the redistribution of the media investments outflowing from the traditional mass media into Internet by causing the stagnation and slowing down of some segments along with the boost in others. This flow promotes the certain communication strategies regarding to the choice of media. In order to compete with Internet, the traditional players have to introduce the new technologies: transparent and attractive for advertisers.

General characteristics of the modern state of the digital advertising market

The digital communications are becoming the paramount factor of the entire communications' market growth. The Global Digital report 2018 of WeAreSocial and Hootsuite reveal there are more than 4 billion people around the world using the Internet (Figure 1).

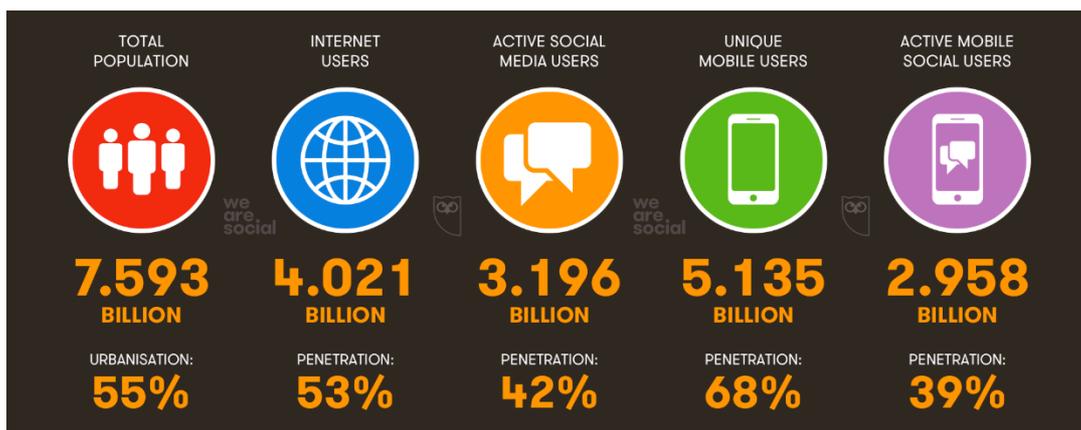


Figure 1. Digital around the world in 2018. Key statistical indicators for the world’s Internet, mobile and social media users, available at <https://wearesocial.com/blog/2018/01/global-digital-report-2018>

In its report on global advertising market trends, released in December 2018, Magna, the centralized IPG Mediabrands resource, reveals that global advertising revenue grew by a record 7.2% in 2018 by reaching \$552 billion in 70 countries analysed by Magna. That is the strongest growth rate since 2010, when the ad market recovered after the two years’ recession, and the second strongest since 2004, thanks to the combination of the strong demand and the cyclical drivers.

The Macroeconomic situation in country, mainly on the consumers' level (solvent demand, changed consumption structure etc.) remains the key factor affecting the state of the advertising market (Stolyarova, 2017). However, after the crisis of 2015, the advertising market in Russia recovered much quicker than the rest of the country's economy.

The Internet advertising continues dynamically growing as its formats rapidly evolve. In the conditions of uncertainty caused by the economic and political situation in Russia in 2014-2015 and the drop of the most commodity markets, the Internet segment growth slowed down considerably while continued by 18% and 15% respectively (Figure 2).



Figure 2. The Internet advertising market growth in 2013-2017, Russia, - «Russian Advertising Almanac – 2017, - <http://www.akarussia.ru/download/rre18.pdf>
 In 2018, the Russian advertising market grew by 12%, by reaching the 469 billion roubles. The share of marketing services amounted to 115 billion roubles (Figure 3). By taking into the consideration the creative and production budgets as well as the advertising agencies fees, the market amounted to 810-830 billion roubles (12-13 billion USD).

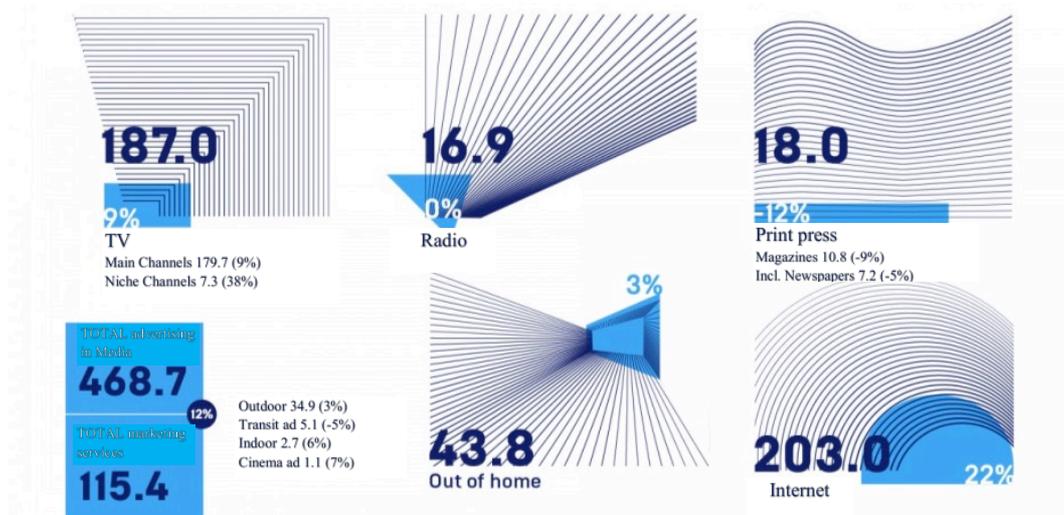


Figure 3. The size of marketing communications in 2018 (bio RUB), Russia

Source: Russian Association of Communication Agencies, -

http://www.akarussia.ru/knowledge/market_size/id8690

The significant size of Internet in Russian advertising pie is largely explained by a relatively low entrance threshold for small and medium-sized businesses (Radkevich, 2016), the possibility of distanced ad placement in situation of wide geographical extent of the country as well as the presence of the major domestic players in search engines, mail and social media.

2. Theoretical background

The study of the impact of digital drivers in communication industry is one of the new fields in the global science in area of economics, marketing and marketing communications coming from the emerging phenomenon itself. The field has expanded from Internet marketing to the exploration of communication patterns of the digital medium that is certainly a wider object of study. One of the important aspects of this study is the analysis of the points of influence of digital intensifiers on the basic sectors of the media-advertising market and its key subjects including the sphere of the methodological management of these processes.

The authors base their study on the consistent patterns characterizing the dependence of the advertising industry development on the overall economic situation. In this regards one has to mention the works of the authors (e.g. Picard, 2011; Doyle, 2013; Tellis G. and Tellis K., 2009; Sinclair, 2012; Chang and Chan-Olmsted, 2005.), who explored the media economy advertising bond and the correlation between the overall state of economy and the activity on the advertising market.

During the economic crisis, the company managers demonstrate the more lenient attitude towards the digital instruments than the classical media where in conditions of the austere economy the target audience express reaction clearer and the expenses on communicating are more justified. In this connection, the authors deemed it necessary to study the materials covering the communication activity in the period of recession when the drop in advertising activity is a universal tendency (Veselov, 2009).

Therefore, the authors take into consideration the results of the researches of Russian advertising market where the structural shift towards the digital communication became the

legitimate outcome in the period of the economy's after-crisis recovery. This phenomenon was deeply analysed by numerous authors (Veselov, 2010; Kolomiez 2009, Kovylov A.I., 2016), whose works have significantly contributed to the study of formation of the digital medium in Russia. These researchers have formed the understanding of the fact that crisis in communication was largely caused by the social-economic consequences of the technical revolution of the late XX - early XXI centuries and structural reforms of the media-advertising sphere. According to the multiple specialists, the mentioned tendencies acquire much richer contents when analysed on the level of particular markets, in the aspect of the media advertising comparisons. The author derived significant informational support from the annually issued "Advertising Almanac", prepared by Association of communications agencies of Russia (AKAR).

Methodology

The approach applied in this study is oriented towards the drawing of conclusions based on prognostic analysis of the market subjects' behaviour under the influence of the digital drivers. Generally, in the global professional discourse one can talk of practically zero opportunity for a single scientist to conduct his own field research - both on the macro level as well as at the level of a single company. The factor of the trade secrets and the high-tech requirements regarding the research tools explain such a limited access to the object of study. Therefore, in order to understand the processes taking place in the digital advertising market one has to conduct the comparative analysis of the reports and research materials of the global companies, authoritative Russian research organizations as well as to apply the own experience of work in such companies and organizations. The empirical base for the work is comprised of the data from the industrial monitoring of the advertising on Russian market (the company Mediascope, former TNS Russia). Moreover, the authors use the data of prognostic analytical study of international companies ZenithOptimedia and GroupM, the materials of the analytical centre Vi (now merged with Gasprommedia, forming together the National Advertising Alliance) and own experience.

Nevertheless, the analysis of introducing the digital technologies on the level of a single corporation can also help in understanding of the processes as they really are. This study also uses the results of a survey, conducted by the authors among the Russian companies' representatives, whose professional activity centres on Internet promotion and digital marketing, regarding the effectiveness of investments in various digital segments.

The analysis and the ways of possible realization of the goal allowed formulating the following research questions:

- Which changes in communication are connected with the wide use of mobile gadgets?
- What is the advantage of the digital measuring of the communication efficiency in comparison with traditional researches?
- What kind of digital communication yield the best return on investment?
- How does the individual mediatization manifest itself and which tendencies in the content development can be registered?
- How do the digital drivers affect the classical media?

Thus, the proposition of this study might be the following: the means of the purely technological factors cannot solve the problem of transparency in the digital medium and in the Internet. The solution is rooted in the intersection of the organizational and managerial

efforts of the entities in charge. The digital drivers, which intensify the development of the advertising market and marketing communications, have the technological form but the social and economic content; their impact sets the complex changes in the life of society. The digital drivers of the market do not only affect the market but also change the quality of the entire advertising scope, drastically affecting all the segments of the media-advertising market. We observe the proof of this impact in the changed managerial behaviour of the key market players - advertisers, as well as agencies, and even consumers.

This study includes the following drivers of market growth:

- New conditions and formats of communication dictated by the use of mobile Gadgets;
- Communication efficiency control systems accessible in digital media;
- Increased consumer activity and the incipience of a significant C2C (consumer-to-consumer) communication segment;
- The system of digital content and its optimization, including the development of cloud storage technologies and visualization of content that expands the formats for delivering information to the target audience;
- The transformation of social networks from communication platforms to content generators, acquiring new monetization possibilities; and the impact of digital technologies on non-digital tools and media.

Let us to examine the impact of these drivers more in details.

3. The impact of digital drivers: new challenges

3.1. Formation of mobile media

According to Mediascop data for 2018, the audience of mobile Internet in Russia reached 75 million people, corresponding to more than 60% of the Russian population, bypassing the desktop users, and continue to steady grow (Mediascope, 2019)

Due to saturation, the segment's growth rate will gradually slow down, but this effect is quite natural for a mature market. Today, the accretion occurs primarily not among the youth but among the middle aged, 40+ population, thus, the audience "matures" and "ages." Today, all the generations, each distinguished by its own activity and intensity of using this channel, exploit the mobile Internet. That is becoming the main overview channel for the young and active audience; however, the other audiences still require the other screens - television and desktop. Perhaps, the next step will be the cross-platform integration of the mobile and the desktop allowing combining the advertising formats regardless of the gadget used at a particular moment of the time.

The players of Russian market confirm the willingness of their clients to invest into mobile, along with deeper cross-media digital analytics, which will allow understanding the structure of spending and forecasting efficiency. The growth of media advertising on mobile platforms is explained by the multiple opportunities of interactive communication with the user, and, therefore, the growing interest among the part of the advertisers. Carrying the personalized message to a concrete user via mobile gadgets grows in value. The reason is the increased involvement in consumption, as well as a higher level of trust to the information on mobile gadget screen, along with the possibility of adapting the advertising to the users' query.

3.2. Technologies for expanding analytical possibilities

An important trend at today's market are mergers and partnerships of companies, which have the access to big data. Retailers, banks, or telecom operators store such data. Access to a vast audience allows obtaining the valuable information about the users and making the targeted offers, which take into consideration the particularities of their online and offline behaviour, movement routes, purchases etc.

However, there is a number of other efficient instruments. GetResponse researchers noted in 2017, the marketers called the email and social media the two top digital channels with a high return on investment (ROI). The research was based on a survey of 2,520 digital marketers from around the globe, working in B2C and B2B: 18% of the respondents from all branches noted that email marketing produced the best ROI; social media came the second with 17%; SEO (Search Engine Optimization) took the third place (14%); and context network advertising was the fourth (12%). The respondents employed in marketing and advertising agencies rated email marketing, SMM (Social Media Marketing), and search optimization as the top three high ROI channels.

The authors based their research on a survey of 140 respondents corroborated by the global selection data on the Russian material. Companies take the decisive steps towards the developing of digital formats or marketing communications based on a high evaluation of their efficiency. The respondents employed into digital promotion, including FMCG companies and retail and business services representatives, have also demonstrated their partiality to email marketing (22%), at higher rate than in the global survey. SEO optimization proved less popular, in connection with its technical requirements for certain qualifications (15%). While, the only 40-50% of respondents in Russia (75% in Moscow) provide the electronic address vs. the mobile telephone number that demonstrates the still low use of this channel by consumers.

Today, the number of digital instruments used by the companies grew from 5-7 to 7-9. More than 25% use more than 10 digital instruments (IAB Barometer, 2018).

The opinion survey among the key advertisers in 2018 highlighted the main changes at the market of the interactive advertising during the last year. Among the prominent ones became the growth of the mobile content consumption, the development of the video formats, social networks as well as the attention to the quality of the content.

To summarize, the lack of media measurements becomes a restraining factor in the development of the new segments in classical media as well as Internet. The measurements help the advertisers to identify the new marketing priorities and effectively manage their budgets. The advertising in Russia will make an evolutionary leap when Russian marketers learn to measure all the accessible content consumption screens (e.g., desktops, mobile gadgets, Smart TVs, televisions) and to combine their results, (Radkevich, 2017).

3.3. Intensive development of niche, narrow professional and visual social networks

This driver allows advertisers to concentrate more specifically on their chosen target audiences. In the new digital conditions, the individuals' trajectories in sphere of the media "landscape" become so diversified that applying the traditional advertising schemes become impossible. The opposition of the centralized mass media and personalized media environments manifest in the acceleration of social media development. Among the main trends of the SMM segment, it is necessary to note the improvement in the quality of SMM thanks to the increased professionalism of the market participants. This was especially important in Russia, lacking the professional infrastructure for training of digital communications specialists. Today the situation has changed for better thanks to the emerging university and college educational programs as well as the developed system of conferences and industrial events. Apart from that, the Russian advertisers are wary of actively promoting their brands in social networks due to unpredictable effects and non-targeted contents that the marketers have not yet learned to control (Tulik, 2017).

The targeted advertising in social networks became the most demanded format (according to more than 80% of interviewed advertisers) with the highest growth: 48% of respondents expected to grow its share in the advertising budgets of companies in 2019 (IAB_Barometer, 2018).

3.4. Mediatisation of trade partners and consumers

Proactive consumer behaviour (when the consumer finds it useful to initiate the contact with an advertiser) calls for complex approaches to SMM promotion and other types of the digital communications. The changing media environment modifies the media consumption and generates the optimal conditions for innovation and individual experimentation in this field.

The technological innovations in the sphere of communications are so radical that they can cause the restructuring of the bases of the entire industry. The main trend of these institutional shifts is driven by the transformation of the consumer into the active subject of communication (Zborovskaya, 2015). The process of media consumption is no longer limited by a certain place and time of action. The transformation of electronic media into a natural habitat – a process that specialists call "mediatisation" - is a highly ambiguous in terms of its social, cultural, and economic consequences (Kolomic, 2009). It is equally ambivalent for advertising, as the forms of relations in all social institutions – state, family, education, etc. – undergo changes. Digitalization allows users to create the communicational messages that are impossible to generate in the traditional technology, at a relatively low cost.

Today, the professional and amateur cultural productions are not that far from each other. Represented by the new media, the communication environment turns the individual himself into the main advertising platform, thus forming a C2C channel, along with the B2B and B2C ones. It is the consumer, endowed with the various possibilities to share his opinion on goods and services with many others, who becomes the main distributor of the marketing communications (Karyakina, 2010).

While we also start seeing the emerging trend of digital B2B2C channel, especially among the international corporations in Russia, where the producing companies involve their trade partners into the digital communication with them and the consumers. They use this channel

to appoint the tasks, control the execution and measure the trade results, including the retail advocacy programs for consumers.

3.5. Content: personalization and visualization

Content in all its manifestations is one of the most important means by which the companies attract the users. Today, in the era of the informational abundance, we observe the growing importance of the quality content, the active monetization of the content in the digital medium, and a search of the new distribution channels. Communicational media depend on the content generators as well as consumers. In many ways, the advertising (along with music) has shaped the video-clip culture of modern audio-visual creativity. This means that the media content is blended into the 30-second advertising messages that harmoniously alternate with equally brief informational or entertaining clips (Karyakina, 2010).

AKAR and IAB Russia analyse the sub-segment of online video based on the measurement of the in-stream advertising. This sub-segment includes the budgets of video advertising of online cinema and websites of the TV companies, of video hosting as well as of licensed players in social media. The video advertising is the quickly growing instrument of the interactive advertising. More than 75% of surveyed companies use the different types of interactive video (traditional and mobile one). Among the companies using the digital video, the 42% allocate the separate budgets, while the 22% do not divide the budget between the interactive video and TV (IAB Barometer , 2018).

3.6. Installing the digital technologies into the classical media

The digital drivers greatly affect other segments of the advertising pie, installing the elements of the digitalization. If one regards the Internet as a technological platform, then, in a certain percentage, all media today are presented in digital formats. That is why there is a tangible need of a joint-effort reconsideration by the advertising community of the existing classification of the media-segments.

In regards to the television, the air channels continue to dominate as the sources of the global income from the TV advertising. However, with the ongoing growth of the paid television and the online TV advertising, these segments might slowly win the dominance. In the developing markets, including Russia, they are notably leaning towards the digitization and an outflow of viewers because of smartphones and tablets. In tele viewing, Russia takes its own course. The main feature is that the high quality air television is free. That is why the per-day number of traditional media-consuming hours has not decreased; on the contrary, it has increased with the additional content viewing online. The choice of the content today depends on the viewer's desire rather than the broadcast schedule. This is happening thanks to so-called non-linear viewing set-ups, including the various on-demand video providing services. Content is also accessible via search engines.

Meanwhile the Russian holdings are taking their own route to business transformation: actively developing the sites of their stations and online portals, work on new formats and experiment with new technologies: audio advertising online targeting, implementing new analytics instruments, creating new online and offline formats.

The received data can be used to launch the advertising campaigns in Internet where the users' interest is piqued in several minutes after viewing a video. Even the traditional outdoor

advertising employs the digital technologies to adapt to different users, contexts, and environments (Mutom, 2017). The digital OOH (Out Of Home) is the key component for the growth of outdoor advertising, while the market of traditional media in this segment remains stable. This branch is currently in the stage of actively transferring to digital formats.

We should not overlook the digital changes in print press and the move of numerous publishers to online format. As noticed the advertising investments in press are the most susceptible to reductions during the periods of economic instability. The television and radio prove to be somewhat more resilient in times of structural transformations compared to the printed media (Zhigunova, 2017), although there are the serious reasons to believe this occurs due to the format of the media rather than the overall market trend.

4. Conclusions

The conclusions concern the various aspects of the impact of digital drivers on the communication market and its main segments.

1. The study demonstrates the modern state of communication industry in Russia and its digital market after the crisis caused by the economic instability of 2014-2015, as well as the difficulties brought by the economic sanctions.

The market manifested the rapid and stable growth of the client activity and the development of the market's infrastructure.

While the relations between the advertisers and the communications agencies require the new management approaches. The medium-sized and large companies, as locomotives of these changes, enrolled into digital interaction with partners as well as began to implement the digital solutions to increase the efficiency of businesses.

2. **The digital drivers represent the most sought-after and rapidly multiplying points of contact between the consumers and brands.** Brand communicators must re-evaluate their traditional relations with customers, allowing the latter to choose the format of communication by themselves. This implies an even deeper integration of all the technologies employed in branding in order to better understand and serve the audience.

However, the digital instruments have to include the strategic integrated approaches in branding and promotion, the ability to see the picture in its entirety, applying the "scanner" analytics to all activities and, as a result, working out a complex development strategy.

3. The new technologies can be used both in favour of the advertisers as well as against them, concealing the true paid advertising coverage and discrediting the digital communications. In order to ensure the stable development of the advertising industry **in absence of clear control systems, the advertising management should conduct the policy of openness towards the clients and improve the evaluation instruments**, which will allow controlling the targeted application of the clients' budgets.

Today, the consumers become the active generators of the content. This means, **the brands will have to forego the editing and the censure.** The communication should not look staged, it should occur in real time, in formats-live programs, streaming, comments, etc.

In the near future, the main social networks will focus on paid content as never before. While even the paid participation does not automatically solve the problem of severe competition: **the advertisers should pay attention to the quality of their content and its individualization** while employing the new platforms to expand their presence, searching for a target segment among the niche audiences, and launching the innovative products.

One of main tasks for the future is preparation of the managers and marketers, who will be ready to interact with the better-informed and technically equipped consumers, use technologies that are more complex and continuously raise their competence, primarily in the field of technology.

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Filmmaking Theory for Vertical Video Production

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Abstract

Smartphones have changed the moving image landscape and now mobile users are consuming more vertical video than ever before (Richards 2017). In particular, vertical video is gaining popularity amongst content makers for social media since the aspect ratio typically suits how mobile phone users hold their phones and therefore how they are now watching video content (ScientiaMobile 2019). In recent years the 9:16 aspect ratio has established itself as an emerging requirement within the professional video market since companies have realised the commercial value of creating video vertically for mobile consumption (Neal and Ross 2018). In order to stand out, creators are being encouraged to broadcast content that is better quality than that which their audience is capable of creating themselves (Social Chain 2018). The film industry has spent over a hundred years specializing in the production of horizontal videography and there is a distinct absence of literature and training which can help support vertical filmmakers as they learn their craft. As the distinction between amateur and corporate vertical video content continues to blur (Neal and Ross 2018), scholastic work helping to identify some of the techniques, equipment, approaches and methods by which professionals can separate themselves from non-professionals is useful. This paper is the author's reflection on the current literature and practice that surrounds the phenomenon of vertical video production and attempts to bring together his own research with the scattered and often inconsistent pieces of advice and inspiration that have been published in print, online and on video.

Keywords: Vertical Video, Filmmaking, Film Theory, Social Media, 9:16, Mobile, Smartphone, Narrative, Cinematography, Aspect Ratio

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Introduction

In 1930, the Academy of Motion Picture Arts and Science proposed the creation of a standardised horizontal frame for cinema display based on aesthetic, commercial and physiological justifications (Clayton 2019). At a meeting convened in America to confirm the horizontal standard, the soviet filmmaker Sergei Eisenstein challenged their ideas and implored the academy to consider a square frame as standard in order to support vertical moving imagery alongside the horizontal. “It is my desire to intone the hymn of the male, the strong, the virile, active, vertical composition!” wrote Eisenstein (1988, p.207). He further claimed that “We are bent and bound to a passive horizontalism; we are on the verge of emphasising this horizontalism still more”. His prediction was correct and for the next eighty years, vertical filmmaking existed predominantly in the realms of artists and experimental filmmakers (Clayton 2019).

Not long-ago filmmakers laughed at the thought of people filming vertically with their phones (Jansson 2015), however consumer-led market demands now require a new approach and understanding of traditional concepts. Whereas at one time people would complain if a video was filmed in portrait mode, that trend has been flipped (Honigman 2016) as vertical videos are now a standard and expected format, particularly in certain social media platforms such as Instagram, Snapchat and others (Social Chain 2018). There are new challenges for filmmakers who are employed in this emergent format, since a vertical frame is a visually distinct space from the horizontal, and new decisions about how to deal with the changes in frame orientation are needed (Neal and Ross 2018). This paper’s attempt at collecting, organising and framing together different ideas, approaches and conceptual insights concerning the representation of moving images within a vertical frame has been created for the purpose of helping vertical filmmakers establish a theoretical grounding upon which their creative practice can be built. It is also intended to help teachers and educators introduce filmmaking students to concepts that are relevant to both the current and future industry needs and demands. This theory cannot be definitive and is unable to explain all that is possible within the vertical format, it is simply a starting point. Filmmakers collectively will exceed in the future their understanding of what is written here, which after all, is simply the author’s reflective response to his current research and thinking.

Despite the increasing demand for vertical video production, there has been a significant literary absence about how vertical video should be produced and in particular there is an absence of instructional material in relation to vertical narratives, composition and cinematography (Clayton 2019). Although filmmaking has been discussed and analysed for over a century, the advent of professional vertical video production has been greeted by an absence of theoretical analysis for this medium. So much so, that some video producers have simply dismissed the practicalities of vertical video production as unfavourable or impossible, without investigating the creative opportunities that the aspect ratio allows. Filmmakers must now literally and metaphorically think outside of the ‘horizontal’ box, vertical video platforms transformed social sharing when they first appeared in 2013 and it has taken time for the marketing world to accept that the trend is here to stay, as such, in 2019 vertical filmmaking is still just getting started (Social Chain 2018) and filmmakers need to upskill to meet demand. It is important to note that whilst much of the following theory can be applied to filmmaking with different frame dimensions including square filmmaking, orbital filmmaking and horizontal filmmaking, the focus of what is written here is concerned with a vertical aspect ratio.

Findings and Conclusions

1. Vertical Subjects And Locations

On Humans

The vertical format allows a person to be shown in full length and opens up new opportunities for physical performance and character exposition. As humans, we often judge each other by our footwear or by the way we walk or stand. However, without a vertical aspect ratio, we rarely see protagonists' lower limbs in any detail. It is rare for a person to be portrayed from head to foot in the horizontal format unless they are framed in a long shot and positioned some distance from the camera, simply because the medium does not support it. The footwear of some of the most iconic characters in film history such as Darth Vader, the Godfather or Gandalf are often difficult to describe and this can be perceived as a shortcoming of the horizontal frame. It is also important to note that a human is a vertical animal, and in many situations, a person will fill the vertical frame. Without any other distractions for the viewer. As such, the vertical format is extremely well suited to a monologue, 'talking head' or 'piece to camera'. The performer engages with the camera directly without any wasted space either side.

On Vertical, Long and Thin Subjects

The world is filled with objects that have risen or elongated more than others in both man-made and natural environments. Long, tall and narrow objects are everywhere. Whenever a horizontal frame captures a tall building or a tree (for example) there is a good amount of wasted space to the sides, which can sometimes be a distraction. Or in order to show more detail, the tall object will have its top and bottom cut out of frame. Since the full horizontal screen is not fairly representing the tall object, this somehow demotes the objects imposing stature. A full tree could not be shown in a close-up but only in a long shot. Although the vertical frame does not easily show these tall objects in their wider landscape, it does allow these subjects to be shown closer up and in more detail. Rockets, boats, trains, missiles, bicycles, spears, arrows and more long-thin subjects also suit the vertical format. It could be argued that in some situations they demand it. Many of these such subjects exist in the world for the purpose of forwards travel or movement and the relationship between long-thin subjects and forward movement is to be noted. In many instances film narratives require their characters to travel from one place to another. Movement forwards lends itself to the vertical format since the direction of travel is not lateral. As such taking a 'point-of-view' shot from the protagonist's perspective or perhaps following the protagonist along roads, pathways, rivers, corridors and more can help the audience feel that they are moving through space and time with the character.

On Most Handheld Objects

Hands are naturally to be found at rest close to a person's waist and hands perform regular functions of lifting and carrying. It is common for a handheld object to be lifted to the face to be inspected by the eye or to interact with the face. The correlation between hand held objects and a vertical movement is strong, since the correlation between the hand and the head are also along the Y-axis. For this reason, any object that is held in the hand can be well suited to a vertical frame.

On Locations

In terms of locations, vertical filmmaking lends itself to narrow, vertical or lineal environments. Anywhere that width will not play a significant part in the narrative. So when making vertical films, it may suit the filmmakers to shoot within and amongst some of the following spaces and features: Straight roads disappearing into the distance are going to lead the eye forwards, perhaps out of expectancy of something arriving from far away, or perhaps with the intention of the protagonist travelling forwards, either way they look good in a vertical frame. Corridors can be bland and uninteresting when shot in a horizontal aspect ratio, they suit a vertical ratio much better. Similar to filming in a corridor, shooting a person walking up a stairway has been difficult to frame attractively for many horizontal cinematographers. However, by using the vertical frame, a stairway becomes an aesthetic pleasure.

If a person is climbing or descending a ladder, rock face or rope, the tall frame is well suited and allows the camera operator to smoothly follow the action in close detail. Tunnels and caves have a naturally claustrophobic effect and boast narrow or circular aspects. As such these are a comfortable photographic companion for vertical filmmaking. Finally, modes of transport are mostly designed for forward motion and so have a long thin ratio. Filming inside long-thin modes of transportation such as, planes, buses, trains and submarines is problematic in wide-screen, whereas the tall-screen format feels at home. This short list of good filming locations for vertical filmmaking is a small indication of how vertical filmmakers can consider the vertical landscape. Vertical stories around the world, are defined in part by the physical environment and their impact upon the human experience.

2. Vertical Narratives And Symbolism

On Power and Vulnerability

On a psychological level, a perception of height is associated with power. Bigger and taller entities are considered powerful by our subconscious. As such, in classical filmmaking, taking a low angled shot has always accentuated notions of power by giving a perception of height. In a vertical frame this perception can be exploited to a greater degree than in a horizontal frame. In reverse, looking down on a subject can make it appear vulnerable and this again can be effectively demonstrated in a vertical frame. Without using high or low angles, a vertical frame can also present the subject's vulnerability to the natural world by showing the large expanse of nature above the protagonist's head. For example, an individual placed at the bottom of the screen and shown to be walking through rain or snow, or perhaps swimming deep underwater, indicates a vulnerability to the natural world.

On Dominance and Subordination

By taking notions of power further, the vertical frame lends itself to showing how one entity may dominate another. This could take a simple form such as an image of a parent chastising a child or perhaps a victorious boxer knocking down his opponent. The powerful character being represented at the top of the screen whilst the weaker character is positioned at the bottom. Representing a character within their environmental challenges can also be well represented in a vertical format. Imagine Jack at the foot of the beanstalk, a new employee approaching her job in a tall skyscraper or perhaps a nervous rock climber at the foot of the

mountain. Notions of dominance, born through psychological perceptions of height power are well suited to the vertical frame.

On Status

Status is an important dramatic concern and it is important for a filmmaker to make it clear who is the main focus of the scene or a particular narrative moment. By placing a character or an object in sharper focus or by placing them in a more dominant position on the screen, you are increasing their status to the audience. Since the field of view is narrow on a vertical frame, it is easier to focus the audience's eye on a particular subject, indeed it is common for the main subject to fill the entire frame. As such it can be argued that the vertical format allows a high degree of unmistakable status conference upon the main subject of the screen.

On Overcoming Gravity

One of the more dominant and oppressive forces endured by humanity each day can be associated with an often-sub-conscious battle against gravitational entrapment. Notions of physical strength are sometimes associated with anti-gravitational actions such as lifting, standing, climbing and growing. Upwardly mobile characters are ones to be respected and admired, 'natural leaders and winners', whereas a person moving along a horizontal plane could be identified as a conformist or 'power neutral' individual. The virile, the strong, the powerful, the victorious and the successful can be associated with conceptions of ascension. Imagery of a winner being placed on his friends' shoulders, or of a superhero flying into the sky or of a plant growing and reaching maturity can all be well represented by the vertical frame. It can also become a narrative device to show that while the strong may rise, the weak will fall and in so doing succumb to the gravity humans strive to resist.

On Depth

Descending through water, falling through the sky or perhaps lowering into a cave network can be difficult to portray on a horizontal frame unless it is filmed on a wide shot. Far from being associated with failure and weakness, deliberate downwards travel can be a brave and adventurous journey for a protagonist. The vertical frame naturally supports upwards and downwards movements and certain framing can allow action to take place towards the bottom of the frame whilst showing the depth above. High angled and low angled shots of depth and height give particularly dramatic effects and accentuate perspective.

On Intimacy

Since human beings are vertical creatures, the human nervous system experiences sensations running up and down the body. Neural transmitters across the body help the human to learn and experience the world around them. Intimate moments are experienced from head to toe through a combination of cerebral and tactile responses. Whereas many filmmakers concentrate simply on a kiss for intimacy, a more passionate experience can be gained by witnessing the touching of hands, the balance of hips, a weakness in the knees or a raising of the heel. Although many films have created a horizontal association with intimate experience, there is enormous value in showing such scenes vertically, not least because intimacy is often vertically experienced.

On Individuality

The language of horizontal film is often focussed around the interactions of one person with others and the conversational aspect of filmmaking has developed as a performative tool for narrative exposition. Interaction between the protagonist and others is important in most narratives, however at other times, the narrative requires only to represent an individual journey or experience. As such we find that the vertical frame supports the individual in the telling of their personal story and monologues may even become more commonplace in vertical films. This may provide a new approach to visual performance and a new opportunity for actors to share less screen time.

On Entrapment

Feelings of claustrophobia and imprisonment can be associated with an inability to move or escape. Since humans predominantly move along a horizontal plane, an actor observed within in a vertical frame can enhance an audience's perception that the character is trapped. Without the audience being able to see the environs, or how the character can interact within it, they are unable to consider escape routes and so they share the character's feelings of powerlessness. For this reason, it may be that some genres such as horrors, mysteries or suspense driven thrillers, may benefit from a vertical framing.

3. Vertical Developments

On the Rule of Fifths

Most existing horizontal film theory promotes that students and emerging filmmakers should consider using the 'Rule of Thirds' to assist composition within the frame. A 'Rule of Quarters' is also discussed among feature filmmakers as being sometimes preferable to the thirds rule since it allows for more creative framing. However, in a vertical format the thirds rule does not always work. For this reason, in vertical moving image production a 'Rule of Fifths' can work. This places an actor or a subject closer to the edge of screen and actually allows some of the looking room often lost in the vertical format. This also places the subject close to the edge of frame and so the fifths rule is not for the faint-hearted and it takes both practice and training to achieve.

On Shot Sizes and Wasted Space

In the classical approach to horizontal filmmaking, wasted space appears above the head (or behind the head) in a frame. A poorly framed shot will therefore leave an expanse of headroom above or behind the head in which there is nothing of interest to the narrative. As such, a well framed shot is usually positioned just above the top of the head and usually places the eyes of the subject close to the upper line of thirds. This principle still applies to the vertical frame and should not be ignored except for in creative moments. Something peculiar occurs in relation to 'classical' shot sizes in a vertical frame.

A human is vertical in nature, which means that they fit a vertical frame well and will fill a vertical frame almost entirely. Since shot sizes are traditionally defined by how far down the body the bottom of the frame reaches, this approach needs rethinking for vertical frames since naturally a vertical frame reaches further down the body than a horizontal frame. For example, A horizontal close-up (measured down to the shoulders of the subject) generates a

very close image of the face when replicated in a vertical frame, which even obscures some of the face outside of the frame. In more technical terms, a horizontal close-up will fill approximately half the screen with the subject, whereas a vertical close-up will fill four fifths of the screen with the subject. This type of framing creates a subject size that would better be described as a big or even extreme close-up for filmmakers, since it allows for less movement potential of the subject than a traditional horizontal close-up perhaps should. A vertical close-up, may be better to be framed down to the navel, in the same way that a horizontal frame would measure a medium shot. This would depend on whether the size of the shot is determined by the size of the subject relative to the frame, or if shot size is determined by vertical anatomy. The question remains, do we reclassify shots for vertical filmmaking, or do we simply execute shot sizes in a different way? Probably the latter.

On Camera Height and Cinema Display

One of the significant challenges a vertical filmmaker will face is the consideration of where the audience will be positioned in relation to the subjects on the screen. This in turn has a significant impact on the way in which the film is recorded, particularly in terms of the height of the camera in relation to the subject and the positioning of the subject within the frame. Does the director on set place the actor parallel to the camera at the top of the screen, at the bottom of the screen or centre? Similarly, in high and low angled shots, does the subject's position change depending on the relative position of the audience?

These are creative challenges that depend naturally on the required dramatic content of the scene, but may also be influenced by how the film will be watched. If we imagine a traditional cinema environment with seats at the bottom of the screen, then this means that there will be a significant amount of requisite head movement for the audience up and down in order to follow all of the action. This in turn could be uncomfortable for the audience. As such having an audience positioned in the centre of the screen is desirable. This usually presents no problem for mobile viewers and for those who have desktop or wall screens which easily rotate. For cinema audiences, or large screen display of vertical film, this would require a specialised viewing environment. An augmented use of some IMAX screens may be preferable.

4. Vertically Framed Motion

On Subjects Moving Along the Z or Y Axis

A subject moving towards or away from the screen on the Z-axis poses no problem for a vertical frame. It is particularly useful if the subject itself has vertical dimensions such as a person riding a bicycle or a London bus. Since the vertical frame orientates around the Y-axis, movement up and down is particularly suitable. The motion of a person jumping on a trampoline or the journey of a yo-yo as it ascends and descends the string is perfectly matched with the vertical filmmaking. Movement along the X-axis can be augmented by a change of camera position, so that it adopts a diagonal movement bisecting the Z/X axis.

On Camera Movements Along the Z or Y Axis

Lifting the camera vertically using jib arm, crane or other, is an environment in which the vertical frame becomes its own, perhaps more than any other movement. Now the vertical frame does something that the horizontal frame struggles with, it provides looking room or

leading room upwards or downwards. ‘Up and down’ narratives are everywhere, if the filmmaker knows where to look. Travelling forwards and backwards on track, Steadicam or other is also very comfortable on a vertical frame. For similar reasons as have just been explained, forward motion of the camera along the Z-axis can have an effect which focusses the eye on the subject at the centre of the screen. As the camera moves forwards or backwards, focus on the central subject will be increased. Since periphery becomes less important, this is a movement which suits the perceived limitations of the vertical frame.

On Rotating Subjects

When an object rotates upon a single axis point it becomes focussed around a centralised position. This lends itself well to all videography, and naturally suits the narrow frame of the vertical film. As such a fast-rotating subject such as a coin spinning on a table, or a gymnast somersaulting can help focus the eye on one particular point.

On Point of View (POV)

A Point of View (POV) shot being taken by looking through film prop such as a telescopic sight or a rifle scope, suits all types of frame due to the circular shape of the optic. Having a fixed boundary to the circular field of view makes the wider frames largely irrelevant. Similarly, a POV shot from the perspective of a person riding a motorbike, or skiing, or running very fast suits the vertical format, just as it does with any aspect ratio, since the motion helps focus the eye forwards. When filming a POV shot from the perspective of a person moving quickly, the periphery becomes blurred and only the subjects in the distance remain in sharp focus.

5. Vertical Equipment

On Lenses

Though not always necessary, it can be a clever trick to use a lens which supports a long depth of field for some shots. Two-shots and conversational shots can be staged so that one actor is upstage and the other downstage, allowing easier framing. This idea can be further experimented with and while of course a pull focus effect is dramatic, for some situations the long depth of field will be preferable, particularly if there are multiple focus points or status targets in the scene. It can be extremely powerful to use a long lens while shooting for vertical video. This can thin the background and intensify the narrow imagery.

However, the greatest challenge for vertical filmmakers is to create width and space, as such, a wide-angle lens is going to be used most often. With a very wide angle, it even becomes possible to create two-shots and conversations without any barrel distortion. Since humans are the most common subject for filmmakers, and since humans are vertical animals, it is important to find a way in which we can show both a human and their environment. This is best done with a wide-angle lens.

On Cameras

Since no professional film cameras are currently developed specifically for the vertical filmmakers, the only cameras that are optimised for vertical recording are those found on mobile devices. For this reason, most vertical video for social media is currently shot on good

quality mobile phones. Professional cameras are capable of recording vertically if the camera is turned on its side and most of the higher budget vertical recordings are made this way. Turning a camera on its side raises issues of stability and also requires extra pieces of equipment in order to rig the cameras securely and manage cabling effectively. Since filmmaking equipment is still optimised for horizontal production, new technologies are anticipated in the near future if demand increases as expected.

6. Vertical Difficulties

The natural trade-off between a horizontal frame and a vertical frame is to adopt a square or orbital frame and for this reason some advocate the use of such formats. However just as the horizontal frame has something extra to offer and audience in width, so too does a vertical frame in height. Vertical video has strengths which should be underlined in the areas in which it is well suited. Naturally there are other areas of film composition which are preferable to the horizontal frame. Some of these have been mentioned already, but it is important to consider these further. Most of these should be undertaken with caution or sometimes avoided during a vertical shoot.

On Looking Space for Actors

In a single frame it is good to position the actor in such a way that if they are looking to the side, there is space in front of their eyes and nose. This is called looking room and works because the audience connects with the on-screen actors by watching their eyes. It is comfortable for the audience to be able to see what is in front of the actor rather than what is behind them, since a human will mostly face that which it interacts with. Looking space also helps with editing. It helps make sense of how one actor is positioned in relation to another to the audience perspective and is particularly effective during conversations and the ensuing close-ups. Traditionally if an actor was looking to the left of frame, the cinematographer would position them on the right-hand line of thirds. However, if a filmmaker tries to use the rule of thirds to create looking room on a vertical frame, they will struggle, particularly in close-ups. For this reason, (among others) it is important to consider a wide-angle lens and a rule of fifths when shooting in a vertical frame.

On Camera Movements and Subjects Moving Along the X-Axis

If there is a significant amount of horizontal movement that is fast paced and perhaps moves to and fro along the X-axis. This is difficult for a vertical frame. For example, recording a football game or a tennis game from the side-line is very challenging. This is perceived as a significant limitation of the vertical frame, since so much of human activity is associated with horizontal movement. However, horizontal action can easily become diagonal action by moving the camera position so that the angle of view bisects the Z/X axis.

If the motion has to be shot flat along the X-axis, then moving the camera along with the subject is preferable. With any camera movement it is good practice to create some lead space ahead of the main subject in the direction of the movement. This is more comfortable for the audience to watch and it allows them to see something of the direction of travel. This effect is akin to providing looking room or looking space within a single frame. Since the vertical frame is narrow, again adopting the rule of fifths and using a wide-angle lens is advisable to help overcome this problem.

On Two Shots, Groups and Conversations

Due to the narrow nature of the vertical frame, having two people positioned next to each other horizontally is difficult without obscuring much of their face. Vertical filmmakers can still achieve two shots, but they need to be more creative in staging or perhaps by combining images in editing. Since it is difficult to capture two faces in one vertical frame if they are staged in a natural position of being horizontally next to each other, then shooting a conversation also becomes difficult. It becomes difficult to establish the conversation in a wide shot and cutting from one close up to another can look jumpy if looking room is not created. A conversation between three or more people gets very difficult. However, it is not impossible, there are creative ways of establishing a scene and staging the drama.

On Establishing Space, Landscapes, Panoramas, Tableaus and Establishing Shots

One of the most important cinematic storytelling devices involves the creation of wide-shots. Something which is made very difficult by the vertical frame even with a wide-angle lens. By showing a broad expanse in a horizontal frame, a filmmaker can show the audience a lot about the environment in which the drama is about to be played out. Establishing a battlefield or revealing an expansive wilderness is well suited to the horizontal frame and so filmmakers using a vertical frame will feel restricted. However, all is not lost, because with a different camera position, as opposed to shooting perpendicular, width can be shown.

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*A Modified Customer Approach for Publishers under the Influence of the
“Internet of Things”*

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Abstract

New technologies under the influence of the “Internet of Things” enable a connection between the virtual and the physical world by adding the “material” dimension to access to information via the internet - through intelligent everyday objects. One area that has not yet concentrated on the influence of IoT and its new technological possibilities is the publishing industry. Publishers already have the essential component of their potential product for intelligent everyday objects: High-quality content. However, publishers first need a strategy to address the different buyer groups. The paper is based on Everett Rogers' “diffusion theory” and its extension by Geoffrey A. Moore. Rogers divides the customer approach into different buyer groups and analyses to what extent these can be convinced by new products. The aim of addressing the customer groups is to create or strengthen customer confidence and thus establish a stable, long-term customer relationship. Geoffrey A. Moore takes up the “diffusion theory” and discusses necessary extensions, especially with regard to the effective closing of the gap between the transition of “early adopters” and “late majority”. The paper develops an approach to the different customer groups of the publishing management of the intelligent publishing products. The author focuses on the “open innovation approach” as well as the conviction of influencers to generate competitive advantages, depending on the customer group.

Keywords: Diffusion Theory, Internet Of Things, Publisher, Intelligent Everyday Objects, Rogers, Moore, Customer Approach

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Introduction

1.1. Potentials for Publishers through Intelligent Everyday Objects

Under the influence of the “Internet of Things” (IoT), a connection is established between the virtual and the physical world, as access to information via the internet is extended by the material dimension - through intelligent everyday objects. The material dimension includes objects such as refrigerators, coffee tables or cookers that are clearly identified in their surroundings, communicate with each other and with their surroundings and can therefore be described as intelligent (Barton 2014, p. 15). These technological innovations and thus opportunities for product development have so far hardly been integrated by publishers into their existing value chain. Direct data exchange between the products and thus also between the publishing products will become possible, which will offer additional added value for both the publisher and the consumer. For example, individual customer requirements can be exchanged between products to personalize their output (Uckelmann et al. 2011, V).

With the progress of information and communication technology and in particular the minimization of electronic components, the vision of connected intelligent everyday objects is becoming increasingly lucrative for publishing house management. At the same time, price degradation makes the technology affordable and thus usable (Fleisch and Mattern 2015, p. IX).

Different types of media in publishing management (e.g. print and online offerings as well as the inclusion of intelligent everyday objects as content channels) can increasingly be connected through the use of new technologies. This increasing media convergence creates room for a changed value proposition for publishing house management (Breyer-Mayländer 2015, p. 5; Zerdick et al. 1999, p. 130). Thus, under the influence of the IoT, new possibilities open up for publishing house management by linking media content and offering it in intelligent everyday objects.

1.2. Changes in Customer Usage Behavior under The Influence of The Iot

This leads to changes in customer usage behavior and requires innovation processes in the area of publishing management. With these changes a differentiated approach to the different customer groups is necessary. Here it should be emphasized that publishing houses can use intelligent everyday objects to offer publishing content to their existing target groups for print and online - both in terms of their experience in adapting their publishing products and generating new publishing customers for the new content channel.

However, using intelligent everyday objects as playout channels for publishing content means that publishers must first develop a possible approach to meeting the different customer needs of different customer segments. This paper addresses the question of how publishers can meet different customer needs. The author uses the “diffusion theory” of Rogers - which includes the analysis of the different customer segments - and takes into account the extension according to Moore (Rogers 2003, p. 5; Moore 1991, pp. X-XII).

1.3. Possible Integration of Intelligent Everyday Objects for Publishers

How the whole thing can now be implemented for publishers can be explained using an example of a stove that has already integrated a display into an intelligent cooker. A possible recipe from the publisher's content could be presented on the display. The customer thus has the option of directly calling up the publisher's content (here the recipe) via the manufacturer's product (here the cooker) and implementing it directly during cooking. An additional media channel for retrieving the publisher's content is therefore not necessary. Here, publishers have the opportunity to integrate their content into the intelligent everyday object and to sell this added value to the manufacturer (e.g. an intelligent refrigerator now serves as a content supplier in addition to the cooling function for food).

The publisher's contents are thus directly related to the customer's use and thus gain added value for the customer. Above all, content is made available to the customer at the right time and in the right place, which is exactly where the customer wants it. In addition, if the customer uses a large number of intelligent everyday objects, individual customer needs can be met in a targeted manner. Moreover, the customer himself is part of content production and distribution, which is why the customer can identify strongly with the publishing product. For example, the publishing customer can be integrated into the selection of the content in the form of communities.

1.4. Scientific Background

In the monograph by Buhse: "Management by Internet: Neue Führungsmodelle für Unternehmen in Zeiten der digitalen Revolution" (2014) as well as in the publication of the authors Elgar, Weinberger and Wortmann discuss in their essay "Geschäftsmodelle im IdD". (2014), those models are discussed which take into account the developments of the IoT.

The publications by Fleischhacker: "Die Zeitung" (2014), by Breyer-Mayländer: "Vom Zeitungsverlag zum Medienhaus - Geschäftsmodelle in Zeiten der Medienkonvergenz" (2015), by Paesler in his article "Make vs. Buy, Digital vs. Print: Verlagsstrategien im Lokal- und Regionalmarkt" (2015) possible regional strategies for publishers as well as Rolf and Sagawe: "Des Googles Kern und andere Spinnennetze: Die Architektur der digitalen Gesellschaft" (2015) discuss the topic of the necessary change in the existing publishing business model and possible design options. In their publication "Das X-Modell für die Medienindustrie" (2002), for example, Tzouvaras et. al. have developed an approach to publishing management that focuses on the relevance of content aggregation for the publishing business model in times of increasing digitalisation.

Published application-oriented publications in the field of IoT, in addition to technological explanations, have so far mainly taken up examples from the fields of logistics, production, health and mobility, e.g. in the investigations by Botthof and Bovenschulte: "Das 'IdD': Die Informatisierung der Arbeitswelt und des Alltags. Explanations of a new basic technology" (2009). In his monograph "Communication and Control Strategies for the IoT" Chisu focuses on the following topics (2010), the areas of logistics and production.

Changes in the publishing industry are therefore often discussed, but so far there is no analysis of possible opportunities for addressing the various customer segments, taking into account the influence of the IoT (Sendler 2013, p. 13). Rather, business models in the age of

the digital revolution are generally discussed with the focus on the necessary adaptation of cross-industry business models.

Therefore, the focus of this paper concentrates on a research gap and thus contributes to scientific progress. The paper thus focuses on research results that are both sound (valid) and unpublished (original) and also provide some new insights in the field of publishing management research. According to Alvesson and Sandberg (2013, p. 29), the research questions thus refer to a so-called “gap spotting” and in particular to a “neglect spotting” with the characteristics “Overlooked area”, “Under-researched”, “Lack of empirical support”, “Lacking specific aspects” as well as an “Application spotting” with the characteristics “Extending and complementing existing literature”.

2. Methodology

2.1. Methodological Techniques

The scientific basis of the work is based on an interpretative approach (Gephart 2004). Individuals construct their own reality and therefore the author of the paper is not objective. Furthermore, the author has been active in the media industry for years, so there is no complete objectivity based on personal experience.

The author uses an abductive approach according to Alvesson and Kärremann (2007). This approach takes into account the logic of inductive research, i.e. the exploration of something unexpected and not expected. Nevertheless, the data have merged with the theory and the development of new scientific insights for the media industry has focused on rethinking/problematising an established theory (here Rogers' “diffusion theory”) in publishing management research. The focus of the work is therefore on the investigation of cases that cannot yet be represented by Rogers' “diffusion theory” (Alvesson and Kärreman 2007, p. 1265; Rogers 2003, p. 5).

The author uses a document analysis to answer the research questions. This methodology was chosen because it guarantees comprehensive access, comparability, long-term analysis, a large sample and a retrospective perspective according to the criteria of Costas (2015, pp. 50-58). The author uses detailed secondary documents (compiled from primary sources) as well as printed mass media (e.g. journals, newspapers and books). The selected texts of the printed mass media have the following criteria: be at least one page long, have been written by authors of the respective editors of the professional journals and concentrate as addressees on persons working in media companies.

2.2. Methodological Approach

First, the author connects the topic of new technologies under the influence of the IoT with potential publishing customers, i.e. to what extent publishers can profit from intelligent everyday objects in the future and offer their content to their customers via them. In addition, the advantages under the influence of the IoT within the publishing value chain - the associated performance promise - as well as the role of the individual publishing customer along the various stages of the value chain are explained.

A theoretical-conceptual, but also logical approach serves as a basis for the development of recommendations for action for publishers. From the general (deductive approach / top-down

approach) several specific recommendations for action for publishing management are derived.

In the course of the work, Rogers' "diffusion theory" will be taken into account (Rogers 2003, p. 5). At first, the theory with the different customer segments in the adjustment process with the product introduction of innovations is presented. Subsequently, the author will explain the different customer groups of publishing house management under the influence of the IoT. The abstractness of the theory will be reduced by concrete solution alternatives for publishers. The aim of the author is to explain the influence of the IoT as a phenomenon and to derive recommendations for publishers as to how they can address the various buyer groups. These design options for publishers within the framework of the IoT serve as guidelines for maintaining competitiveness and tapping new sales potential (Eigler 2006, p. 522; Scheuss 2008, pp.216-219).

The advantages of the IoT for publishing houses can be worked out well from this and thus the relevance of the individual customer for his needs can be shown. Subsequently, the author develops both recommendations for action and suitable adaptation attempts of Rogers' theory in relation to the publishing industry under the influence of the IoT (Rogers 2003, p. 5).

The author analyses the individual categories of the theory so that a large number of factors are listed, completeness and sufficient data of the research project can be guaranteed ("rich data"). These explain the necessary measures to address the individual customer needs of the customer segments. The feasibility of the project is strengthened above all by the part of the document analysis.

2.3. Object of The Study: The Value Chain and The Role of The Customer under The Influence of The Iot

In the area of procurement, it can be said that the manufacturer of the everyday objects is added as an additional partner. The customer himself does not yet play a direct role here, but a suitable selection of manufacturers should nevertheless be made for the provision of content. With the IoT new risks arise for publishers that the information that is disseminated about everyday objects will continue to guarantee independent content. Consumers can quickly assume that only selected journalistic content is reproduced by the publishers in cooperation with companies. It is therefore increasingly important to maintain credibility and transparency as competitive criteria in both the reader and advertising markets, and thus to cultivate and expand trust in customer relationships (Döpfner 2012, pp. 168-169, 181).

In the area of production, it is evident that the personalization of content is improved by the new technologies and that the customer can be integrated into the content creation process. Personalization by incorporating the content wishes of the individual consumer and, for example, querying them in the form of community or feedback formats within the product and implementing them immediately. The creation, maintenance and expansion of a stable customer relationship should be taken into account in content production, for example by delivering independent, credible content. In the advertising market, too, it is important to ensure that both credibility and transparency are conveyed to the customer during content production.

In the area of distribution, the new distribution channel will reduce printing costs and specify advertising, so that the length of stay will also increase. By taking up the individual usage

context of the publisher's customer, the increase in the length of stay will improve significantly. The creation of communities for the direct exchange between the individual customer segments as well as feedback functions additionally improve the satisfaction of publishing customers' needs with regard to integration and communication.

Stable customer relationships support the sales market and future demand within distribution. These can be consolidated within distribution by gathering sufficient information together with the customer about his needs. Particularly with regard to independent content, publishers can obtain feedback from their customers on the extent to which credibility and quality can continue to be guaranteed as part of the distribution of their products.

The art of publishing house management should therefore consist in ensuring that the adjusted performance promise in the IoT corresponds to the changed customer needs. These changed customer needs - especially with regard to the individual customers of the various customer segments - can be examined with the help of Rogers' "diffusion theory" and the extension according to Moore (Rogers 2003, p. 5; Moore 1991, pp. X-XII). Possible approaches to fulfill these customer needs can be developed, e.g. with "open innovation" approaches. "Open innovation" means the active involvement of the customer in product development (Gassmann and Enkel 2006, pp. 132-136; Osterwalder et al. 2011, p. 33; Scheuss 2008, p. 256).

2.4. Rogers "Diffusion Theory" as An Option for Defining The Customer Approach under The Influence of The Iot

The "diffusion theory" according to Rogers (2003, p. 5) focuses on the process and thus the diffusion in which an innovation is communicated to a social system via various channels over a period of time (Rogers 2003, p. 5) A new product or service that reaches the market is not adopted by all potential customers at the same time. Some individuals decide to adopt earlier than others. The decisive criterion for dividing adopters into different categories is the joy of innovation, i.e. the extent to which an individual is willing to adopt an innovation earlier than other members of a social system (Rogers 2003, p. 280). Initially, a user acquires product knowledge and develops a positive or negative opinion of the innovation (persuasion). This is followed by the decision of the adaptation (decision), from which the implementation and the confirmation of the decision for the innovation follow (Olenberg 2015, p. 9, Rogers 2003, p. 37). The innovation factor makes it possible to divide customers into different segments in terms of their willingness to adapt to innovation (Olenberg 2015, p. 9).

Rogers “diffusion theory” describes different customer segments when innovation penetrates in the market. These can be depicted as a Gaussian bell curve (see Figure 1).

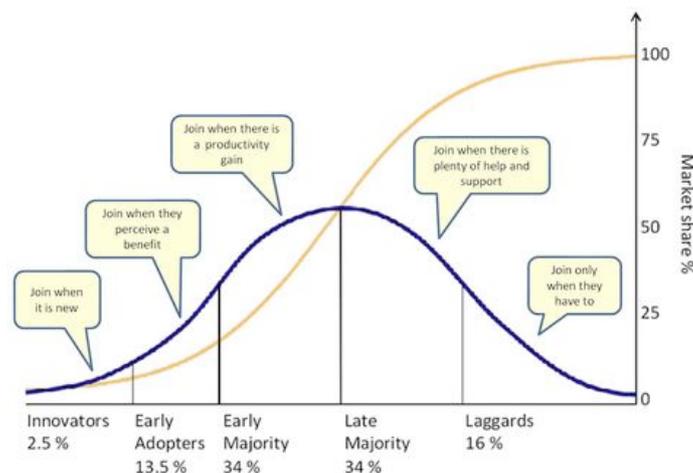


Figure 1: Rogers 1962, p. 247.

In his “diffusion theory”, Rogers distinguishes between five groups of buyers in terms of the speed with which they are willing to accept an innovation/new product. The x-axis represents the time and the y-axis the proportion of users of the respective group in relation to the total. The different groupings differ in terms of psychological and demographic characteristics that determine their willingness to innovate (Rogers 2003, p. 5).

The “innovators” are both enterprising and willing to take risks. These people adopt an innovation independently of other individuals. Since there is only limited information available about the new product at this time, an innovator must be able to cope with a high degree of uncertainty. The ability to understand and apply new technologies is also required.

The “early adopters” act cautiously, but accept new ideas at an early stage. They enjoy a high degree of opinion leadership in most systems. They are often asked for advice when it comes to adopting and testing a new idea.

The “early majority” adopts new ideas earlier than the average consumer with thoughtful action. Caution and deliberation are important. It is a matter of moving with the times and adopting an innovation, even if it seems to prevail. Contact with members of the same category is of higher importance than the opinion of previous adopters. Imitation plays a decisive role.

The “late majority” is rather skeptical about new ideas and only accepts innovations once they have been evaluated by the majority of consumers. Rather, the motivation is in line with social pressure and economic necessity than with the actual joy of the idea. Cheap and absolutely safe solutions are required.

The “laggards” accept innovations if they are integrated into their environment and are already described as traditional new products (Herrmann and Huber 2009, pp. 267-268). They are suspicious of new achievements and adhere to traditional ideas and conceptions (Rogers 1962, p. 247; Rogers 2003, p. 5).

2.5. Adaptation of The “Diffusion Theory” as A Success Factor for The Customer Approach in Publishing Management under The Influence of The Iot

Rogers' “diffusion theory” is useful for dividing the various customer groups for content consumption into intelligent everyday objects. However, the Gaussian curve according to Rogers' “diffusion theory” and thus the distribution of customers among the different customer groups strongly depends on which technologies are necessary for content consumption via intelligent everyday objects and to what extent these are accepted by the different customer groups.

In addition, the successful distribution of content depends on the use of the individual customer groups. If the “innovators” - according to Rogers the first customer group that consumes content via intelligent everyday objects - do not accept the technological innovation and its offer to consume content, the publishing product will not reach the other customer groups according to Rogers. (Rogers 2003, p. 5). Moore (1991, pp. 15-17, 20) examined this approach in detail. He speaks of “crossing the chasm”, which should occur particularly in the transition from “early adopters” to the “late majorities” (Moore 1991, pp. 15-17, 20). Moore (1991, pp. 10, 20) intended to focus on one customer group and use each group as a basis for marketing the next one. If a successful company can achieve a “bandwagon effect” with sufficient momentum, the product becomes the de facto standard. The “bandwagon effect” is a phenomenon where the acceptance of beliefs, ideas, fashions and trends increases when adopted by others. In other words, the “bandwagon effect” is characterised by an increase in the likelihood of individual adoption compared to the proportion that has already done so. Once, a group of people believe in something, others will “jump” on the bandwagon, regardless of the underlying evidence (Moore 1991, pp. 11, 16, 116-118).

Publishers can learn from their experiences with different customer groups in relation to existing online and offline formats to achieve acceptance of content through intelligent everyday items for different customer groups. Publishers should try to achieve a “bandwagon effect”: An adaptation of the new product is significantly influenced by the fact that a large number of publishing customers have already consumed content about intelligent everyday objects, are active in communities here and contribute to the continuous expansion of the product through feedback loops. These measures can be subordinated to the “open innovation” approach. Moreover, it is important to win influencers who have a positive influence on the following customer groups and their product acceptance. Which role open innovation approaches and influencers have for the different customer groups for the production of competition advantages, explains the author in the following after the diffusion theory of Rogers (2003, p. 5) and its extension after Moore (1991, pp. X-XII). That is, a customer approach, which builds on one another and depends on the success of the preceding customer group is the basis of the analysis.

“Innovators” are characterized by an open and risk-taking acceptance of new products. This target group is initially reached by publishers because they enjoy the added value of intelligent everyday objects. This group in particular enjoys possible “open innovation” approaches. They are willing to express appropriate know-how and product wishes and, together with manufacturers and publishers, to work out these requirements for the other customer groups in the existing publishing product and then integrate them.

The buyer group “early adopters” acts cautiously, but shows a high willingness to consume published content about intelligent everyday objects. It is likely that these are customers who have a high degree of trust and commitment in the publishing product itself and are also influenced by the IoT for products (Herrmann and Huber 2013, pp. 267-268; Rogers 1962, p. 247). Publishers are increasingly integrating this customer group into the value chain in the form of “open innovation” approaches and benefit from the experience they have gained with the “innovators”. In this way, publishing products can be personalised together with publishing customers according to their needs. This results in a high data volume with individual and personal publication products that are tailored to the customer needs of the customer groups “innovators” and “early adopters”.

Publishing customers who belong to the “early majority” are increasingly concerned with the new content product. The goal of publishing management is to convince these customers of the quality and the existing credibility of the publishing product. This customer group wants to receive an almost mature publishing product, so that the integration via “open innovation” concepts, e.g. in the form of feedback loops, is not as effective for the success of the conviction of this target group as it is for “innovators” and “early adopters”. Rather, this group of buyers wants to receive a “high-quality” publishing product.

The “late majority” buyer group can be approached with ratings, communities and experience reports from other buyer groups. “Open innovation” approaches are almost pushed into the background. For this reason, it is crucial for publishing house management to win over suitable influencers as customers, which provide for a product acceptance of the further customer groups by appropriate reviews for this reason.

The “laggards” can be approached if consumption has established itself via intelligent everyday objects from the contents of the publishing house and, in addition to “print” and “online”, also shows noticeable buyer acceptance. This noticeable buyer acceptance can be promoted again by publishing houses, by moving customer reports into the foreground, with which the “laggards” can identify themselves, i.e. likewise the focus on influencers. “Open innovation” approaches are not prioritized by this target group. Rather, this customer group benefits from the integration of the previous customer groups into the various stages of the value chain in the form of “open innovation” approaches in order to obtain an almost mature, intelligent publishing product.

If one transfers Moore's approach to publishing management, it becomes clear that the approach to achieving competitive advantages in the form of “open innovation” approaches or focusing on influencers is changing in the gap between “early adopters” and “late majorities” described by Moore (1991, pp. X-XII, 20).

For “innovators” and “early adopters”, “open innovation” approaches are precisely the means of convincing consumers to buy and co-develop the publishing product under the influence of the IoT. The acceptance of “open innovation” approaches, however, is already declining among the “early majority” users, since they aim to consume an almost completely developed product. For this customer group and the following “late majorities” and “laggards” it is of crucial importance to integrate suitable influencers in the evaluation of the publishing product via intelligent everyday objects in order to strengthen the product acceptance of their (and the following customer groups). It is particularly important that the publisher's product has already been developed at a fairly high quality level (with the help of “innovators” and “early adopters” through “open innovation” approaches), so that this transition increases the

acceptance of the publisher's product for the following customer groups with regard to the product acceptance of the new intelligent publishing product and its evaluations by suitable influencers.

3. Conclusion and Discussion

3.1. Main findings

On the one hand the author has pointed out that with the development of new technologies around the topic IoT and the development of intelligent everyday objects as a possible content channel, publishers now have the chance to integrate a multitude of additional channels into their portfolio and to fill them with personalized, individual content for the different customer groups.

An essential key activity is the management of customer relationships and their different customer groups, i.e. the adaptation of publisher content via intelligent everyday objects. It is crucial to involve publishing customers in product development, in order to close the gap between “early adopters” and “late majority” customers (Moore, pp. XI, 20). According to Teece (2010, p. 189), the focus is on answering the question of what customers really value and how the product's range of services satisfies these needs in order to meet customer wishes and thus customer benefits. Osterwalder et al. (2011, p. 27) complement this question by stating what value is conveyed to the customer and what product and service package is offered to each customer segment. A tailor-made range of services tailored to customer needs contributes to the company's added value (Osterwalder et al. 2011, p. 27).

The most important point is therefore the adaptation to customer wishes by personalizing the product. Customer needs can be analyzed and fulfilled with the help of the different “open innovation” approaches: These “open innovation” processes can help to achieve the “bandwagon effect” for publishers in regards to their customers. This means that the various “open innovation” concepts satisfy customers with regard to their needs. The customers would hereby be part of the production process and thus have a decisive influence on the publisher's content. Thus, publishers can generate a higher number of customers within the different customer groups, which has a positive effect on the generation of further customers within the next customer group according to Moore (pp. XI, 20). The publishers thus have a tool to close the gap between “early adopters” and “late majority” customers (Moore, pp. XI, 20; Rogers 2003, p. 5).

3.2. Implications for Publishing Management

In conjunction with Rogers (2003, p. 5) “diffusion theory” and the adaption of Moore (1991, p XI), the work divides the various groups of publishers' buyers and develops recommendations for action for publishers to address customers in the IoT. According to the “diffusion theory” from Rogers (2003, p. 5), it is necessary to address the various buyer groups differently and during the various product launch phases. The aim of addressing the customer groups is to create or strengthen customer confidence and thus build up a stable, long-term customer relationship, thus increasing the relevance of the customer relationship.

In summary, Rogers' diffusion theory and Moore's adaptation can be used to develop a strategy for addressing publishers' customers that makes a positive contribution to successful intelligent publishing products. The author points out that the integration of influencers as

well as “open innovation” approaches - depending on the different customer needs of the different customer groups - positively influences the success of the customer approach and thus the distribution for the publisher management. Here, the focus on influencers - especially among the customer groups “late majorities” and “laggards” - is a key factor for the success of intelligent publishing products and their acceptance by all customer groups. Precisely because the acceptance of different customer groups builds on each other, the influencers are decisive for the acceptance of the publishing product via the content channel intelligent everyday objects for later following customer groups.

The business focus on good customer relationships has a positive effect on the reputation of publishers and promotes acceptance of the new content channels. In addition, the perception of the publisher's customers also benefits with regard to the user-friendliness of the new publishing product. The goal of publishing house management should be to ensure that the value proposition under the influence of the IoT corresponds to the changed customer needs and has a positive effect on the customer relationship and thus the adaptation of the various customer groups.

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***Global Adaptation, Local Expression: Taiwanese Trendy Drama
Highlighting 'Zeitgeist' - A TV Practical Perspective***

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Abstract

Trendy drama is an arising TV drama genre popularized in East Asia in the recent decades. Its role has been legitimised by the social and popular culture phenomenon based on its specific features in local TV productions. The aim of this paper is to review the features of trendy drama that transform with the time. For it, this paper utilises the in-depth interview combined with the literature highlighting the practical perspectives of TV specialists on this investigation. The findings of this paper foreground that this new genre, in comparison with the conventional TV drama productions, signifies the current trend of East Asian social atmosphere, and which is bringing this new genre back to its spirit. Importantly, the media text conveyed in the genre represents a tendency towards collective self-reflection in terms of social situation and media ethnics. This paper argues that trendy drama has been reinforced drawing on extra appealing features for TV marketing according to different local popular cultures such as Taiwan, Hong Kong and South Korea. However, the contemporary trendy drama production in highlights the most feature of this genre, zeitgeist. This meanwhile refers to the TV industry has symbolic power to express bottom-up force of popular culture through media in East Asia.

Keywords: trendy drama, media's symbolic power, collective self-reflection

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Introduction

In March 24, 2019, Taiwan's TV broadcast aired the first episode of the television series *'The World Between Us'* (Lu & Lin, 2019), which was produced by Taiwan Public Television Service cooperating with HBO. The name of the drama in traditional Chinese is 我們與惡的距離, literally referring to the distance between us and the evil. The drama displays an examination of the aftermath of a mass gun shooting with the scenario adapted from a real social affair occurred in Taiwan. A monologue, led by the murderer in the story, saying: "I have been aspiring to do something huge since I was little", signifies the 2014 MRT murderer Cheng Chieh's calm attitude when he was arrested. Inspired directly from Cheng's tragic case in which four people dead and 24 injured, the societal realist drama has departed from the typical over-idealized storylines that were set up with being acted by the stereotyped characters mainly act in the last two decades in Taiwan. It probes straight into reality. The drama aimed to explore the teenage psychic with 10-part TV drama series, examining the make-up situation of the lives of all those who had survived a mass gun shooting in a movie theater two years ago. The fictional story deals with the examination by interweaving relationships of the killer, the killer's families, the victims, the victims' families, the media and the defense teams.

As mentioned, such storyline had not appeared with public attention in the past two decades in Taiwan. Its departure from the popular TV drama of the mostly-idealized features reflects the audiences' disenchantment. The popular TV drama refers to 'trendy drama' that has been a new drama genre widely circulated within the East Asia since 2000 (Peng, 2018; Peng, 2012). Trendy drama originates from Japan in the 1990s, and it has developed based on local TV adaptations by South Korea, Taiwan and now Mainland China. Initially, trendy drama was created to describe the middle-class lifestyle in Japan's metropolis and the issues that the group faced and discussed. Subsequently adapted by the East Asian TV industries, the genre was renamed as 'idol drama' to appeal its market by the photogenic characters. Exemplifying the most famous, *Meteor Garden* (Chai & Tsai, 2001), which is also the first Taiwanese-produced idol drama, it was aired in 2001 in Taiwan and its popularity has been lasting till now. Its popularity in East Asia can be demonstrated by the following local productions in Japan (2005), South Korea (2009), and Mainland China (2018). The most significant is *Meteor Garden* firstly produced by the Taiwanese TV industry was actually adapted from a Japanese comic book *'Flower Boys'* (Kamio, 1992). The storyline, the settings of the scenes and characters in the drama and camera strategies manipulated in this genre are very distinct from the so-called conventional Taiwanese TV drama (Peng, 2012; Chen, 2008).

The fact that trendy drama has established a standard for local TV productions to earn a large dividend within the Asian TV market can be ascribed to its legitimation in the society. However, Taiwanese trendy drama has been reduced in production due to its limited market in the recent year. Despite this situation, the Taiwanese TV industry started to consider the essence of the genre production. This paper aims to examine the development of trendy drama in Taiwan and its implications for the Taiwanese society. The proposition is that trendy drama has been reinforced drawing on extra appealing features for TV marketing according to different local popular cultures such as Taiwan, Hong Kong and South Korea. However, the contemporary trendy drama production highlights the most feature of this genre, zeitgeist. The methodology

involves the in-depth interview combined with the literature highlighting the practical perspectives of TV specialists on this investigation. The paper argues that this new genre, in comparison with the conventional TV drama productions, signifies the current trend of East Asian social atmosphere, and which is bringing this new genre back to its spirit. Importantly, the media text conveyed in the genre represents a tendency towards collective self-reflection in terms of social situation and media ethnics. This meanwhile refers to the TV industry has symbolic power to express bottom-up force of popular culture through media in East Asia.

Motivation of trendy drama production and its development

Taiwanese idol drama emerged in the early 2000s. At that time, the main resources for producing Taiwanese idol drama were based on Japanese manga, and the main producers were Taiwanese independent production companies. Subsequently, more and more TV companies began to produce this genre because of its popularity in Taiwan. This paper includes Taiwanese TV specialists' viewpoints on the Taiwanese TV industry's motivation for producing idol drama. One Taiwanese producer, Mark Chen, was interviewed face-to-face using a semi-structured interview methodology. Producer Chen works for SETTV, the TV station that has produced idol dramas based on representing local cultures. In addition, I draw on other TV specialists' perspectives collected from previous formal and informal interviews by other researchers to develop the discussion in this chapter. In particular, the focus is on the perspectives of one director, Yuen-Hsun Tsai, and one producer, Yu-Shan Chen, both of whom have been successful in producing Taiwanese idol drama in the recent years.

Essentially, production of Taiwanese idol drama has developed from adapting the Japanese style to creating a specifically local genre. Initially, the idol drama genre was new and challenging for Taiwanese TV directors and producers. The format of the genre and its elements had appeared infrequently in Taiwanese local TV production previously, and they did not have any reference point to guide them in the production of this new genre. Hitherto, the Taiwanese idol dramas produced initially were mostly adapted from Japanese sources. Despite this, this new genre was deemed to satisfy the needs of the Taiwanese TV market at that time. Chen (2010) indicates that before idol drama, local TV dramas in Taiwan had audiences in their 40s, 50s and 60s, while the younger generations, in their 20s and 30s, had been ignored. He argues that the younger audiences "have been ignored when [scriptwriters are] structuring storylines" (personal communication, December 23, 2010). In this situation, the TV dramas would not be able to expand their audience groups. Chen proposed that the lack of storylines concerning the younger generations in Taiwanese conventional TV dramas is one of the main factors that has resulted in the large importation of Japanese and Korean trendy dramas into Taiwan during the early 2000s.

Director Tsai holds similar views about the motivation for producing Taiwanese idol drama. He (cited in Gao, 2009) related when he began to produce idol drama, there were still many unrealistic TV dramas with exaggerated and superficial dialogues, and plots that did not reflect people's ordinary life. He avers: "The new style of my TV work did not attempt to confront traditional dramas. My purpose was to provide Taiwanese audiences with a new genre of TV drama" (p. 192; translated by the researcher). Clearly, for Tsai, the Taiwanese TV market needed different forms of TV

programs in the early 2000s. He believed that a new production does not necessarily replace an existing one; instead, traditional drama can remain in conjunction with new trends to contend different audience groups.

Tsai exemplifies the first Taiwanese idol drama, *Meteor Garden* (流星花園) (Chai & Tsai, 2001), which is also his work, to explain further his motivation for producing a new TV genre for the Taiwanese TV market. Tsai (cited in Gao, 2009) comments that his enthusiasm for producing *Meteor Garden* (流星花園) happened because he realised trendy drama was “the kind of TV drama that should be very close to our life; the performances, materials, content, lifestyles are all very realistic and common” (p. 192; translated by the researcher). Tsai emphasises that *Meteor Garden* (流星花園) represents a love story of the younger generation, even though the story was based on a Japanese manga. Therefore, the portrayal of the young couple’s relationship in the drama appealed to the audiences when it was broadcast in Taiwan. In particular, the format of the drama provided a new feeling for Taiwanese audiences, such as the various styles of the characters, the dialogue, the settings, the costumes and the shots. It is apparent that Chen and Tsai have similar perspectives about the Taiwanese TV industry’s motivation to produce idol drama; these were due to the need for a new TV genre in the domestic TV market.

The previous study has discussed the fact that adaptation has become a crucial factor in the rise in regionalisation in the East Asian TV industry (Peng, 2012). In particular, Japanese TV production has played an important role in this rise. Both Chen and Tsai acknowledge that Japanese trendy drama became the main resource behind the formula and ideas for producing Taiwanese idol dramas in the initial stage. Chen (2010) observes that when Taiwanese audiences watched Japanese trendy drama broadcast on Hong Kong’s TV channel through an illegal satellite in the late 1990s, they were satisfied because the programs were very new and made them feel the stories in the program belonged to their generation. This led to the Taiwanese TV industry creating a new style of local production which accorded with the established form of Japanese trendy drama. Tsai also admits that adaptation became a method to produce a new style of local TV production; however, he considers it to be experimental at the beginning of the production. Tsai (cited in Gao, 2009) claims that when he produced *Meteor Garden* (流星花園) based on a Japanese manga, he attempted to keep the original format, including the story, settings and filming. At that time, he deemed the experience of producing *Meteor Garden* (流星花園) to be a good start in seeking different production techniques.

However, the adaptation of Japanese trendy drama has been criticised by many Taiwanese audiences insofar as Taiwanese idol dramas were merely imitations, and did not represent local Taiwanese lifestyles. Moreover, at that time, some senior TV producers disagreed with the adaption of Japanese manga because they thought it meant discarding local cultures (Lin, 2006). Idol drama was even deemed to be a form of cultural imperialism and a ‘metamorphosis’ which made local culture deteriorate. In this regard, Tsai did not acknowledge contemporary Taiwanese idol drama as an imitation of Japanese trendy drama. He (cited in Gao, 2009) claims, “I did not wish to make a product of an imported culture; instead, I sought and still seek to produce Taiwanese-ness” (p. 194; translated by the researcher). That is to say, Tsai attempts to produce TV dramas based on Taiwanese materials. His following works, such *The*

Hospital (白色巨塔) (Yu & Tsai, 2006) and *Black & White* (痞子英雄) (Yu & Tsai, 2009), were indeed produced from local scripts.

Chen (2010) supports Tsai's claim indicating that, in the beginning, it was very challenging for Taiwanese TV producers and directors who endeavoured to produce idol drama because the production was very new. Therefore, the adaptation became the major, but temporary way forward for this new type of local production. Chen further contends that Tsai's experiment of producing *Meteor Garden* (流星花園) was very worthwhile because it opened up a new vision of TV programs for Taiwanese audiences. Taiwanese audiences began accepting this new genre, identifying themselves more with the structure of this version of idol drama. This led to Taiwanese idol drama recently establishing storylines created locally. As a consequence, the Taiwanese TV industry has developed this particular genre successfully and now idol dramas made in Taiwan are starting to sell to the other countries in the Asian region. For example, SETTV has produced many Taiwanese idol dramas based on local scripts which have been profitable overseas during the last ten years.

From adaptation to creation, Taiwanese idol drama has become the most popular genre of TV programs in Taiwan. Chen (2010) opines that the age groups focused on by idol drama had been ignored by the marketing of conventional TV drama productions. Idol drama focuses on this group and heightens the relevant elements to appeal to these audiences, such as the urban lifestyles. Chen states, "The scenes of idol drama are usually set up in urban areas where the younger generations prefer to develop their career and life in the future" (personal communication, December 23, 2010). In addition, Chen agrees that the new attitudes towards life portrayed in idol drama are also acknowledged by most audiences saying, "What the characters say and how they behave in the drama and their lifestyle seem to be an indication for the audience about what to desire and learn about" (personal communication, December 23, 2010). Clearly, idol drama has developed to be an acknowledged, specific genre, which audiences consider as depicting younger persons' world.

For selling to a wider TV market within Asia, trendy drama was given a new term to emphasise idols in this genre advertise the photogenic characters. The Taiwanese TV industry treats idols as symbols of certain cultural values which are at the core of popular culture in the Asia TV market. Nevertheless, for this new term which emphasises the idols, the Taiwanese TV specialists hold different attitudes. Chen (2010) considers 'idol drama' as an appropriate term for this genre because it highlights the distinctiveness between the genre and traditional TV drama. Chen (2010) argues:

the term, idol drama, can definitely catch people's attention; especially the young generation [because idol drama emphasises] new actors who ... have some particular characteristics, such as having a pretty face and beautifully toned body, and having the potential to be a star". (personal communication, December 23, 2010)

Chen insists idols to be the most appealing part of this new Taiwanese drama; therefore, the TV industry should promote the drama by highlighting the name of the genre to attract the attention of the audience. Indeed, Chen's attitude can be associated with the symbolic power of the Taiwanese TV industry, which attempted to utilise

'idols' as the symbol for the marketing of this new local Taiwanese production. This accretion of symbolic power has led to success in the cultural industries, followed by economic success in other areas. For example, the fashion and accessories industry increased their sales due to the success of 'idol' drama.

Contrarily, Tsai disapproves of promoting the new genre by emphasising idols, preferring 'trendy drama' rather than 'idol drama' when he produced *Meteor Garden* (流星花園). Tsai (cited in Gao, 2009) argues that this new genre of TV drama should not only be focused on idols, even if they play an important part, but instead, the genre should be considered as being contemporary with the spirit of the times. He (cited in Gao, 2009) claims:

I always wanted to produce a new format of TV drama. The content is different from traditional dramas. I thought I just directed a new type of TV drama; I did not have any thought of it as the term, idol drama. I expected to produce a specific type of TV drama, which could represent 'our stories', not just being a fantasy but also a reality. (p. 59; translated by the researcher)

Clearly, Tsai emphasises the content of the new genre more than the idols, further contending that the term, idol drama, may attract immediate attention; however, the audiences will expect more than idols after viewing this new genre for a time. For example, through watching examples of this new genre the audiences may seek certain cultural messages or specific new ideas with which they can identify when desirous of following a popular trend. In this situation, Tsai believes the genre should put more effort into the content and offer relevant material other than just idols. He concludes that the TV industry has aimed to represent the ideas of fashion through idols in the drama, but "fashion comes and it goes" (p. 191). If producers give their efforts to fashion and idols only, this new genre will become superficial, and weakened in the future. Therefore, Tsai regards the term idol drama as unrepresentative of the spirit of the new genre he produces.

It is apparent that idols are specific symbols for the new Taiwanese TV drama; they become the specific and crucial element in Taiwanese idol drama. Chen (2010) intimated that idols could even be cultural signposts for this genre, which is expected to show "new faces" regularly (personal communication, December 23, 2010). He comments: "We attempt to stereotype the stars for a drama, so they will probably have an influence on the audience's point of view toward the drama ... this is the primary meaning of idol drama" (personal communication, December 23, 2010). Similarly, for Tsai, idols can be deemed as an important reference point for new TV productions. He (cited in Gao, 2009) indicates that new faces are part of the new format of this genre because they represent the new values of so-called 'pretty people'. Therefore, in his work *Meteor Garden* (流星花園) (Chai & Tsai, 2001), he seeks new faces as actors. Tsai says, "I created the four main male characters for this drama by using the idea of selecting new faces because the TV market requires new artists" (p. 192; translated by the researcher). Tsai further indicates that new artists can reinvigorate the domestic TV market and establish a new direction for local TV production. However, he suggests that TV producers need to be aware that they have to spend an extensive amount of finance and time training new actors. In particular, the new actors need to be trained as Asian idols for the Asian TV market, because these idols are currently a symbol of cultural production in a global market.

To summarise, Chen's and Tsai's perspectives are clear: 'idols' are the specifically key element in Taiwanese idol drama; the TV industry uses their stereotyped images to represent new norms of beauty. Additionally, the new genre opens the potential for introducing and connecting local Taiwanese culture to popular culture in Asia. This can achieve cultural exchanges for Taiwanese local culture in the Asian region. However, there has been a concern that the amount of Taiwanese talent available has not met the needs for these new TV productions. Chen (2010) thinks that idol drama has been developed so rapidly in recent years that the Taiwanese TV market has not had sufficient human resources to fulfill and act in the dramas. Furthermore, Chen reveals that when Taiwanese actors playing in idol dramas start to be appreciated by the public and become popular, they usually move to the big screen and films. Hence, there is always a lack of actors for idol dramas. In this regard, Chen suggests that the Taiwanese TV market needs to establish a star system of training new actors to produce idol drama in the future; otherwise, it could lead to declining development of Taiwanese idol strategy.

The emphasis on idols is not approved of to any extent by the Taiwanese TV producer Yu-Shan Chen, who (cited in Lai, 2008) argues that no one can individually represent an 'idol' in the present idol dramas because there are different idols for different groups in different contexts. Chen is of the opinion that using actors of different ages or any ordinary persons in idol drama can make the drama closer to ordinary people's daily life. Therefore, almost anyone could be a performer for this new genre. Chen believes that if actors are selected from among ordinary people who do not have an extremely attractive appearance, the stories of trendy drama would be closer to the audiences' everyday lives. If this idea flourished then in the dramas she produces, the characters are not emphasised as having extremely pretty faces; contrarily, they are depicted as having a role in ordinary life.

Instead of the emphasis on 'idols', the Taiwanese TV specialists now expect attraction of storylines. The Taiwanese TV specialists emphasise that the storylines of idol drama could feature diverse stories based on local scripts. The storylines representing contemporary lifestyles attract audiences because they can identify themselves with the local cultures conveyed in the drama. Chen (2010) proposes that "the idol dramas created locally reflects Taiwanese social reality more compared to previous productions" (personal communication, December 23, 2010); this increases the demand that Taiwanese idol dramas begin production based on local scripts. Local scripts can represent local cultures and contemporary ideas, and make the storylines of Taiwanese idol drama appear diverse. The importance of the storyline based on local scripts in idol drama is also emphasised by Tsai who (cited in Gao, 2009) believes the script and TV program creators should not leave their homeland because they must develop their work based on the inspiration of their own culture. He suggests that when the creators "engage themselves in their motherland" (p. 59; translated by the researcher), love their country and its people, and sympathise with local lifestyles, they will be able to produce good work. Furthermore, this work, which connects to their homeland, should be copious in quantity and quality. To sum up, storylines in idol drama should be improved being based on local scripts; in this way, the audiences will feel that the drama is very close to their ordinary lives.

The perspective of enhancing the storylines in Taiwanese idol drama by local scripts is supported particularly by the producer Yu-Shan Chen, who is also a scriptwriter.

She (cited in Lai, 2008) contends that love stories in this genre must be depicted with various scenarios; especially, the storylines need to be designed as experiences that could happen to ordinary people. She says that the visual elements applied in idol drama, such as costume and settings, are important in the production; however, the storylines are even more crucial, because they are the spirit of the dramas. In order to represent the spirit, Chen suggests, the storylines and endings of idol drama must be adjusted so as to enable the drama to look diverse and close to reality.

Conclusions

This paper has provided practical insights into Taiwanese idol drama production as given by Taiwanese producers and directors who have been involved in the development of this genre. From discussing the motivation for producing the new genre, the emphasis on the specific elements and its implications for the drama, it has shown that Taiwanese TV specialists were aware of the influence of this new genre in Asian societies before they began producing Taiwanese idol drama. This further demonstrated that the Japanese TV industry held symbolic power because the popularity of Japanese trendy drama encouraged its adaptation by other TV industries in the region. Therefore, in the early stage of the development of Taiwanese idol drama, this new local production reproduced the power of the Japanese TV industry. This is the reason that the early work was criticised for ignoring Taiwanese local culture and supporting cultural imperialism. Nevertheless, Taiwanese idol drama production was shown to begin expressing its own characteristics, based on local culture, in its later stages.

Apparently, the Taiwanese TV industry has found itself in an advantageous position in expressing its strength in producing popular TV drama for the Asian TV market. In particular, the TV industry has dismissed adaptation; it has started to produce TV dramas based on local scripts. This means that the Taiwanese TV industry has made an attempt to influence the Asian region in terms through the TV market's adherence to a blend of local scripts and popular culture. Taiwanese TV dramas have been sold to other Chinese communities since the 1970s; however, sales have gradually declined. Moreover, these sales were not based on a targeting strategy but simply for the purpose of profit; they did not aim to promote Taiwanese drama actively as a cultural production. Nevertheless, since *Meteor Garden* (流星花園) (Chai & Tsai, 2001) was successfully sold to Mainland China and other Asian countries, Taiwanese local production has been based on the representation of local culture with a global context in mind. This has led to an attempt on the part of Taiwanese TV producers to establish the Taiwanese brand for dramas in this new genre. The attempt was shown to mean the Taiwanese TV industry already had the ability to establish the specific symbolic form necessary to legitimise certain cultural meanings as part of popular culture in Asia. In such a way, Taiwanese local culture could participate in cultural exchanges within the Asian TV market.

Broadly speaking, the two opposing positions of developing Taiwanese idol drama and it being representative of Taiwanese local TV production have been reconciled. The first is that 'idol drama' should reflect contemporary Taiwanese society and culture, the specialists stating this in a number of different ways especially that the Taiwanese audience is the primary audience. In contrast, the second point emphasised the importance of appealing to a broader regional audience and growing the domestic

TV market, so ensuring the Taiwanese TV industry remains capable of continuing to produce quality drama. The views of the TV director and producers were embedded in this reconciliation of achieving success with a local Taiwanese audience.

Importantly, in spite of the decline of Taiwanese trendy drama production, the circumstances have brought forth a reflection to Taiwanese TV specialists. They seek for the deeper cultural meanings embedded in the media text of the genre. Therefore, the recent TV dramas, such as *The World Between Us*, represents a tendency towards collective self-reflection in terms of social situation and media ethnics. It demonstrates that trendy drama has been reinforced drawing on extra appealing features for TV marketing according to different local popular cultures such as Taiwan, Hong Kong and South Korea. However, the contemporary trendy drama production in Taiwan highlights the most feature of this genre, zeitgeist. This meanwhile refers to the Taiwanese TV industry has symbolic power to express bottom-up force of popular culture through media in East Asia.

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