AUGMENTATION REALITY AS A TRENDS ORIGINATION FACTOR IN THE FASHION INDUSTRY

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The purpose of the scientific paper is to determine the potential impact of virtual / augmented reality (VR / AR) technologies on the formation of fashion trends and the development of other activities of the fashion industry; to analyze the role of VR / AR technologies as trend generators and trend accelerators of the fashion market and determine the mechanisms of their influence on the generation of innovative design solutions. The research methods are based on a system approach to determining the impact of VR / AR technologies on the fashion industry development; a historiographic analysis of the dynamics of the development of VR and AR technologies showed that they are being actively implemented at all stages of the life cycle of a fashion product; research into the prospects for the application of these technologies and the results of their impact on the fashion industry has been made with reference to the "impact points" of technologies for each stage. The scientific novelty is to determine the mechanisms of VR / AR technology impact on all stages of the fashion product life cycle. The concepts of "trend generator" and "trend accelerator" of fashion were formulated. It is shown that trends of fashion are not born under the influence of VR / AR technologies, but by association with the characteristic images for which these technologies are the media environment. That is, the VR / AR technologies are not trend generators, but the trend accelerators of fashion, technological trends in the fashion market, and carriers of images that have trend-forming fashion potential. Conclusions. It was found that the VR/AR technologies become trends in the technological development of the fashion industry. Using the influence of powerful machine intelligence on the mind and creativity of a person can yield fruitful results in the absence of suppressing the imagination of the author – the generator of ideas. The feasibility of engaging the VR / AR technologies at the design stage of design artifacts is to extend boundaries of generating imaginative ideas. Since the AR technology creates the conditions for the generation of innovative images of fashion objects, and the generation of images, in turn, creates conditions for the emergence of fashion trends, it was concluded that the AR technology can be attributed to potential trend accelerators.

Keywords: virtual reality; augmented reality; trends of fashion; impact points, trend generator; trend accelerator.

Introduction

The modern fashion industry under the influence of the transience of its trends and high technologies is more than ever subject to the unspoken rule, which has become a survival factor for the fashion business: "Be on the wave of innovation or disappear". New technologies, such as virtual and augmented reality, demonstrate a high potential to influence the development of the fashion industry. In the conditions of total digitalization of business operations and domestic procedures in the field of design, a number of questions arise: Will technology advances improve the search for innovative design solutions, what trends will the digital revolution bring and can they radically change the fashion of the future? On these issues, an actual problem is being formed – the analysis of the potential, mechanisms and factors influencing the technologies of virtual / augmented reality (VR / AR) on the formation of fashion trends and other activities in the fashion market. The solution to this problem will help find ways of sustainable development of the 21st century fashion industry.

Today, there are a large number of publications on the impact of digitalization achievements, including the technology of virtual and augmented reality on the future of the fashion industry.

The virtual reality (VR) is a model of the world created by technical means, which is presented to a person through his/her senses with an imitation of actions and reactions to actions, and which blocks communication with the real world. The augmented reality (AR) is a model of the world created by technical means with the display of the real situation in a real environment with the addition of virtual components and sensory influences without blocking communication with the real world (Skrynnikova, 2017).

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ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

Analysis of the dynamics of the development of VR and AR technologies in society and in the fashion industry relegates the beginning of virtual reality as special technology to the 50s, and the technology of augmented reality – to the 90s of the twentieth century. As a mass industry, the VR / AR arose in 2016, when virtual reality glasses for ordinary users went on sale (Skrynnikova, 2017).

In the fashion industry, the VR and AR applications were first associated with virtual fitting rooms, so that people could "test" newfangled trends at home, and with demonstrations on the websites of fashion week events. Now virtual and augmented reality represent a powerful digital platform for retail intensification. Brands put into operation virtual fitting rooms and "magic mirrors", which allow to try on a virtual model on the real image of the buyer, as well as organize virtual demonstrations from the podium. As part of a comprehensive study of the state of the fashion industry in 2018, it became clear that leading innovators in the reporting period in the search for new ways to generate values demonstrate the capabilities of artificial intelligence (AI) in all links of the chain of creation, implementation and maintenance of the fashion product. Among the main trends of 2019 are the acceleration of the launch of new fashion products to the market, the increase in the digital presence in the fashion business processes by mastering the digital services and analytics platform, the convergence of art and science based on merchandising, and improvements in marketing forecasts. For companies, the issue of how to quickly join the online retail platform is becoming increasingly relevant (The state of fashion 2019, 2018).

As there is a massive installation of the VR / AR technologies throughout the world in various fields of activity, it is believed that their role in the progress of society is to move human communications to the next level, which is capable to change the lifestyle radically. In the second decade of the century, the AR and VR technologies became the basis for electronic fashion commerce. Development companies of digital transaction platform are already providing solutions for using virtual reality elements in retail. The use of VR technology opens up new opportunities for demonstrations at fashion weeks. The unique film in the technology of virtual reality "Mirror to the Soul" and from the 31st season of Mercedes-Benz Fashion Week Russia has been awarded at the Virtual Reality Festival (Zhuravleva, 2015) in the category "The Best VR Travel Film or Experience".

In Ukraine, there are also trends in convergence of high-tech and fashion technologies. In the fall of 2018, the Ukrainian Fashion Week team presented the Fashion Experiment project. SkyWell Software created an integral visual and ideological concept from the models of Ukrainian designers in rder to present designer clothes in New York and Tokyo (VR showcase for Ukrainian Fashion Week, 2018).

An analysis of the examples discussed above in conjunction with materials from publications, exhibitions, with numerous digests, descriptions of specific implementations of technologies, reports, presentations at TED conferences (technology, entertainment, design) (Milk, 2016) gives reason to conclude that the VR, AR and AI technologies are actively being introduced by leading fashion companies at all stages of the life cycle of a fashion product.

There are significantly fewer reports on the use of technology to activate the search for innovative design solutions. It is impossible to find materials describing the mechanisms of the stimulating influence of VR, AR and AI elements on the creative generation of innovative design solutions. The smallest number of reports falls on a phased analysis of the role of technology of additional reality in the processes of artistic design of modern clothing models. But there are already offers for services of virtual three-dimensional modeling based on two-dimensional model developments, which can replace the production of models in the material. There are examples of demonstrations of completely virtual collections, models of which exist only in virtual space (Zhuravleva, 2015; Berg et. al., 2018).

Materials that reveal the capabilities of technology to improve the design / implementation of a fashion product are primarily descriptive. The publications do not contain descriptions of the features of transferring real models into virtual three-dimensional space, preparing virtual design artifacts in 3D printing; practically, they do not analyze the features of virtual design using avatars, as well as issues of convergence of related specializations and the expansion of design competencies under the influence of automation.

A separate topical, still poorly studied, problem is the analysis of the potential impact of the VR / AR technologies on the formation of trends in a wide range of fashion industry phenomena – from fashion trends with features of mass production of "fast fashion" models, trends in targeted design technology and retail of fashion products.

The purpose of the article

The research purpose is to determine the potential impact of the VR / AR technologies on the formation of fashion trends and the development of other activities of the fashion industry. To achieve this purpose, it is

ДИЗАЙН

ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

advisable to analyze the dynamics of the development of VR / AR technologies in society and in the fashion industry, and use the results of the analysis to assess the level of adoption of these technologies by leading global brands. Further, based on the system analysis, it is necessary to determine the structure of the trend-forming potential of VR / AR technologies and characterize the mechanisms of their influence in the projection on the spectrum of the fashion industry, including the formation of fashion trends. In order to determine the impact potential of VR / AR fashion trends, it is necessary to conduct a comparative analysis of the mechanisms of their influence on the generation of innovative design solutions with the traditional factors of the formation of carrier elements of fashion trends.

Presentation of the main material

The transfer of traditional methods of artistic projecting of design artifacts to a virtual digital 3D environment with support for automation systems of the technological chain of operations, applied cloud services, reference libraries of material parameters will require a significant revision of the algorithms for constructing design solutions.

As the analysis of relevant materials shows, virtual reality is a product created by machine intelligence, with the perception of which the real situation is replaced by a virtual model. The augmented reality is formed as a result of the synthesis of the perception of reality with a digital model, which complements this reality.

In the course of analysis, the task arises to determine the nature and mechanism of influence of technologies on the formation of trends in the fashion industry. Can technology, in particular, advanced technology, play the role of a generator or accelerator of trends formation? Can it become a trend in certain areas of development of the fashion industry?

The nature of the impact can be differentiated into the following categories:

the VR / AR technologies (or one of them) in a certain direction of the fashion business are:

- trends;
- trend accelerators;
- trend generators.

If a trend is understood as the main characteristics of the development of a process that prevail in a specific period of time, in this scientific paper a trend accelerator is the ability of a factor to accelerate the development of a trend, and a trend generator is the ability of a factor to induce trends.

The analysis of the prospects for the application of these technologies and the results of their influence on the fashion industry should be extended to all stages of the life cycle of a fashion product: from the generation of design solutions to the materialization of models, the production and sale of products to the final consumer (in some cases, with subsequent support in operation).

The life cycle of a design product can be represented as composed of four stages: design, production, sale (retail), as well as the stage of support in operation. Analysis of the potential impact of VR / AR technologies on each of the stages of the life cycle of a fashion product is advisable to associate with the "points of impact" of technologies on the stage.

The design stage is charged with the reproduction of fashion trend carrier elements in fashion products, so an analysis of the impact of VR / AR technologies on this stage allows us to understand whether they are trends, trend accelerators or trend generators of fashion trends. From the perspective of the influence of VR / AR technologies, it is advisable to present the design stage in the form of a sequence of 3 stages – the pre-design stage, the construction stage of design solutions and the stage of their modeling, and analyze them separately.

After identifying a social order – a signal for the presence of a need for a particular fashion product, the designer generates an initial generalized idea of its image, which is a prerequisite for the start of the project, that is, for the launch of the pre-project stage. The pre-design stage is characterized by the requirements for awareness of the feasibility of developing a new product and is accompanied by marketing and social research with the definition of the target group of consumers, the prediction of their expectations and the extent to which the expectations correspond to fashion trends, with an assessment of the optimal batch volume of products. Based on the research results, the generalized image of the product adapts to the requirements of consumers and harmonizes with fashion trends. Thus, at the pre-design stage, the theme and conception of the design project is formed and substantiated.

An important result of the pre-design research is to determine the relevance of the project in the context of market requirements, clarify the client base and the requirements of a "social order" to create a fashion

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ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

product with certain characteristics regarding fashion trends. These findings are implemented with the involvement of innovative methods and means of collecting, processing and analyzing "big data". At the present stage of processing large arrays of unstructured information the analysis is carried out on the basis of the "data mining" technology, which organically combines formalized, statistical and heuristic methods of analysis. One of the areas of data mining is the visualization technology, in which the VR / AR methods and techniques are actively used. From this point of view, VR / AR can relate to technological trends at the stage of pre-design research.

However, this technological trend does not affect the formation of fashion trends. It is usual to study future trends in fashion design using materials of trend setting agencies, analyze them using materials of coolhunters who are looking for "trends" that spontaneously originate in the atmosphere of the streets, and new trends can be identified by analyzing the creativity of new generation designers. Since the younger generation of designers has a heightened sense of fashion, their work is of particular interest, as it is presented in numerous sources and also presented by fashion show centers (Gallery, 2018; MBFWRussia Fashion Series, 2018).

Effective support of the process of operation with "big data" can be modeling in the virtual space VR / AR "street fashion" or characteristic plots from currently popular films, fashion shows, game situations from the repertoire of computer games. The role of VR / AR at the stage of pre-design research is to visualize the positive experience of using design solutions based on youth subcultures, the public trend "DIY" (Do it yourself), the use of the latest materials and technologies in composite solutions of design objects. The influence of VR / AR technologies at the pre-design stage of the projecting phase can be designated as the first "impact point".

At the stage of construction of design solutions, a detailed elaboration of the project idea takes place with the search for design solutions and their visualization in the form of a two-dimensional sketch. The search for innovative design solutions is usually influenced by at least two primary sources: one of them is the carrier of fashion trends, the prototype of the product, and the other is the creative primary source for transferring its characteristic features and providing the created solution with novelty of perception. An important result of this stage in terms of the impact of technology on the development of trends is the visualization of images of design solutions with their transfer from the space of ideas in the mind of the author to a two-dimensional sketch. The second "point of impact" of VR / AR technologieson the formation of innovative design solutions is at the stage of constructing design solutions at the design stage.

At the modeling phase of the design stage, design solutions are embedded in the finished image of a modern clothing product and its three-dimensional materialization in the form of a model from a real material of the product or visualization in the form of a virtual 3D model takes place. The visualization capabilities of design solutions in the form of a virtual 3D model form the third point of VR / AR impact on the design process.

The analysis of the emergence of trends based on materials from various sources, as well as from the perspective of "impact points" at the pre-design stage and the stages of construction and modeling of design solutions suggests that technologies, even advanced ones, do not have trend-forming potential in the context of fashion trends, but they can play the role of technological trends. That is, at the phases of the design stage, VR / AR are not trend generators of fashion. They can be technological trends in the context of the techniques of visualization, modeling and materialization of design solutions.

Fashion trends originate not under the influence of the technologies themselves, but of characteristic images for which technologies can be a media environment. That is, the VR / AR technologies are not trend generators of fashion trends, but carriers of images that have trend-forming potential and generators.

An example is the "mosaic" trend in graphics, which arose under the influence of images distorted by the quantization noises of portraits of human faces. In the process of low-rate digitalization of images in areas with a smooth transition of brightness, "false contours" arise, which in some scenes is perceived as a grotesque transformation of the surface into a mosaic structure. This side "digital" artifact is used in graphics as a technique for enhancing the image expressiveness.

The second example is the influence of the youth movement (*subculture*) "cosplay" on the trends in the youth costume. The "Cosplay" subculture is a theatrical costume and role-playing representation of the images materialization of the heroes of comics and computer games, which is characterized by the most complete reconstruction of the images of comic book characters, anime or computer games in the costume and image of a representative of the subculture – a cosplayer. The appearance of mass production of attributes and cosplay costumes indicates the emergence of a fashion trend not under the influence of the augmented reality technology, but under the influence of cosplayers. The brutal "ears" on hats and hoods, "tails" on

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ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

jackets and coats, shoulder belts, leather belts, shoulder pads of unusual shape and metal inlays on gloves are manifestations of the influence of cosplayers on the design of modern clothes.

Another example of the formation of trends in the reconstructive-compilation direction in a youth costume is the tendency to reproduce in the models the characteristic features of the images of the virtual world characters of computer games. The development of three-dimensional visualization and animation programs created a technological platform, and the ideas of augmented reality – the plot direction for computer games. Visual effects, unlimited possibilities of modifying images in terms of augmented reality, colorful scenes and the fascinating narrative of computer games gave fashion designers a chance to distance themselves from existing fashion products. The origin of the "cyberpunk" style is not based on the technology of augmented reality, but on the impression from the images of the characters of the computer saga generated by the environment of augmented reality.

A great influence on the formation of youth fashion have iconic typed image figures, the carriers of which are technologies of show business, cinema, television, advertising. The technology of augmented reality has the greatest potential for generating cult typed image figures of heroes of fairy-tale and quasi-realistic stories.

Since the search for innovative design solutions is carried out under the impression of real prototypes from the fashion world, the use of AR technology is effective at this stage. The mechanism of influence of AR technology on the design process can be interpreted as follows. As a result of the synthesis of the image of a real prototype with a digital model of the virtual source, the creative potential of innovativeness is generated. Impressed by the transformation of the image of a real prototype in a virtual augmented space, the author's consciousness is changing. A change in consciousness may be emergent. The qualitatively new state of consciousness of the individual consists in the transition from the passive perception of the environment to the active generation of the media environment in which innovative images of fashion objects spontaneously originate. Since the generation of images creates the conditions for the emergence of fashion trends, the AR technology can be attributed to potential trend accelerators.

In order to implement creative innovative potential in the augmented reality space, it is necessary to create an informative, powerful, naturally harmonious and unobtrusive layer of digital information over the real world. Instead of blocking (as in virtual reality) or distorting (as in mixed reality) the reality of the individual, to achieve the emergence of the state of consciousness, metadata must be presented that are capable to harmonize with the real world and not suppress the sense of reality.

If these data purposefully add something useful to the synthesized model of the situation (for example, they recreate the images of a particular trend in the stage of generation), consciousness will be able to effectively generate innovative images of fashion objects that can stimulate the development of this trend.

The augmentation of reality contributes to the expansion of the boundaries of fantasy and the removal of professional inertia of thinking in the process of generating creative design solutions. The feasibility of engaging the VR / AR technologies at the design stage of design artifacts is to extend boundaries of generating imaginative ideas. Using the possibilities of influence of powerful machine intelligence on the mind and creativity of a person can yield fruitful results in the absence of suppressing the imagination of the author – the generator of ideas.

The third "point of impact" of VR / AR technologies on the life cycle of fashion products arises in the process of materializing fashion objects with the latest tools, in particular, using 3D printers. The fourth "point of impact" can be associated with the processes of improving the technology of manufacturing products and improving the methodology of project management at the experimental and working stages of production. The following "points of impact" of VR / AR technologies are related to product promotion on the market based on information and visual devices of marketing, merchandising and retail, with the formation of positive user experience and product support in operation. At these stages, VR / AR technology plays the role of technological trends. The trend of the fashion industry is also the use of VR / AR technologies for product model presentations and demonstrations at a geographic distance from the creative studio in the form of a "virtual podium". "Telepresence" systems allow us to create virtual meetings and consultations, remote group work on the development of clothing collections and evaluate the results of work in the form of a virtual podium or fitting room. The use of modern audiovisual systems for displaying information about products in the "augmented reality" mode opens up broad prospects for another "point of introduction" of the impact of VR / AR technologies in the direction of individualization and targeting of design. In order to implement this type of systems, tools and techniques are used on the technological platform of augmented reality with the addition of specialized information panels that are connected to databases on products, services and advertising and which include tools for measuring parameters of a human figure, as well as tools for image processing and recognition.

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ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

The fact that VR / AR technologies have become technological trends in the fashion industry it is confirmed by the desire of innovative companies to create a chain of services using virtualization and an increase in the real situation that supports the entire life cycle of a fashion product. Modern solutions for the entire life cycle of the fashion business using VR / AR and AI technologies are offered by Gerber Technology and Avametric, which decided to combine resources and technological developments in order to achieve the task. These companies have entered into a cooperation agreement for the provision of 3D solutions that cover the entire value chain of the development of fashion products. While Gerber has solutions focused on the design and production of garments throughout the model's life cycle, Avametric already offers virtual reality programs for consumers that have aroused interest in some of the world's leading fashion brands. Collectively, these two companies are the only supplier of an integrated end-to-end three-dimensional platform that seamlessly integrates with the popular Gerber AccuMark 2D design product (Technology, 2018; Solution for the fashion business life cycle, 2018).

The scientific novelty is to determine the mechanisms of VR / AR technology impact on all stages of the fashion product life cycle. The nature of the impact of VR / AR technology on the formation of fashion trends differentiated by categories of generation and acceleration of fashion trends. The concepts of trend generators and trend accelerators of the fashion market have been introduced and characterized. It was found that at the stage of design of fashion products, in order to increase the efficiency of generating innovative design solutions, it is more efficient to use the AR technology. One of the new results of the analysis of the mechanisms of digitalization impact on fashion design is the establishment of the fact that fashion trends do not originate under the influence of the digital (in this case, VR / AR) technologies, but as associations with the characteristic images for which these technologies are the media environment. It is validated that the VR / AR technologies are not trend generators, but the trend accelerators of fashion, technological trends in the fashion market, and carriers of images that have trend-forming fashion potential.

Conclusions

In the context of informatization, the transfer of traditional methods of artistic projecting of design artifacts into a virtual digital 3D environment will require a revision of the algorithms for constructing design solutions and mastering the latest methods of extracting, processing and reproducing information. The technologies of virtual and augmented reality open up new possibilities of projecting design using the synthesis of the achievements of science, technology and art in both traditional and new directions of creativity. The development of three-dimensional visualization and animation programs created a technological platform at which AR / VR technologies have reached a new level of development, at which they can be viewed as a new direction of art in the origin stage.

In the course of the study, the potential impact of VR / AR technologies on the formation of fashion trends and development trends in other areas of the fashion industry has been described. Answers to questions are formulated whether technology, in particular, advanced, can play the role of a generator or an accelerator of the formation of trends, can it itself become a trend in certain directions of the development of the fashion industry.

Based on the results of the analysis of the dynamics of the development of VR and AR technologies, it was found that VR / AR technologies (or one of them) can be trends in the technological areas of the fashion industry and trend accelerators in the directions of the formation of fashion trends. An analysis of the prospects for the application of these technologies and the results of their influence on the fashion industry, carried out for each of the stages of the life cycle of the fashion product with reference to the "impact points" of technology on the stage, showed that technologies, even advanced ones, do not possess trend-forming potential in the context of fashion trends. Trends originate not under the influence of the technologies themselves, but under the influence of characteristic images for which technologies are the media environment. That is, the VR / AR technologies are not trend generators, but generators and carriers of images that have a trend-forming potential in the context of fashion trends. The augmentation of reality contributes to the expansion of the boundaries of fantasy and the removal of professional inertia of thinking in the process of generating creative design solutions. The feasibility of engaging the VR / AR technologies at the design stage of design artifacts is to extend boundaries of generating imaginative ideas. Using the influence of powerful machine intelligence on the mind and creativity of a person can yield fruitful results in the absence of suppressing the imagination of the author – the generator of ideas.

Further research should be directed to detailing the chain of services supporting the full life cycle of a fashion product in a virtual space with 3D modeling of design artifacts.

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ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

References

Berg, A., Heyn, M., Hunter, E., Rölkens, F., Simon, P. and Yankelevich, H. (2018). Measuring the fashion world. *McKinsey & Company.* [online]. Available at: <https://www.mckinsey.com/industries/retail/ our-insights/measuring-the-fashion-world> [Accessed 17.03.2019].

Gallery. (2018). *Mercedes-Benz Fashion Week Australia.* [online]. Available at: < http://mbfashionweek.com/gallery> [Accessed 17.03.2019].

MBFWRussia Fashion Series. (2018). *Mercedes-Benz Fashion Week Russia.* [online]. Available at: <http:// mercedesbenzfashionweek.ru/designers> [Accessed 17.03.2019].

Milk, Ch. (2016). The birth of virtual reality as an art form. *TED.* [online]. Available at: <https://www.ted.com/talks/ chris_milk_the_birth_of_virtual_reality_as_an_art_form> [Accessed 17.03.2019].

Skrynnikova, A. (2017). Vse, chto nuzhno znat pro VR/AR-tekhnologii [Everything you need to know about VR / AR technology]. *Rusbase.* [online]. Available at: <https://rb.ru/ story/vsyo-o-vr-ar/> [Accessed 10.03.2019].

Solution for the fashion business life cycle. (2018). *Gerber Technology.* [online]. Available at: <https://www. gerbertechnology. com/fashion-apparel> [Accessed 17.03.2019].

Technology. (2018). *Avametric.* [online]. Available at: <https://www.avametric.com/technology> [Accessed 10.03.2019].

The state of fashion 2019: A year for awakening. (2018). *McKinsey & Company.* [online]. Available at: <https://www. mckinsey.com/industries/retail/our-insights/the-state-of-fashion-2019-a-year-of-awakening (Accessed 17.03.2019).

VR showcase for Ukrainian Fashion Week. (2018). *Skywell Software.* [online]. Available at: <https://skywell.software/ portfolio/vr-showcase-for-ukrainian-fashion-week/(Accessed: 17.03.2019].

Zhuravleva, N. (2015). Novye vozmozhnosti: VR-tekhnologii na Nedele mody Mercedes-Benz v Moskve [New features: VR technology at the Mercedes-Benz Fashion Week in Moscow]. *New Retail.* [online]. Available at: <https://new-retail. ru/tehnologii/novye_vozmozhnosti_vr_tekhnologii_na_nedele_mody_mercedes_benz_v_ moskve_8312/> [Accessed 10.03.2019].

Список використаних джерел

1. Журавлева Н. Новые возможности: VR-технологии на Неделе моды Mercedes-Benz в Москве. *New Retai* : [сайт]. 2015. URL: https://new-retail.ru/tehnologii/novye_vozmozhnosti_vr_tekhnologii_na_nedele_mody_mercedes_ benz_v_ moskve_8312/ (Accessed: 10.03.2019).

2. Скрынникова А. Все, что нужно знать про VR/AR-технологии. *Rusbase* : [сайт]. 2017. URL: https://rb.ru/ story/vsyo-o-vr-ar/ (Accessed: 10.03.2019).

3. Gallery. *Mercedes-Benz Fashion Week Australia* : [site]. 2018. URL: http://mbfashionweek.com/gallery (Accessed: 17.03.2019).

4. MBFWRussia Fashion Series. *Mercedes-Benz Fashion Week Russia* : [site]. 2018. URL: http:// mercedesbenzfashionweek.ru/designers (Accessed: 17.03.2019).

5. Measuring the fashion world / Achim Berg, Miriam Heyn, Elizabeth Hunter, Felix Rölkens, Patrick Simon, Hannah Yankelevich. *McKinsey & Company* : [site]. 2018. URL: https://www.mckinsey.com/industries/retail/ our-insights/measuring-the-fashion-world (Accessed: 17.03.2019).

6. Milk Ch. The birth of virtual reality as an art form. *TED* : [site]. 2016. URL: https://www.ted.com/talks/chris_ milk_the_birth_of_virtual_reality_as_an_art_form (Accessed: 17.03.2019).

7. Solution for the fashion business life cycle. *Gerber Technology* : [site]. 2018. URL: https://www.gerbertechnology. com/fashion-apparel (Accessed: 17.03.2019).

8. Technology. *Avametric* : [site]. 2018. URL: https://www.avametric.com/technology (Accessed: 10.03.2019). Measuring the fashion world. *McKinsey&Co* : [site]. 2019. URL: https://www.mckinsey.com/industries/retail/our-insights/measuring-the-fashion-world. (Accessed: 17.03.2019).

9. The state of fashion 2019: A year for awakening. *McKinsey & Company* : [site]. 2018. URL: https://www. mckinsey.com/industries/retail/our-insights/the-state-of-fashion-2019-a-year-of-awakening (Accessed: 17.03.2019).

10. VR showcase for Ukrainian Fashion Week. *Skywell Software* : [site]. 2018. URL: https://skywell.software/ portfolio/vr-showcase-for-ukrainian-fashion-week/(Accessed: 17.03.2019).

ДИЗАЙН

ISSN 2410-1176 (Print) • Вісник КНУКіМ. Серія: Мистецтвознавство. Вип. 40 • ISSN 2616-4183 (Online)

АУГМЕНТАЦІЯ РЕАЛЬНОСТІ ЯК ФАКТОР ЗАРОДЖЕННЯ ТРЕНДІВ В ФЕШН-ІНДУСТРІЇ | Гардабхадзе Ірина Анатоліївна
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Мета роботи – визначити потенціал впливу технологій віртуальної/аугментованої реальності (VR/AR) на формування тенденцій моди і розвиток інших напрямів діяльності фешн-індустрії; проаналізувати ролі технологій VR/AR як тренд-генераторів та тренд-акселераторів фешн-ринку та визначити механізми їхнього впливу на генерацію інноваційних дизайнерських рішень. Методологія дослідження ґрунтується на системному підході до визначення впливу технологій VR/AR на розвиток фешн-індустрії; історіографічний аналіз динаміки розвитку технологій VR і AR засвідчив, що вони активно впроваджуються в усі етапи життєвого циклу фешн-продукту; дослідження перспектив застосування цих технологій та результатів їхнього впливу на фешн-індустрію виконано із прив'язкою «точок впливу» технологій до кожного етапу. Наукова новизна полягає у визначенні механізмів впливу VR/AR технологій на всі етапи життєвого циклу фешн-продукту. Сформульовано поняття «тренд-генератор» і «тренд-акселератор» моди. З'ясовано, що тренди моди зароджуються не під впливом самих VR/AR технологій, а як асоціації з характерними образами, для яких ці технології є медіасередовищем. Тобто технології VR/AR є не тренд-генераторами, а тренд-акселераторами моди, технологічними трендами фешн-ринку та носіями образів, які мають трендутворюючий потенціал моди. Висновки. Доведено, що технології VR/AR стали трендами розвитку технологічних напрямів фешн-індустрії. Використання впливу потужного машинного інтелекту на розум і креативність людини може дати плідні результати за умов відсутності придушення уяви автора – генератора ідей. Доцільність залучення VR/AR на етапі проектування дизайн-артефактів полягає в розширенні граней генерації образних ідей. Оскільки технологія AR створює умови генерації інноваційних образів фешн-об'єктів, а генерація образів, своєю чергою, створює умови для виникнення фешн-трендів, зроблений висновок, що технологія AR може бути зарахована до потенційних тренд-акселераторів.

Ключові слова: віртуальна реальність; аугментована реальність; тенденції моди; точки впливу; тренд-генератор; тренд-акселератор.

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Цель работы – определить потенциал влияния технологий виртуальной/аугментированной реальности (VR/AR) на формирование тенденций моды и развитие других направлений деятельности фэшн-индустрии; проанализировать роли технологий VR/AR как тренд-генераторов и тренд-акселераторов фэшн-рынка и определить механизмы их влияния на генерацию инновационных дизайнерских решений. Методология исследования основана на системном подходе к определению влияния технологий VR/AR на развитие фэшн-индустрии; историографический анализ динамики развития технологий VR и AR засвидетельствовал, что они активно внедряются во все этапы жизненного цикла фэшн-продукта; исследование перспектив применения этих технологий и результатов их влияния на фэшн-индустрию проведено с привязкой «точек воздействия» технологий к каждому этапу. Научная новизна заключается в определении механизмов влияния VR/AR технологий на все этапы жизненного цикла фэшн-продукта. Сформулированы понятия «тренд-генератор» и «тренд-акселератор» моды. Выяснено, что тренды моды зарождаются не под влиянием самих VR/AR технологий, а как ассоциации с характерными образами, для которых эти технологии являются медиасредой. То есть технологии VR/AR является не тренд-генераторами, а тренд-акселераторами моды, технологическими трендами фэшн-рынка и носителями образов, которые имеют тренд-образующий потенциал моды. Выводы. Показано, что технологии VR/AR стали трендами развития технологических направлений фэшн-индустрии. Использование влияния мощного машинного интеллекта на ум и креативность человека способно дать плодотворные результаты в условиях отсутствия подавления воображения автора – генератора идей. Целесообразность привлечения VR/AR на этапе проектирования дизайн-артефактов заключается в расширении граней генерации образных идей. Поскольку технология AR создает условия генерации инновационных образов фэшн-объектов, а эти образы, в свою очередь, создают потенциал для возникновения фэшн-трендов, сделан вывод, что технология AR может быть отнесена к потенциальным тренд-акселераторам.

Ключевые слова: виртуальная реальность; аугментированная реальность; тенденции моды; точки воздействия; тренд-генератор; тренд-акселератор.