

Character Designs in Relation with Artificial Intelligence And Creativity

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Abstract

Can artificial intelligence be creative? Artificial intelligence has been a source of inspiration for fields such as cinema and literature, and has started to become a part of industries that require creativity, apart from being a dystopian/utopian fictional theme in literature and science fiction films. (E.g. *Space Odyssey* (1968), *Bladerunner* (1982), *The Terminator* (1984), *Ghost in the Shell* (1995).

Creativity is an important concept in terms of comparing machine intelligence with human intelligence and talking about the ability of machine intelligence at the human level. Creativity deals with a feature and limits of human intelligence. Creativity can often be defined as the ability to come up with new and valuable ideas in a surprising or different way. The fact that artificial intelligence produces works in fields that require creativity (Graphic design, Animation, Cinema, Advertising and Marketing, etc.) has laid the groundwork for some questions such as

whether artificial intelligence is creative or not or and “can it be creative?”.

One of the areas where artificial intelligence has begun to stand out is character design. Character design, which is a part of visual communication, continues to be popular from past to present. Artificial intelligence tries to come up with new character designs using some reference images. Character designs created by artificial intelligence gained momentum especially on anime characters (Makegirlsmoe, Crypko etc.). The work of artificial intelligence in this field is considered important in terms of establishing a new connection between character design and artificial intelligence and questioning the creativity of machine intelligence in the design process.

Within the scope of this research, it is analyzed whether artificial intelligence contains creativity or not in terms of character design. This was revealed through a project of application. In the study, the concept of creativity was considered

important in terms of questioning the potential of artificial intelligence in character design. Experiments were conducted using datasets with different contents to question creativity. As a result of the experiments, human-artificial intelligence cooperation was experienced, and the character designs that could be made with artificial intelligence were applied in different channels and it was accepted that artificial intelligence was inspiring. The effect of artificial intelligence on character design has been examined not only in terms of creativity, but also in terms of technical (character animations) and social impact (user and character communication). Through artificial intelligence, the complex motor skills of the characters can be performed flexibly and naturally (Motion Intelligence), sentences can be translated into character movements (JL2P), two-dimensional static images can be animated to create a three-dimensional effect (Photo Wake-Up: 3D). This situation opens the doors of a new era in character animation. The developments that will change the relationship of the characters with the users are discussed in the character and user interaction section. Artificial intelligence supported virtual characters have started to influence users in many ways by getting ahead of non-interactive characters.

In the application project part of the research, a project was designed to explore the limits and

potential of artificial intelligence. The increasing continuation of violence against women shows that there is a need for more awareness on the issue. In the experiments and application project carried out in the thesis, it was found that the ability of artificial intelligence to create new combinations is much faster than a human. Artificial intelligence supports the designer to come up with a new idea. It is artificial intelligence itself that turns the implementation project of this thesis into a powerful idea. Artificial intelligence is much more than a passive tool for the designer to come up with the idea and implement it. New forms and combinations created by artificial intelligence pave the way for new ideas and projects.

Violence against women, which is an important social problem, is discussed in the application project of the thesis. The idea of the project was inspired by artificial intelligence, and the visuals were all created by artificial intelligence. Considering that creative works should be new, surprising and applicable, the visual outputs of artificial intelligence in this project are creative. For the first time, a creative process of human and artificial intelligence was completed together to raise awareness about violence against women. With this project, artificial intelligence approached the human limits and brought a new creativity and perspective to the field of design.

The project, which supports all women who are exposed to violence and emphasizes the strong and combative spirit of women, went beyond the stereotypical images of women victims of violence and emphasized the subject with a new creativity method. Artificial intelligence has created an idea process that encourages and supports women by breaking the visual language (bruises on the face and body, blood, etc.), which has become commonplace in women's violence, and supported this idea with the visuals it created. Experiments with artificial intelligence provided a method, inspiring the development of this project. Artificial intelligence is creative and inspiring for designers.

Artificial intelligence is not a passive tool like other technological software used by designers/artists (Adobe Photoshop, Adobe Illustrator, etc.). Its ability to learn and produce enables us to qualify it as a teammate. Media artist Refik Anadol, in his interview for his exhibition *Machine Memories and Space*, mentions that he sees artificial intelligence as a teammate rather than a tool: “Artificial intelligence is not my brush, it is my teammate (Anadol, 2021)”. Artificial intelligence is not a helpful tool; it is people's teammate who understands technology best.

Considering the current development of artificial intelligence, it can be said that human creativity will face a strong intelligence in the future. In line with the developments in deep learning and robotic systems, it can be predicted that strong artificial intelligences can take an active part in creative ideas and projects where they can gain experiences in life like humans. This means that hard-to-reach ideas and projects are possible rather than destroying human creativity.

