

Chapter 4

Human–AI Interaction in the Production of Cultural Symbols: An Implementation on Kilim Motifs

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ABSTRACT

This chapter explores how artificial intelligence can contribute to the production of visual cultural values and how we can collaborate with AI more effectively and creatively by adapting rug motifs that have existed since the early second millennium BC. The reproduction of these rug symbols with contemporary values acts, in a sense, as a revival of the Anatolian rug language. Generative AI tools have the potential to revolutionize representation and visualization through their ability to interpret and generate visual content. Rug motifs are powerful symbols of female identity, productivity, and creativity, especially in cultures where rug weaving is traditionally a female-dominated craft. By addressing issues of gender inequality and adapting these cultural symbols to the present through AI collaboration, this study seeks to rediscover and recontextualize women’s creative spirit within the framework of the modern world. Additionally, it aims to explore AI’s contributions and limitations in creating cultural visuals through human–AI interaction.

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INTRODUCTION

This chapter focuses not only on adapting traditional cultural symbols to the present but also on how they can be used as tools to highlight and address contemporary social issues affecting women. It has been argued that understanding and fostering collaboration between AI systems and human agents holds promise for breaking new ground (Wang et al., 2020; Fui-Hoon Nah et al., 2023; Huang et al., 2024). Dellermann et al. (2019) introduced the term “Hybrid Intelligence” to describe the collaboration between human intelligence and artificial intelligence (AI) to achieve more effective problem-solving and decision-making. Hybrid intelligence systems are defined as systems that can accomplish complex goals by combining human and AI to collectively achieve superior results than either could have achieved independently, and they continuously improve by learning from each other.

Generative AI is a rapidly expanding field that is transforming content creation processes (Fui-Hoon Nah et al., 2023). Recently, generative AI has made significant strides in providing dynamic elements and generating design alternatives (Oh et al., 2019). It has even empowered end consumers to produce creative content, particularly in visual production (Devineni, 2024). One of the most significant indicators of this shift is Boris Eldagsen’s prize refusal. He won first prize in the creative category of the 2023 Sony World Photography Awards for his ethereal, vintage-style portrait of two women in black and white. Eldagsen revealed that his award-winning image was not captured by a camera but created by AI (The Economist, 2023). His statement, indicating that he participated in the competition to test whether he could deceive the panel, underscores the escalating discourse on AI’s role in creative endeavors and demonstrates how AI can create its own style based on existing human-made examples. Generative AI tools have the potential to revolutionize representation and visualization with their ability to interpret and generate visual content (Chen, 2021; Furmanek, 2021). AI technology can learn from existing human-made examples and synthesize them (Abukmeil et al., 2021; Ye et al., 2024). In addition to the evolving potential of generative AI, the quality of the generated images is steadily improving, expanding the use of AI-generated visual content in various fields. The growing potential of generative AI has sparked interest in its application in diverse creative fields, including advertising, fashion design, user interface design, and visualization. Generative AI can automate tasks, streamline design processes, and collaborate in the creative phase (Sedkaoui & Benaichouba, 2024).

AI tools will not imminently replace all designers. Although creativity and imagination remain paramount strengths of artists, the trend toward collaboration between humans and AI in design processes is rising. As successful real-world applications of AI-human collaboration increase, academic studies are increasingly focusing on how combining human and AI strengths can resolve complex problems

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