

***Designing Creative AI Partners with COFI: A framework for Modeling
Interaction in Human-AI Co-Creative Systems***
JEBA REZWANA and MARY LOU MAHER, Summary:

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Summary:

The text presents a framework for the design and evaluation of human-AI co-creation systems. It explores the challenges and opportunities of collaboration between humans and artificial intelligence in the creation of creative products. The text emphasizes the importance of interaction design in these systems, highlighting different styles of collaboration and communication between human collaborators and AI agents. It introduces the Co-Creative Framework for Interaction Design (COFI), a framework that describes the components of interaction in co-creation systems, such as participation style, task distribution, initiative timing, and mimicry. COFI aims to guide the design of interaction models in co-creation systems and evaluate existing interaction models. The text also discusses previous research on human creative collaboration, interaction design in co-creation systems, and provides an analysis of interaction models in 92 co-creation systems to evaluate COFI. Finally, it identifies gaps in existing interaction models and suggests avenues for future developments, highlighting the importance of extending communication between humans and AI in these systems.

The COFI interactive design framework (Co-Creative Framework for Interaction Design) proposes an approach to model and understand interactions between humans and artificial intelligences (AI) in co-creation systems. COFI is divided into two main parts: interaction among collaborators (humans and AI) and interaction with the shared product.

In the first part, COFI defines the components of interaction among collaborators, including collaboration style and communication style. Collaboration style includes participation style, task distribution, initiative timing, and mimicry. Communication style encompasses intentional communication from human to AI, consequential communication from human to AI, and communication from AI to human.

The second part deals with interaction with the shared product, distinguishing between the creative process and the creative product. The creative process includes generation, evaluation, and definition, while the creative product focuses on the type of contribution and the similarity of contributions.

The analysis of interaction models in co-creation systems reveals three main clusters: the interaction model for pleasant generative AI agents, the interaction model for provocative generative AI agents, and the interaction model for diverse generative AI agents. Each of these clusters has distinct characteristics in terms of participation style, initiative timing, communication, and creative process.

In summary, COFI offers a comprehensive framework for understanding and designing interactions in co-creation systems, taking into account the different dynamics between human collaborators and AI

