ThematicPlane: Bridging Tacit User Intent and Latent Spaces for Image Generation

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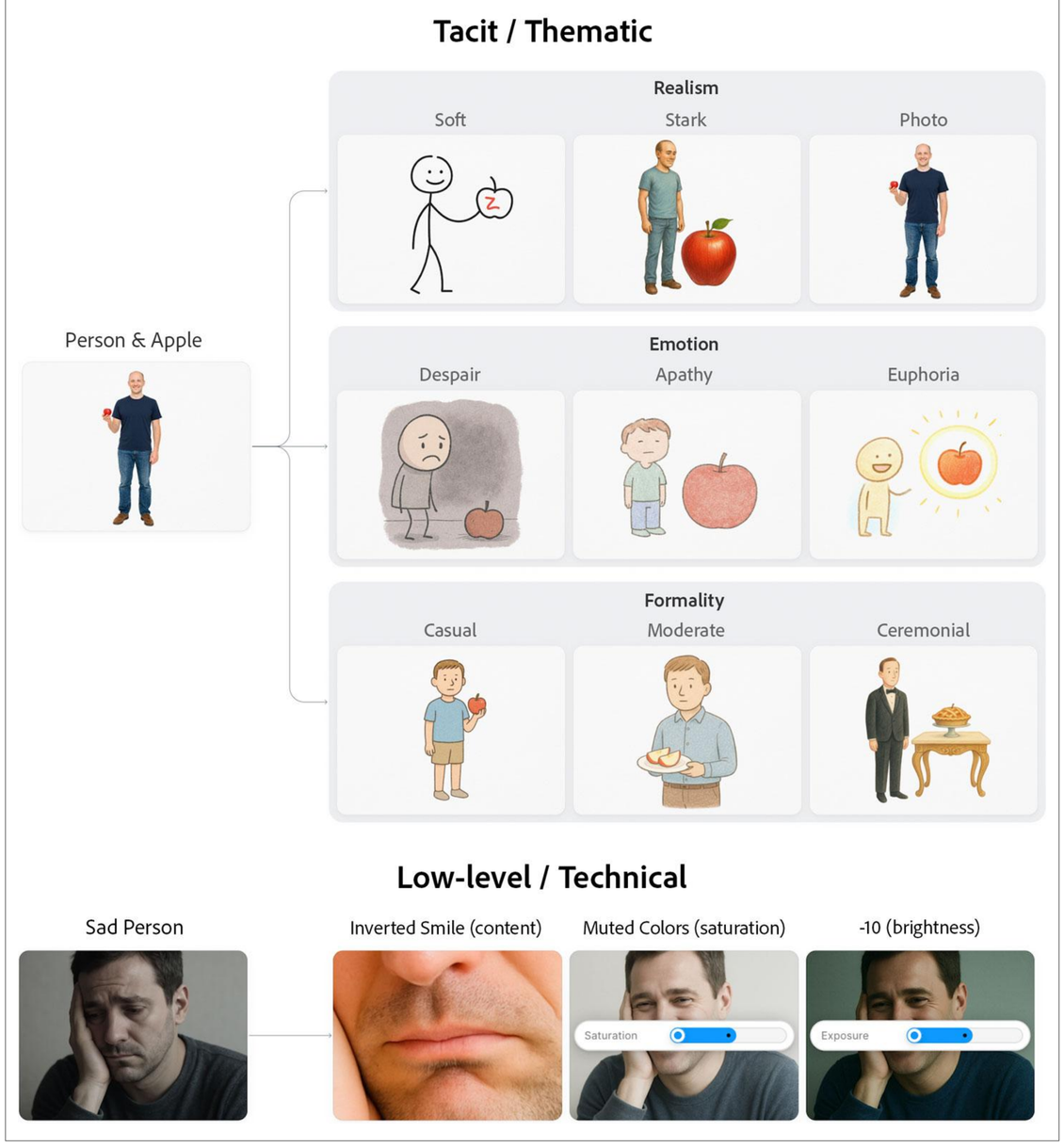
Abstract

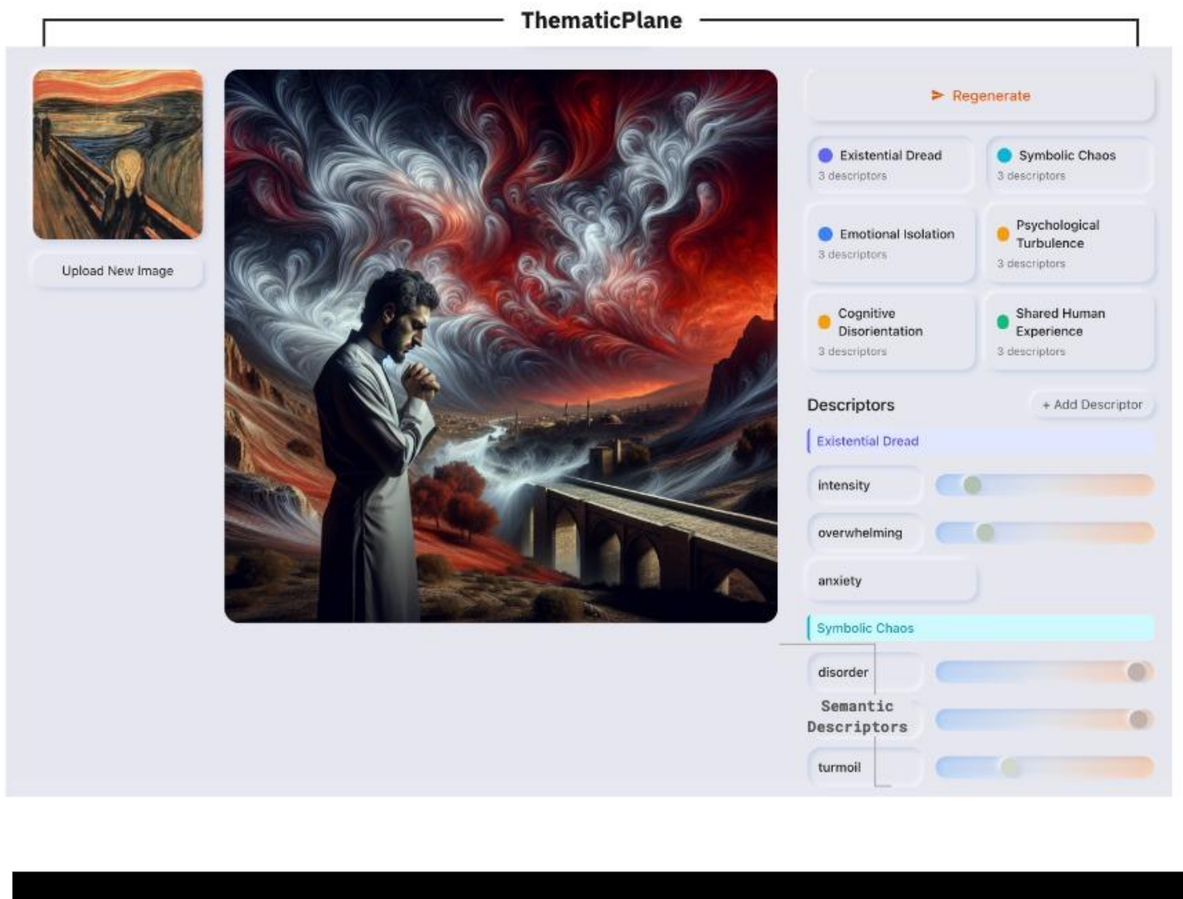
Generative AI has made image creation more accessible, yet aligning outputs with nuanced creative intent remains challenging, particularly for non-experts. Existing tools often require users to externalize ideas through prompts or references, limiting fluid exploration.

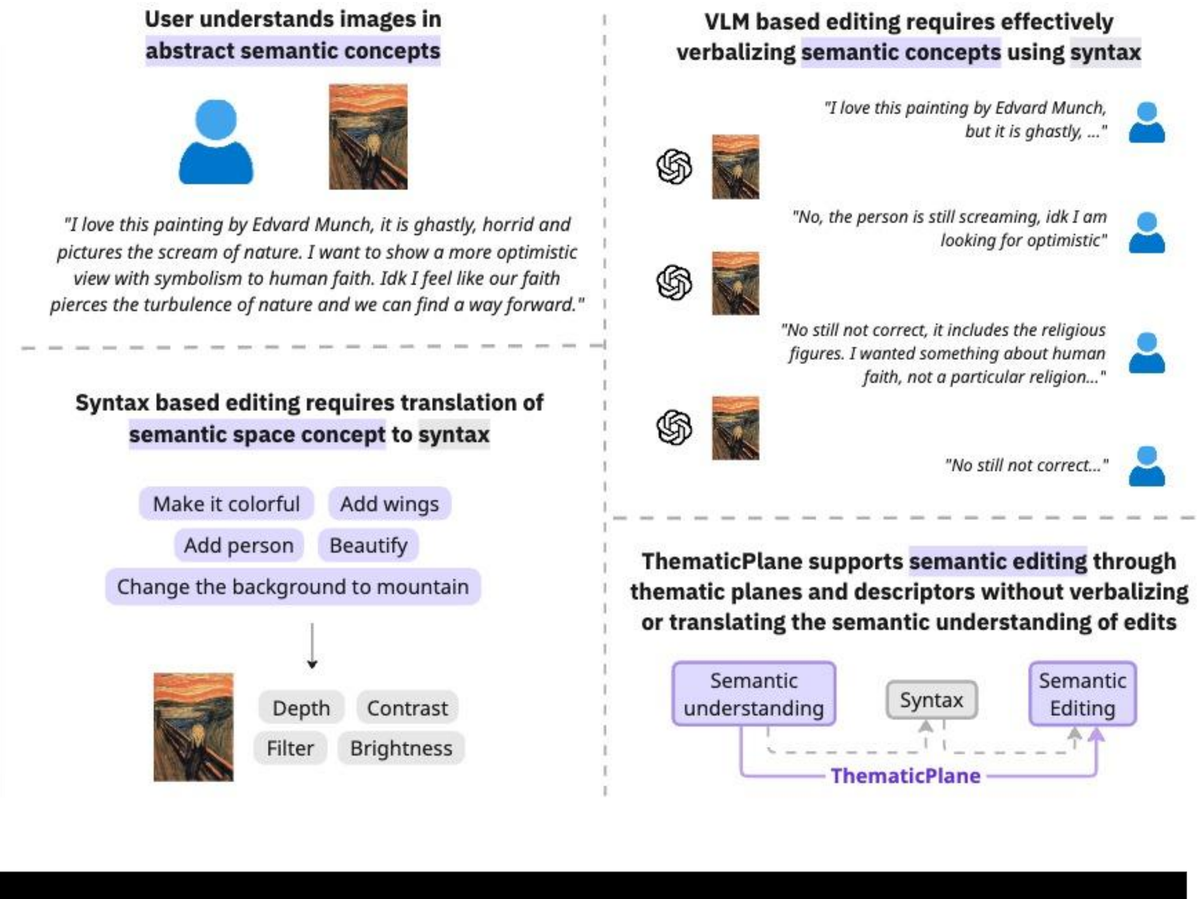
We introduce ThematicPlane, a system that enables users to navigate and manipulate high-level semantic concepts (e.g., mood, style, or narrative tone) within an interactive thematic design plane. This interface bridges the gap between tacit creative intent and system control. In our exploratory study (N = 6), participants engaged in divergent and convergent creative modes, often embracing unexpected results as inspiration or iteration cues. While they grounded their exploration in familiar themes, differing expectations of how themes mapped to outputs revealed a need for more explainable controls.

Overall, ThematicPlane fosters expressive, iterative workflows and highlights new directions for intuitive, semantics-driven interaction in generative design tools.

Tacit/Thematic vs. Low-Level/Technical Edits







System Overview