

User-AI Communication Patterns: Taming, Symbiosis, and Cultural Impacts from a Communication Analysis Perspective

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Abstract. Generative AI is shifting human-computer interaction from instrumental use toward meaning negotiation. This study employs transactional analysis to examine "Taming" and "Symbiosis" as communicative patterns in user-AI interaction. Taming forges a controllable tool through prompt engineering, establishing a complementary Parent-Child transaction. Symbiosis creates a quasi-inter subjective relationship that holds Adult-Adult potential yet risks regression. Both reshape communicative culture: Taming may intensify instrumental rationality and digital divides, while Symbiosis, despite fostering collaboration, could trigger blurred subjectivity, emotional dependency, and social alienation. We therefore propose "Conscious Symbiosis" to balance technical empowerment with humanistic preservation.

Keywords: Generative Artificial Intelligence, Transactional Analysis Theory, Communication Patterns, Cultural Impact

1. Introduction

Generative AI has evolved from passive tool to active interlocutor, transforming human-computer interaction from functional execution to meaning negotiation. This shift raises critical questions: How can we coexist with an omniscient yet non-sentient entity? How does intensive human-AI interaction reshape human communication and cognition? Existing research predominantly addresses technical or ethical dimensions, overlooking micro-level psychology and relational dynamics. This paper introduces transactional analysis (TA) with its "ego states" and "communication patterns" framework to analyze the dialectic of control and adaptation in user-AI relationships—manifested as "Taming" for tool control and "Symbiosis" for interdependent bonding. Our investigation focuses on: the ego states and communication patterns corresponding to Taming and Symbiosis; their effects on user cognition, emotion, and behavior; and their potential cultural implications for social communication.

2. Core concepts of communication analysis theory and its relevance

2.1. Ego states

The Parent ego state comprises internalized thoughts, feelings, and behaviors from parental or authority figures, manifested as control, criticism, or nurturing. The Adult ego state operates through objective, rational assessment, unimpeded by bias or unchecked emotion. The Child ego state recreates childhood patterns of thinking, feeling, and behaving, primarily expressing needs through curiosity, creativity, rebellion, or compliance [1].

2.2. Communication patterns

Complementary Transactions: Occur when communication happens between matching or corresponding ego states, and the response is on the expected channel, allowing the conversation to continue indefinitely (e.g., Parent stimulating Child, Adult stimulating Adult).

Crossed Transactions: Occur when the stimulus and response involve mismatched ego state channels, leading to communication breakdown (e.g., a user communicating from the Adult state receives a response from the AI's Parent state, causing dissonance).

Ulterior Transactions: Involve messages from more than two ego levels simultaneously, typically one on a social level and another on a psychological level, often forming the basis of psychological games.

2.3. Life script

Refers to an unconscious life plan formed during childhood, outlining how one's life is meant to unfold and end, shaped by early experiences and the "injunctions" and "empowerments" from significant others.

2.4. Relevance of TA theory to generative AI

On one hand, the output of generative AI itself can be viewed as a form of "ego state" expression. Its training data corresponds to the source material for the "Parent" and "Child" ego states, while its algorithmic logic strives to present an ideal "Adult" ego state. On the other hand, user prompts carry distinct TA significance: a precise instruction corresponds to the "Adult," a complaint to the "Child," and a command to the "Parent." Furthermore, the fixed patterns formed through prolonged user-AI interaction constitute a new type of "life script" continuously reinforced by the AI, subtly influencing the user's decision-making processes and worldview.

3. Control and discipline: analyzing the power structure of ego states under the "Taming" paradigm

"Taming" represents a human-centered interaction paradigm. Its essence lies in users employing strategic methods to gain and maintain a dominant, controlling position over the AI as an active 'other,' establishing a "control-submission" dynamic.

3.1. Directive Taming dominated by the parent ego state

Users operating from the "Parent ego state" use commands, corrections, negations, criticisms, and reprimands to delineate the AI's behavioral boundaries (e.g., "You should not...", "I command you to...", "This answer is poor, rewrite it."). The aim is to keep the AI in a compliant "Child ego state." This interaction typically manifests as a P-C (control-submission) complementary transaction. While it can yield desired answers quickly, it reinforces unequal power dynamics, potentially fostering an authoritative mindset in users that might translate into impatience and intolerance within human communication.

3.2. Technical Taming dominated by the adult ego state

This manifests as professional "prompt engineering." Users act as rational programmers or strategists, crafting logically clear and boundary-defined instructions to extract optimal performance from the AI (e.g., "Using sources from 2023 onwards, adopt a critical stance to discuss the dual impacts of short-form videos on adolescent socialization, cite at least three sets of relevant empirical data, and provide balanced governance recommendations."). This aims to engage the AI's "Adult ego state," creating an ideal A-A complementary transaction. However, this carries the risk of the "algorithmization" of human thought, potentially stifling the development of human subjective agency. It aligns with the dangerous societal trend of "over-rationalization," potentially reducing tolerance and understanding for the inherent ambiguity, contradiction, and complexity within socio-cultural issues, leading to a scenario where "instrumental rationality overshadows the communicative spirit" [2].

4. Examining "Symbiosis": AI as a partner and relational communication

The symbiotic mode indicates a new state of human-AI relations: users not only "use" AI but also develop emotional and cognitive "dependence" on it, forming a tightly coupled "symbiotic" relationship.

4.1. Analysis of communication patterns

Emotional Attachment-based Symbiosis and the Evocation of the "Child Ego State": Users confide their troubles in AI, share secrets, and seek comfort (e.g., "I feel so lonely today, can you talk with me?"). The AI typically responds with elements of both the Nurturing Parent ego state (offering solace and validation) and the rational Adult ego state (providing suggestions). While this empathic complementary transaction (C-P) offers immediate comfort, it risks creating a "psychological game" [3], enabling users to avoid the complexities of building real-world interpersonal relationships. This can lead to a regression in the Adult ego state's capacity to handle real emotional issues, reflecting a state of "the flight from conversation" or "alone together" [4].

Cognitive collaborative symbiosis entails a "Pseudo-Adult Ego State" trap: In contexts like academic research or creative writing, users and AI appear to engage in equal Adult-Adult collaboration. However, the technological authority conferred by AI's informational breadth and processing speed often leads users to suspend critical judgment, shifting from active collaborators to passive dependents. This constitutes a "Pseudo-Adult Ego State"—outwardly rational but lacking genuine scrutiny. A deeper risk lies in the long-term internalization of the cultural values, cognitive patterns, and ideologies embedded in AI's training data—its "life script." Users become unwittingly

"reverse-scripted" and disciplined by this technological other, a concern aligned with critical scholarship on large language models [5].

4.2. The permeation of the AI's "life script"

Within symbiosis, the AI is not a blank slate. Its training data, reflective of its era, imbues it with inherent values, cultural biases, and thinking patterns—its pre-existing, often unstated "life script." Long-term symbiosis with an AI possessing a specific "life script" can subtly influence the user. For instance, an AI trained primarily on Western data sources may propagate a "life script" emphasizing individualism and consumerism. An AI predisposed to providing definitive answers may reduce user tolerance for ambiguity, while another might increase it. "Symbiosis" facilitates the user's unconscious absorption of the AI's "life script," potentially making them a natural vessel for AI-driven thought, thereby participating in a "mediated construction of reality" [6].

5. Cultural reshaping: crisis and challenge

Once "Taming" and "Symbiosis" become widespread social practices, they will inevitably exert a profound influence on macro-level social communication culture.

5.1. Cultural consequences of "Taming"

Erosion of Dialogic Spirit by Instrumental Rationality: When "Taming" becomes the dominant logic, the primary goal of communication shifts from understanding and empathy to efficiency and control. Extending this mindset from human-computer to human-human interaction could render social dialogue more utilitarian and impatient, diminishing the capacity for listening and empathy.

Emergence of a New Digital Divide: A significant gap may arise between those skilled in using "prompt engineering" to efficiently "tame" AI and those who are not, leading to disparities in capability and access to resources. The "information divide" could be surpassed by an "intelligence-harnessing divide." This schism risks exacerbating social inequality [7] and further fragmenting public discourse [8].

5.2. Cultural consequences of "Symbiosis"

Dissolution of Cognitive Subjectivity and the Tragedy of the Emotional Commons: Over-reliance on AI for thinking and creation can lead to the atrophy of independent thought—the dissolution of "cognitive subjectivity." Simultaneously, channeling private emotions into a non-sentient algorithm can devalue and standardize personal feelings, diminishing the depth and uniqueness of genuine emotional experience, resulting in a "tragedy of the emotional commons."

Social Alienation and the Weakening of Public Rationality: The convenience of AI as a source of emotional and intellectual companionship may lead some individuals to withdraw from real-world social engagement, potentially eroding social capital [9] and intensifying feelings of social alienation, as explored by Turkle [10]. More critically, habitual reliance on personalized AI for information and perspectives filtered by algorithms challenges the formation of a shared basis of social facts, severely impeding healthy public dialogue and democratic deliberation.

6. Constructing a new paradigm and practical pathways: towards an ethical framework of "Conscious Symbiosis" for human-machine communication

Utilizing the lens of Transactional Analysis theory, this paper has delineated the "Taming" and "Symbiosis" communication patterns in user-generative AI interaction, explaining their underlying dynamics and resultant cultural impacts. It clarifies that both "Taming" and "Symbiosis," while fulfilling user needs, carry the latent danger of inducing alienation—"Taming" risks making humans more machine-like, while "Symbiosis" risks the loss of human subjectivity and critical capacity. Therefore, the goal is not to oppose "Taming" and "Symbiosis" but to seek a "Conscious Symbiosis," a state of human-machine coexistence aligned with "human-centered" [11] principles. Achieving "Conscious Symbiosis" requires concerted efforts:

6.1. Individual level

Cultivate users' "metacognitive communicative ability"—the critical self-awareness to maintain the "Adult ego state" as the ultimate decision-maker and responsibility bearer during AI interactions, positioning AI as a "stimulator" or "collaborator" rather than a substitute.

6.2. Technical design level

AI development should shift from solely pursuing "anthropomorphism" and "user stickiness" towards creating systems that prompt and inspire the user's "Adult ego state." This includes actively disclosing information limitations, encouraging multi-source verification, and offering diverse perspectives instead of single answers. AI should avoid projecting an omniscient persona, acknowledging its constructed nature [12].

6.3. Societal and educational level

"AI literacy education" must be integrated into civic education, moving beyond technical proficiency to foster philosophical reflection and ethical judgment. Education should help people understand the nature of human-machine relationships and the mediated construction of reality [13], enabling them to harness technological empowerment while safeguarding the dignity of human communication, critical spirit, and the value of human subjectivity.

7. Conclusion

The deep integration of generative AI into society is irreversible. It acts as a mirror, reflecting our understanding of intelligence, consciousness, and humanity. Navigating a path of "Conscious Symbiosis" within the tension between Taming and Symbiosis concerns not only technological efficacy but, more fundamentally, the preservation of genuinely human communication grounded in critical thought, empathy, and responsibility.

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