Prediction and Perturbation: Towards a Theoretical Integration of Predictive Processing and Milan Systemic Therapy

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1 Introduction

Psychotherapy has historically developed in advance of its theoretical foundations. Many of its most established techniques work in practice without a satisfactory account of why they work, and systemic family therapy in particular illustrates the gap: its clinical methodology has long outpaced its theoretical apparatus, which still draws largely on biological and cybernetic ideas from several decades ago (Boscolo et al., 1987). The recent emergence of predictive processing as a unifying computational framework for cognition, perception, and action has begun to change this picture. The framework treats the brain as a hierarchical inference machine that minimises the prediction error between expected and observed sensory input, and it offers a single vocabulary in which perception, action, and learning can be redescribed under one principle. Its applicability to psychotherapy has been recognised, and predictive-processing accounts have already been proposed for several therapeutic modalities, including EMDR, coherence therapy, cognitive-behavioural therapy, and body-oriented trauma intervention Holmes and Nolte (2019).

2 Methods

This thesis extends the same project to Milan systemic therapy. The work is theoretical: it proceeds through literature review across cognitive neuroscience and systemic family therapy, and through theoretical framework conceptualisation, illustrated by close reading of two canonical Milan case studies.

3 Results

Three main contributions are developed. First, the thesis offers a diagram that aligns the core dynamics of predictive processing with the core dynamics described by Milan systemic therapists, making the structural correspondences between the two frameworks explicit. Second, it articulates the PTPN framework — Perturbation, Trust, Preference, and Non-confrontation — specifying the four conditions under which new information delivered in a therapy session can be expected to update the family's generative model rather than be rejected; each condition is grounded in independent empirical literatures from cognitive neuroscience, social and clinical psychology, and computational modelling. Third, the account is extended from the individual to the multi-agent setting, where the simultaneous and iterative updating of several family members' generative models is argued to produce the shift in interactional pattern that Milan therapists describe as the dissolution of the problem. (Lehmann et al., 2024)

4 Discussion

By offering a predictive-processing reading of Milan systemic therapy, the thesis provides a mechanistic vocabulary for therapeutic processes that have historically been described in metaphorical terms, and identifies the conditions under which systemic interventions can be expected to succeed or fail.

References

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