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Julius Kuhl's Contributions and Some Reflections on PSI and SDT as Organismic Perspectives in Dialogue

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Abstract

In this commentary in honor of Julius Kuhl, I reflect on decades of dialogue and collaborations between his work in *Personality Systems Interactions* (PSI) theory and research within *Self-Determination Theory* (SDT). Both frameworks are rooted in an organismic metapsychology, emphasizing human capacities for integration and self-regulation. I highlight several points of convergence: the role of autonomy support in facilitating adaptive functioning, especially among state-oriented individuals; the shared recognition that well-internalized goals yield vitality and more effortless willpower; and parallel findings in neuroscience linking self-access and awareness to more autonomous motivation. Although differences and critiques have occasionally arisen, PSI and SDT remain “sibling theories,” offering largely complementary insights into

motivation and personality. This essay reflects on their intersections and underscores the value of open and thoughtful dialogues between theories in motivational science.

Keywords: Self-Determination Theory, Personality Systems Interactions, autonomy, vitality, motivation neuroscience

During the 1990's, Ed Deci and I had the opportunity to collaborate with Julius Kuhl on a theoretical paper on the importance of organismic thinking within the field of motivation (Ryan, Kuhl, & Deci, 1997). Since then there have been multiple collaborative adventures between SDT and PSI researchers. In this brief commentary I focus on areas in which SDT and PSI have directly interfaced, typically in a convergent manner.

First at a meta-psychological level both theories are *organismic*, as described in the paper cited above. Both theories view individuals as actively developing toward self-regulation and integration. In PSI the *integrative self* (Quirin & Kuhl, 2018) plays a central role, and in SDT the self is similarly viewed as inherently integrative (Ryan, 1995). Both theories value consilience and are particularly interested in how psychological and neuropsychological processes can be coordinated. Third, SDT has emphasized the importance of autonomy support in facilitating motivation, and experiments in PSI have demonstrated its facilitative effects across PSI's two major personality types. Finally, both theories have investigated vitality, emphasizing the energizing effects of well-integrated goals, and the depleting effects of self-control and introjections (see Quirin et al., 2022; Frederick & Ryan, 2023).

Autonomy Support as a Facilitative Condition

Much research in PSI rests upon its distinction between two very broad personality styles, *action-oriented* and *state-oriented* individuals. State-oriented people are characterized by a propensity, especially under demands, to ruminate, overthink, and get motivationally stuck. In contrast action-oriented individuals cope well with demands, more efficiently executing intentions under stress. Reviewing PSI's self-report measures of these two "traits" reveals that being action oriented involves endorsing better coping, more energy, and more self-confidence, among other positive attributes, leaving little doubt they will generally show more adaptive

functioning. Nonetheless, according to PSI both types have downsides. Action-oriented individuals, for example, may falter in low-demand settings, showing poorer self-regulatory performance (Waldenmeier et al., 2023), whereas state-oriented individuals, while vulnerable to ruminative inertia, can show deep reflective capacities under more supportive conditions.

In SDT, *autonomy support* describes contexts that are attuned and responsive to a person rather than pressuring them toward specific outcomes. Work in PSI has suggested that autonomy support can be particularly useful in helping state-oriented people better regulate emotions and thus more effectively pursue self-aligned goals. Controlling conditions can, however, lead state-oriented people to *introject* goals, resulting in states of self-alienation. PSI researchers have developed innovative paradigms for operationalizing introjection involving conditions in which participants misidentify externally provided goals as their own, and shown that autonomy support can reduce state-oriented people's tendency toward introjection when under stress. And although autonomy support is particularly useful to state-oriented people, SDT assumes it can facilitate better functioning for action-oriented people too. This dual positivity was shown by Kadzikowska-Wrzosek (2015) who reported that in autonomy supportive contexts even action oriented participants were more persistent, effective and interested in assigned tasks.

Vitality, Internalization, and Effortless Willpower

Within both PSI and SDT, goals that are more autonomous and well internalized are less costly of energy. The neurocognitive mechanisms underlying these dynamics have been examined from both perspectives. Within PSI Quirin et al. (2019) argued that the different levels of internalization are related to the degree to which goals are neurally connected with core representations of *the integrative self*, defined as an extensive parallel-processing network of well-integrated goals and values. More autonomous motivation is thus linked to more *effortless*

willpower as it renders “shielding” or protection of a goal from competing impulses less necessary (see also Kazén et al., 2015). Research in SDT similarly argues that more integrated, autonomous motivation requires access to processes relevant not only for detecting motivational conflicts, but also to the self-relevant information needed to resolve them. The more well internalized one’s goals, the less the inner conflict and need for suppression, resulting in less depletion (Moller et al, 2006). SDT further stresses that vitality can be enhanced by the energizing effects of autonomy, competence, and relatedness need satisfactions (Frederick & Ryan, 2023).

Self-access, Awareness, and Neuroscience

The neuroscience of some forms of autonomy within SDT overlaps with PSI formulations. Most relevant to PSI, Di Domenico and colleagues (2013; 2016) showed that persons higher in need satisfaction, when making difficult preference decisions, were more prone to activations in anterior cingulate cortex (ACC) and the right medial prefrontal cortex (MPFC), consistent with greater access to internal conflicts and richer processing of self-related information. In a subsequent collaborative study, Quirin et al. (2022) reported that introjections, operationalized by imposed tasks falsely recognized as self-chosen, involved the bilateral medial MPFC and the dorsal ACC. Diminished right MPFC activation was more likely for state-oriented participants, suggesting how they can lose touch with what were actually their own goals.

This finding highlights that even when goals are well internalized, people may lack the ability to access those goals. In PSI “self-access” can be disrupted particularly by severe negative affect, especially in state-oriented people. In SDT we also see how self-regulation can be disrupted by need frustrating conditions, as well as factors that interfere with awareness and self-reflective capacities. Indeed, SDT research shows how *mindfulness* facilitates more autonomous

functioning, as it is conducive to greater “self-access” and lower defensiveness (see Donald et al., 2020; Roth et al., 2019)

Worth noting here is that neural processes supporting another form of autonomous motivation within SDT, namely intrinsic motivation, are distinct (Di Domenico & Ryan, 2023). Intrinsic motivation is typically more spontaneous and requires less self-related processing and MPFC involvement (Di Domenico & Ryan, 2017). Still, it is profoundly self-determined, as it emanates from inherent interest and satisfaction. SDT-based research on intrinsic motivation suggests a strong role of the anterior insula, (important in self-initiative and choice), striatal activations associated with rewarding experiences, and lateral prefrontal activations associated with task involvement (Lee, 2023; Reeve & Lee, 2025).

On Siblings

These active dialogues between PSI and SDT led me to characterize PSI and SDT as “sibling theories” in a festschrift for Professor Kuhl (Ryan, 2018). But even siblings sometimes squabble. For instance, Koole et al. (2019) critiqued SDT in ways that felt to us inaccurate, requiring a direct response (Ryan et al., 2019). Yet, more salient than such conflicts are the many points of convergence, only a few of which are highlighted in this brief comment. Having another organismic viewpoint focused on the inherent human capacities for integration and self-regulation has I think been of benefit to both theories, and my hope is that the two frameworks continue to exchange ideas across new generations of researchers.

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