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From Extreme Experiences to Behavioural Addictions: Psychological Meaning, Function, and Change

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Abstract

An activity may give a person purpose, identity and relief, yet gradually become something they cannot live without. This tension brings Mihalits's (2025) multidimensional account of extreme psychological experiences into conversation with research on behavioural addictions, where intense engagement is too easily interpreted through diagnostic criteria borrowed from substance use. His framework offers a way to describe intensity, control and psychological impact without prejudging their meaning or outcome. Yet the meaning attributed to an experience retrospectively cannot establish that it carried a developmental direction from the outset. We argue that clinical and research understanding requires attention to the experience of involvement, the psychological functions a behaviour comes to serve and the meanings attributed to it over time. An activity may sustain self-worth, regulate distress and enrich life while progressively narrowing the possibilities available beyond it. To investigate these changing configurations, we consider the limits of group-level findings for understanding individuals, alongside dynamical systems, fuzzy logic and longitudinal assessment. These approaches may illuminate how involvement becomes rigid, provided their clinical significance is theoretically grounded and continuous monitoring does not generate new forms of pathologisation. Ultimately, understanding extreme experiences requires us to examine how their intensity and subjective meaning become intertwined with the psychological functions of behaviour, shaping trajectories that may lead toward personal growth, persistent vulnerability, or increasingly restrictive patterns of involvement.

Introduction

In his recent contribution, Mihalits (2025) asks psychology to reconsider how extreme experiences are understood, particularly when their intensity or unfamiliarity invites an immediate judgment of pathology. His argument brings together experiences as different as trauma, religious ecstasy, artistic creation, and extreme athletic performance. To describe their complexity, he proposes six dimensions: intensity, impact, demand, control, novelty and identification. These encompass, respectively, overwhelm and numbness, transformation and stabilisation, exertion and ease, the experience of gaining or losing control, unfamiliarity and ritualised familiarity, and involvement and detachment. By placing these experiences within personal histories and cultural contexts, Mihalits challenges the assumption that deviation from an accepted norm provides sufficient grounds for clinical interpretation.

His proposal thus offers a useful occasion to consider a broader question: how might we recognise the significance of an unusual or highly involving experience while remaining attentive to the psychological processes through which it becomes meaningful, helpful or harmful? The relevance of this question becomes particularly clear in the study of behavioural addictions. Although Mihalits does not set out to explain addiction, the risks he identifies are familiar to a field in which sustained involvement in an activity has too often been confused with evidence of disorder. Our purpose in this commentary is to examine what his dimensional approach contributes to that debate, where its explanatory limits lie, and how a closer consideration of psychological functions and individual trajectories might take the discussion further. Excessive physical exercise here offers one useful illustration, precisely because

extensive research has not yet provided sufficient evidence for its recognition as a distinct addictive disorder (Chhabra et al., 2026), and questions about which additional behaviours may merit clinical attention and a potential diagnostic designation remain important (Brand et al., 2022). The implications extend to behavioural addictions more generally, where dedication, distress and dependence on an activity may be bound together by psychological processes that a list of symptoms can only partially capture.

The problem of recognising addiction without presupposing it

This challenge is set against the backdrop of a field—that of non-substance addictions—which is currently at a unique juncture. On the one hand, whilst more than a decade ago Billieux et al. (2015) pointed out the lack of a theoretically sound framework capable of capturing the phenomenology and specificity of problematic behaviours, today well-founded theoretical models are available, and the relationship between theory, empirical research and clinical practice is bidirectional and productive (Brand & Potenza, 2021). On the other hand, the field has been able to examine its own nature from a rigorously critical perspective. Important questions concern the extension of substance-use criteria to other behaviours (Flayelle et al., 2022; Grubbs & Boness, 2025), the standards for establishing new potential addictions (Gullo et al., 2022; Grubbs et al., 2027), and the validity of assessment instruments and their cut-off points (Billaux et al., 2023; Flayelle et al., 2025). Further concerns involve conceptual precision (Ince et al., 2025), the interpretation of excessive involvement (Loscalzo & Giannini, 2025) and methodological standards (Rumpf et al., 2019). A further challenge is to distinguish meaningful, sustained engagement from genuine addictive patterns (Kardefelt-Winther et al., 2017). Despite all this progress, one of the main concerns or risks in this field today, that is, the pathologisation of everyday life, is more prevalent than ever (Flayelle et al., 2025; Starcevic, 2016; Starcevic et al., 2018a, 2018b, 2026).

One reason for this persistent difficulty is the confirmatory approach to behavioural addictions. In this approach, researchers begin with a set of addiction criteria largely derived from substance-use disorders, look for comparable features in an everyday activity, and then interpret their presence as evidence that the activity can itself become addictive. The procedure may identify people who are struggling, although it also risks confirming a diagnostic assumption through the very indicators chosen to test it. Fournier et al. (2023) illustrate this problem in their examination of the components model as applied to social media, while Grubbs et al. (2027) revisit the requirements for considering a behaviour a mental disorder. When a measure treats preoccupation, frequent engagement or discomfort on interruption as inherently addiction-like, intense involvement may begin to look pathological before its function or consequences have been understood.

A prime example of this is Griffiths's (2005) component model, according to which all addictions, whether substance-related or not, share six components (salience, mood modification, tolerance, withdrawal, conflict and relapse). Griffiths situated this within a biopsychosocial framework, which had the merit of moving the study of these behaviours away from a purely biomedical interpretation. The advantage of this model was clear, as it allowed very different behaviours to be compared using a single

set of terms and facilitated the development of assessment tools. It is therefore reasonable that a growing field, such as that of non-substance-related addictions, should draw on what had already proved effective in the context of substance use. The difficulty appears when this borrowing begins to determine what is observed. A biopsychosocial label can accommodate several levels of description while leaving the relations among them insufficiently explained. Current discussions of normativity and mental health illustrate why the coexistence of different perspectives does not, by itself, establish the principles by which a behaviour becomes clinically significant (García & Barandiaran, 2025).

The confirmatory tendency is reinforced by a broader habit of moving from description to diagnosis. Since the mid-20th century, clinical practice and research have relied on diagnostic manuals such as the DSM (American Psychiatric Association) and the ICD (International Classification of Diseases), which share a categorical, descriptive and fundamentally non-theoretical paradigm. In other words, each disorder is defined by the presence of a minimum number of observable symptoms grouped under a categorical threshold criterion, based on clinical manifestations rather than underlying mechanisms (thus remaining descriptive), without requiring an explanation of its biological, psychological or social origin. This approach prioritises diagnostic reliability (implying that different clinicians agree on the same case) over aetiological validity (implying that the category represents a discrete existing entity). Such classifications make clinical communication and research possible, even when diagnostic boundaries remain provisional and their causal interpretation unsettled.

Those boundaries also have a social history. What a culture recognises as an acceptable degree of dedication, distress or loss of control is shaped partly by institutional practices and by the social conditions in which diagnostic systems develop (Conrad, 2007; Kirmayer & Crafa, 2014). These influences create two related difficulties. The first limitation is the drawing of arbitrary boundaries between the normal and the pathological, and where the threshold is drawn depends not only on the phenomenon itself, but also on the context in which it is defined. The second concerns reification, so that a category established to organise observations can gradually be treated as though it were an independently demonstrated entity (Hyman, 2010). Wakefield (1992) similarly reminds us that judgments of disorder involve questions about dysfunction as well as values. The transdiagnostic debate offers another reason to examine processes that may cross established diagnostic boundaries (Pérez-Escobar, 2024). Together, these considerations bring us back to the provocative reflections developed by Mihalits in his article. His model creates room to describe complex experiences before drawing clinical conclusions, although its dimensional language must still be connected to an account of how psychological difficulties develop.

Extreme experiences, finality, and the construction of meaning

Mihalits's (2025) focus is on extreme psychological experiences—namely, 'subjective states characterized by extraordinary intensity, changes in the experience of control, emotional overwhelm, or existential borderline situations' (p. 7)—among which he explicitly includes extreme athletic performance

(p. 3). He argues that diagnostic systems, including the DSM-5 (American Psychiatric Association, 2022) and even the psychodynamic OPD-3 (Operationalized Psychodynamic Diagnosis; Arbeitskreis OPD, 2023), 'tend to classify extremes as deviations from an assumed norm, often leading to premature pathologization' (p. 3). His proposed dimensions therefore encourage attention to the experience as it is lived and situated, rather than treating the presence of an unusual state as sufficient evidence of disorder. In doing so, the proposal replaces the binary question of whether a disorder is present with the question of how an experience is configured across various axes, without predetermining the outcome.

This descriptive ambition resonates with Mihalits's discussion of the weaknesses of psychological measurement, informed by Meehl's (1967, 1978, 1990) criticism of loosely connected theory and evidence. The 'crud factor' (whereby virtually any two psychological variables may show some degree of association, even when that association has little theoretical or clinical significance) raises questions about the interpretation of ubiquitous associations (Orben & Lakens, 2020), while the quality of construct measurement remains a separate issue (Flake & Fried, 2020; Maul, 2017). These concerns are especially pertinent when a statistical association with an addiction criterion is taken as confirmation that the activity under investigation is pathological. Mihalits nevertheless goes further than description. His stated aim is to analyse the psychological processes that are 'activated in moments of maximum intensity, shift in control, novelty, or identification' (p. 20). Yet the six dimensions currently provide a heuristic organisation of experience, whose mechanisms and clinical validity still require investigation.

A more fundamental tension arises in the way the author approaches psychological transformation. Mihalits recognises that extreme experiences may have destructive, stabilising or transformative consequences. At points, however, drawing on Jungian perspectives, Mihalits presents extreme states as 'not only meaningful but even necessary for change' (p. 6), while elsewhere he observes that such experiences 'often unfold their meaning retrospectively' (p. 20). These propositions leave open an important question about the direction of psychological development. A finalistic understanding of psychic life may accommodate purposes, aspirations, conflicts and possibilities that never come to fruition. The difficulty begins when a meaning subsequently constructed by the person is understood as evidence that the earlier experience already contained the direction of the change. What happened later can then seem to have been waiting within what happened before. This gives a potentially open account of transformation an almost deterministic colouring, despite Mihalits's acknowledgment of divergent outcomes.

The distinction matters because the experiences gathered under the same heading may have radically different origins. Imposed trauma, deliberately sought exposure, creation and spiritual practice are distinct psychological processes. Although Mihalits distinguishes between a situational and a dispositional component, the origin and the degree of volition should be included as a condition or moderator within the framework. Indeed, some persons may actively seek an experience in the hope of changing their life, while other persons must find ways to survive an experience never chosen. The subsequent narrative may give either event a place within personal identity, although this does not establish what the event originally meant, or what other trajectories might have followed. The fact that

someone constructs meaning tells us little about the original experience and the divergent trajectories it might have produced. Recovery, moreover, does not imply that vulnerability disappears, because psychological trauma research (Schimmenti, 2018; Schimmenti et al., 2025) confirms that the wound does not necessarily heal with transformation.

These distinctions also indicate how the contribution of Mihalits might be developed rather than simply rejected. The attribution of meaning may itself be a powerful psychological achievement. Whether it enables a person to revise enduring patterns of feeling, relating and acting remains a further question. An experience celebrated as liberating may at the same time sustain an arrangement of the self that the person cannot easily question. Conversely, an activity that seems repetitive or defensive may also support meaningful relationships, competence or discovery. Understanding such possibilities requires attention to the psychological functions that emerge around an experience and the ways in which they persist or change. This is particularly relevant when we move from a single extreme state to the recurrent patterns that characterise problematic behavioural involvement.

When involvement becomes psychologically indispensable

Experiences and behaviours do not occupy the same temporal scale. A moment of exceptional intensity may be followed by many different developments, while a pattern of behaviour becomes woven into daily routines, personal experience and relationships over months or years. What matters clinically is how an activity comes to be used, what it helps the person sustain, and the consequences of its increasing centrality. Three aspects therefore require consideration together: (i) the qualities of the lived experience, (ii) the functions of the recurring behaviour, and (iii) the meaning through which the individual understands it. Each can change without the others changing in the same direction.

Physical exercise is an illuminating case, although the problem applies equally to other highly involving activities. Two individuals may train with the same intensity and report similar feelings of achievement. For one, exercise may coexist with relationships, projects and other means of coping with distress. For the other, it may gradually become a privileged means of containing extremely distressing emotions, maintaining self-worth or mentally escaping negative experiences. Similar behaviours can thus belong to substantially different psychological motivations. The origin is not always so clear-cut, as behaviour initiated by passion may end up fulfilling a compensatory function, and vice versa (Lalande et al., 2017; Waxler, 2026; Wegmann et al., 2025). Therefore, rather than using the origin as a criterion for inclusion, it would be better to treat it as just another variable in the process, whose weight should be determined empirically by observing how the behaviour evolves over time.

These developments also caution against accepting self-attributed meaning as a complete explanation of the behaviour. Someone may sincerely regard intense training as an experience of freedom while depending on it to avoid shame, emptiness or distress that feels otherwise unmanageable. Actually, a behaviour may be meaningful precisely because it protects psychological continuity under vulnerable conditions. The possibility of such a function is a reason for clinical curiosity, and it cannot be inferred

from frequency, intensity or a person's autobiographical account alone. We must examine how the behaviour operates within relationships, what happens when it becomes unavailable, and whether other sources of emotional regulation and personal satisfaction remain accessible. The question is thus how an activity that once enlarged a person's possibilities may, under particular circumstances, become indispensable to the maintenance of psychological stability.

Following individual trajectories without prescribing their outcomes

The observation of this evolution and the consideration of the ambivalence described by Mihalits suggest that the challenge is psychometric as well as theoretical. We continue to represent constructs as one or more one-dimensional spectra with a cut-off point, such that the position occupied leads to a dichotomous logic of "disorder versus non-disorder". This representation fails to account for three facts that are readily observable in clinical practice: (i) that persons can change over time, (ii) that they may experience opposing states simultaneously, and (iii) that the same behaviour can either support or trap them, depending on how many ways out they have. The point of the proposed methodological extension is to take those three observations seriously, without turning them into another predetermined classification.

In our view, three approaches deserve consideration for different reasons, namely ergodicity, dynamical systems, and fuzzy logic. In detail, ergodicity clarifies why findings at the group level may offer limited guidance about a particular person's evolution. Dynamical systems provide a language for interacting processes and trajectories. Fuzzy logic offers a way to represent gradations and overlapping descriptions without forcing an immediate binary judgment.

Ergodicity is a concept derived from statistical physics (Lévy, 2019; Mangalam & Kelty-Stephen, 2022). Its relevance to psychological research lies in the conditions under which relations estimated across individuals can be generalised to processes within a single person, conditions that frequently remain untested (Molenaar, 2004; Molenaar & Campbell, 2009). For example, individuals who exercise more frequently may, on average, report better mood, while increasing exercise may have the opposite effect on someone who is already physically or emotionally exhausted. Associations observed across individuals cannot therefore be assumed to describe how the same person functions over time. This distinction is particularly relevant when examining how intense involvement in an activity may remain adaptive or become maladaptive, as illustrated by research on self-regulation in esports (Brevers et al., 2020). The implication is to examine trajectories within persons alongside differences between persons, while retaining appropriate caution about what either type of evidence can establish.

The focus on dynamical systems concerns the field that studies how systems whose parts interact with one another change over time, describing their state through a set of variables and their evolution through trajectories (Strogatz, 2024). Each relevant variable (activation, mood, relationships, plans) would be an axis in a phase space, and the individual would trace a trajectory within it. An attractor is a region to which the system tends to return and can be imagined as a valley in a landscape. When there

are several accessible valleys, the withdrawal of behaviour (for example, due to an injury) allows the system to move to another one, such as relationships or projects; when there is only one deep valley, withdrawal can destabilise the system. Plasticity would thus be a matter of degree, depending on how many outlets the system has rather than on the volume of behaviour, and rigidity would not in itself be equivalent to pathology. This accommodates the divergent trajectories from a single starting point highlighted by the psychodynamic perspective and has precedents in the psychopathology of dynamic systems (Cramer et al., 2016). There is considerable value in this metaphor, although its explanatory limits should remain visible. Describing a behaviour as an attractor tells us something about its persistence within a configuration of mutually influencing processes. It leaves the origins and psychological significance of that persistence open to investigation. The relevant questions concern the affective experiences, interpersonal contingencies, expectations and conflicts through which a particular activity acquires its privileged position (Costanzo et al., 2024). An apparent loss of alternatives may help indicate rigidity, yet clinical impairment must still be examined in relation to the person's circumstances and the costs of the behaviour. Accordingly, a dynamical account becomes most informative when these psychological processes are specified rather than left implicit in the mathematical imagery.

A more pragmatic problem is that the therapist still needs to decide whom to treat and when. Here, fuzzy logic (Zadeh, 1965) offers a practical approach because, rather than assigning a person to an exclusive category, it allows for the expression of degrees of membership that do not necessarily add up to one (for example, a training session may belong to 'exhaustion' to a degree of 0.7 and to 'fulfilment' to a degree of 0.8). Whereas probability distributions over mutually exclusive outcomes must sum to one, fuzzy membership describes the extent to which an observation fits one or several partly overlapping concepts. Furthermore, fuzzy inference systems include a final step that may convert the fuzzy state into a concrete decision (Lee, 1990; Van Leekwijck & Kerre, 1999). The assessment can therefore be gradual and dynamic, whilst the clinical decision remains categorical, and would, in turn, be a decision about what to do, not a statement about what the person is. Fuzzy sets have a history in clinical diagnosis (Adlassnig, 1986; Seising, 2006), and they may help represent the coexistence of different psychological states while allowing clinical decisions to account for their complexity and individual significance.

Taken together, these approaches could inform the development of more person-sensitive assessment, while their functions should be kept distinct, because none of them can provide an independent theory of why a behaviour has become necessary for a particular individual, nor can any mathematical representation settle the clinical meaning of distress or impairment without appropriate validation. Their methodological appeal, however, still remains, since they may enable researchers to follow change without assuming that the person's trajectory was already determined by the initial experience. In this respect, they extend Mihalits's (pp. 5, 21) conception of a heuristic framework for generating and testing theories while remaining answerable to the psychological questions that motivated it.

It remains to be seen which methodology would enable us to observe these trajectories. Qualitative and quantitative approaches are complementary here, and Mihalits conceives his model as something that 'can serve as a basis for qualitative and quantitative research designs' (p. 21): clinical listening and

narratives capture the meaning that the person attributes to their experience, whilst repeated measurement captures what changes and when. Since the problem we started with arises within psychometrics, which is grounded in quantitative techniques, we focus here on the latter. The answer points to intensive, longitudinal designs such as ecological momentary assessment (EMA) in everyday settings, complemented by physiological sensor recordings (sleep, heart rate variability, training load, arousal) and intra-individual analyses that model each person's dynamics (Fisher et al., 2018; Molenaar, 2004). Techniques such as unsupervised trajectory clustering (Aghabozorgi et al., 2015; Nagin & Odgers, 2010) or early transition indicators in dynamical systems (Scheffer et al., 2009; van de Leemput et al., 2014) could help to identify when a behaviour loses its alternatives. These remain possibilities for investigation, and any candidate indicator would require theory-driven hypotheses, prospective validation and careful distinction between changes in behaviour and clinically meaningful changes in functioning. The methodological difficulties of course would include participant burden, large numbers of possible associations and the absence of established benchmarks for such markers, but this direction remains one of the most promising for understanding of excessive and extreme behaviors.

Clinical responsibility and the limits of observation

We are aware that this proposal raises new issues, as continuous and ecological measurement increases the risk of pathologisation through surveillance. Observing someone closely reveals more 'signs' than observing them on a one-off basis, increasing the risk that ordinary fluctuations in mood and behaviour may be mistaken for clinically significant problems. Furthermore, data describing a trajectory (physiological, behavioural and emotional) are by their very nature more sensitive and more easily re-identifiable than a one-off questionnaire, and in the sporting context, they may be of interest to third parties, such as clubs or federations, for purposes unrelated to the athlete's welfare.

These concerns matter because the attempt to identify emerging risk through denser measurement can inadvertently reproduce the same classificatory reflex that originally motivated the commentary. If prolonged observation is to improve clinical understanding, the person must retain a meaningful role in deciding what is measured, for what purpose, and who may use the resulting information. Hence, a robust legal framework is an absolute prerequisite. The General Data Protection Regulation (GDPR; Regulation (EU) 2016/679) treats health data as a special category (Art. 9), establishes safeguards concerning automated individual decision-making (Art. 22), and requires data protection by design (Art. 25). In practice, technical implementation raises questions about secure and reliable machine-learning workflows (Berberi et al., 2025), decentralised training approaches (McMahan et al., 2017), and architectures designed to preserve individual privacy (Sáinz-Pardo Díaz & López García, 2026). Such safeguards support responsible clinical judgment and do not remove the need to justify the purposes of measurement itself.

Conclusions

A more differentiated description of extreme experiences may prevent premature pathologisation, yet it also requires us to consider the possibility that a meaningful experience can become central to a restrictive psychological organisation. Clinical assessment must therefore examine what the activity allows a person to experience or avoid, how it affects relationships and obligations, and whether it remains possible to relinquish or transform it without intolerable disruption. Clinical decisions about whether and when to intervene remain necessary and should emerge from an understanding of the processes involved. Neither a hopeful account of transformation nor an addiction score can decide in advance the direction of a person's life.

Mihalits's invitation to look beyond diagnostic binaries is valuable especially because it leaves room for lives that develop in unexpected ways. The remaining task is to understand how meanings are made, how particular extreme behaviours might become necessary, and under what conditions new possibilities can emerge. An experience may acquire profound personal meaning without changing the vulnerability that made a certain behaviour indispensable. It may also become the occasion for change, through processes that have to be understood rather than presumed. In our perspective, the most useful contribution of a psychology of extreme experiences to the study of behavioural addictions may lie in preserving that uncertainty while making the psychological processes within it increasingly intelligible.

Declarations

Competing Interests

Abel Nogueira-López co-authored an epilogue with the author of the target article (Nogueira-López & Mihalits, 2026) in the Handbook of Non-Substance Addictive Behaviors. The remaining authors have no relevant financial or non-financial interests to disclose.

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