SWARP Occupational Matching A Triadic Data Model Integrating Human Design, Paths of Change, and O*NET

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Abstract

This paper presents a formal data model for occupational matching within the SWARP Case-Based Learning System. The model integrates three complementary frameworks: Human Design (HD), as a bio-energetic personality architecture; Paths of Change (PoC), as a fractal quaternary model of worldviews and cognition; and the O*NET Content Model, as the empirical taxonomy of occupational characteristics. We argue that PoC functions not merely as a supplement to O*NET but as its generative deep structure — the explanatory principle that accounts for why O*NET's six domains cohere as they do. Human Design operationalizes this structure at the individual bio-energetic level, enabling hyperpersonal occupational routing within SWARP's learning architecture. The resulting four-step matching engine — from HD chart to PoC weights to RIASEC profile to O*NET match — is embedded in Roger Schank's Case-Based Reasoning cycle, ensuring that occupational advice is not a static output but a learning process responsive to expectation failures across five fractal scales.

Keywords: occupational matching, Human Design, Paths of Change, O*NET, Case-Based Learning, RIASEC, fractal cognition, SWARP

1. Introduction

Conventional occupational guidance systems operate on a two-step logic: measure personality or interests via a standardized instrument, then match the resulting profile against a database of occupations. The dominant scientific standard for this procedure is the O*NET Content Model (Peterson et al., 2001), which classifies occupations across six domains — from Worker Characteristics to Occupation-Specific Information — and uses Holland's RIASEC typology (Holland, 1997) as the primary interest-matching dimension.

While O*NET is empirically robust, it is theoretically thin. It describes *what* occupational characteristics exist and *how* they cluster, but offers no principled account of *why* the six domains are structured as they are, why RIASEC maps onto human personality as it does, or how the same patterns recur at different scales — individual, team, organization, society.

This paper addresses that theoretical gap by introducing a triadic model that places Paths of Change (McWhinney, 1997) as the explanatory deep structure underlying O*NET, and Human Design (Ra Uru Hu, 1992) as the bio-energetic operationalization of PoC at the individual level. Together, these three frameworks form a coherent, fractal matching architecture implemented within SWARP — a Case-Based Learning system built on Roger Schank's theory of dynamic memory and expectation failure (Schank, 1982; Schank & Abelson, 1977).

The central claim is this: a person's HD chart, systematically translated into PoC weights and subsequently into RIASEC scores, produces occupational matches that are more personally

calibrated and theoretically grounded than conventional interest inventory approaches — and that embedding these matches within Schank's learning cycle transforms occupational guidance from a one-time assessment into a self-correcting developmental process.

2. Theoretical Foundations

2.1 Paths of Change as Fractal Architecture

Will McWhinney's Paths of Change (1997) proposes four fundamental worldviews — Unitary (Blue), Sensory (Red), Social (Green), and Mythic (Yellow) — that constitute the irreducible dimensions of human experience, organization, and change. These worldviews are not personality types in the conventional sense; they are ontological orientations that determine how individuals perceive reality, make decisions, and engage with their environment.

Critically, PoC is fractal in structure. The same four-fold pattern recurs self-similarly across scales: in individual cognition, in team dynamics, in organizational culture, and in societal governance. Konstapel (2018, 2026a) has extended this fractal principle to show that the PoC quadrant maps coherently onto John Holland's RIASEC typology, onto the life-span development model, and — as this paper demonstrates — onto the six domains of the O*NET Content Model.

The two principal axes of PoC are agency versus communion (the degree to which an individual orients toward autonomous action or relational connection) and observer versus experiencer (the degree to which cognition is reflective or enactive). These axes generate the four worldviews as quadrant positions and correspond to the two fundamental dimensions identified in the personality literature as well as in O*NET's Worker Characteristics domain.

2.2 Human Design as Bio-Energetic Operationalization

Human Design (Ra Uru Hu, 1992) is a synthesis of the I Ching's 64 hexagrams, the Kabbalistic Tree of Life, Western astrology, and the Hindu chakra system, expressed as a BodyGraph of nine energy Centers, 36 Channels, and 64 Gates. Within the present model, HD is not employed as a metaphysical truth claim but as a high-resolution individual differentiation instrument — a structured framework for generating a unique energetic profile that can be systematically mapped onto PoC color weights.

The five HD Types (Generator, Manifesting Generator, Projector, Manifestor, Reflector) correspond to distinct modes of energetic expression and engagement with work. Strategy and Authority determine the decision-making and response modality. The twelve Profiles describe archetypal life roles. The Incarnation Cross encodes the overarching life theme or purpose. The nine Centers, when defined (consistently active) or undefined (conditionally active), constitute the most granular level of energetic configuration.

Previous work by Konstapel (2026b) has demonstrated that HD's structural elements can be mapped onto PoC worldviews through their associated circuits: the Individual Circuit corresponds to the Mythic (Yellow) worldview; the Collective Circuit to the Unitary (Blue); the Tribal Circuit to the Social (Green); and the Integration Channels to the Sensory (Red). This circuit-based mapping provides the foundation for the HD-to-PoC translation described in Section 4.

2.3 O*NET as Empirical Occupational Taxonomy

The O*NET Content Model (Peterson et al., 2001) organizes occupational information across six hierarchical domains. Worker Characteristics — comprising Abilities, Interests (RIASEC), Work Values, and Work Styles — describe stable personal attributes predictive of occupational choice and performance. Worker Requirements and Experience Requirements describe developable skills and practical training needs. Occupational Requirements detail the actual work activities performed. Occupational Characteristics describe the contextual and environmental conditions of work. Occupation-Specific Information provides the concrete, bespoke details of individual occupations.

The RIASEC typology embedded in O*NET's Interests domain has been extensively validated as a predictor of occupational choice (Holland, 1997; Rounds & Day, 1999). Each occupation in the O*NET database carries an Occupational Interest Profile — a scored vector across the six RIASEC dimensions — enabling cosine-similarity matching between individual interest profiles and occupational profiles.

2.4 Schank's Case-Based Learning as Process Architecture

Roger Schank's theory of dynamic memory (1982) holds that human learning proceeds through three fundamental functions: the collection of expectation failures (deviations from script-based predictions), the indexing and retrieval of analogous cases from memory, and the revision of scripts in light of those cases. Schank et al. (1994) demonstrated that this learning cycle can be deliberately activated through goal-based scenarios — engineered situations that produce expectation failures before they occur in consequential real-world contexts.

McWhinney's four PoC worldviews map precisely onto Schank's four learning sub-processes: the Unitary worldview corresponds to script maintenance; the Sensory worldview to expectation failure detection; the Social worldview to case retrieval through dialogue; and the Mythic worldview to script revision and generalization. This correspondence, identified by Konstapel (2026a), is not merely analogical — it provides the theoretical basis for SWARP's architecture, in which PoC-driven occupational matching is simultaneously a Schank-driven learning intervention.

3. The Fractal Claim: PoC as the Deep Structure of O*NET

The central theoretical contribution of this paper is the proposition that PoC is not merely compatible with O*NET but is its explanatory deep structure — the generative logic that accounts for the internal organization of O*NET's six domains.

This claim can be stated as follows. O*NET's Worker Characteristics domain captures stable, cross-occupational personal attributes — corresponding to PoC's core personality layer (the innermost fractal level: body and cognition). O*NET's Worker Requirements and Experience Requirements capture developable capacities acquired through training and practice — corresponding to PoC's learning and Community of Practice layer (the puberty and experimentation phase in the life-span model). O*NET's Occupational Requirements capture what individuals actually do in their work — corresponding to PoC's action layer, where the four worldviews manifest as distinct work activity types: analyzing data (Blue), performing physical tasks (Red), assisting others (Green), thinking creatively (Yellow). O*NET's Occupational Characteristics capture the environmental and contextual conditions of work — corresponding to PoC's organizational culture layer. O*NET's Occupation-Specific Information captures the unique concrete manifestation of all higher patterns in a single occupation — the leaf node of the fractal tree.

The fractal principle holds that each O*NET domain not only corresponds to a PoC layer but is internally organized by the same four-fold PoC structure. Within Worker Characteristics, the four RIASEC clusters map onto four PoC worldviews; within Work Styles, the four clusters of conscientiousness, interpersonal orientation, proactive growth, and emotional resilience repeat the same four-fold pattern. This self-similarity at multiple levels of granularity is the hallmark of a fractal architecture.

4. The SWARP Triadic Matching Model

The operational data model implements the theoretical framework in four sequential steps.

4.1 Step 1: HD Chart to PoC Weight Vector

The full HD chart is parsed into its structural components, each weighted for its contribution to the PoC color profile. The weighting scheme is as follows: HD Type contributes 30% of the total PoC weight, reflecting its fundamental determination of energetic mode; Profile contributes 20%, reflecting its archetypal life role; defined Centers contribute 25%, reflecting the consistent energetic qualities present in the individual's bio-energetic field; active Channels contribute 15%, classified by circuit (Individual/Yellow, Collective/Blue, Tribal/Green, Integration/Red); Incarnation Cross contributes 10%, reflecting the overarching life theme mapped onto PoC quarter.

The output of Step 1 is a four-dimensional PoC weight vector: (w_Blue, w_Red, w_Green, w_Yellow), where all weights sum to 1.0.

4.2 Step 2: PoC Weights to RIASEC Profile

The PoC weight vector is translated into a RIASEC score vector via a mapping matrix derived from the theoretical correspondence between the two typologies:

PoC Color	R	I	A	S	E	C
Blue	0.10	0.40	0.05	0.05	0.05	0.35
Red	0.45	0.10	0.05	0.10	0.25	0.05
Green	0.05	0.20	0.10	0.45	0.05	0.15
Yellow	0.05	0.15	0.40	0.10	0.25	0.05

The RIASEC score for each dimension is computed as the dot product of the PoC weight vector and the corresponding column of this matrix. The output is a six-dimensional RIASEC vector normalized to 100-point scales, compatible with O*NET Occupational Interest Profiles.

4.3 Step 3: O*NET Occupational Matching

Occupational matching proceeds through cosine-similarity computation between the individual's RIASEC vector and the Occupational Interest Profiles of all relevant O*NET occupations. A secondary filter applies HD Type-specific energy constraints: Generators are preferentially matched

to occupations with high Sacral-energy demand (Realistic and Social); Projectors to occupations requiring sustained guidance and system awareness (Social, Investigative); Manifestors to occupations requiring high initiative and autonomy (Enterprising, Artistic); Reflectors to occupations embedded in collective awareness (Social, Investigative). These constraints reflect the differential energetic strategies described in HD theory and ensure that matched occupations are not only interest-congruent but energetically sustainable for the individual.

Job Zone filtering is applied based on the individual's reported educational level, ensuring that recommended occupations are practically accessible.

4.4 Step 4: Schank-Based SWARP Module Routing

The dominant PoC color in the individual's weight vector determines the appropriate SWARP learning module for occupational development. A Blue-dominant profile (script maintenance phase) is routed to the Community of Practice module for retrieval of existing cases. A Red-dominant profile (expectation failure detection phase) is routed to the Scenario Generator for deliberate exposure to productive failures. A Green-dominant profile (case retrieval through dialogue phase) is routed to the ARIA Coach for guided case-based dialogue. A Yellow-dominant profile (script revision phase) is routed to the Spiral Navigator for pattern recognition and generalization.

This routing ensures that occupational matching is not a terminal output but an entry point into a developmental learning trajectory calibrated to both the individual's current learning phase and their bio-energetic configuration.

5. Discussion

5.1 Theoretical Contributions

The model makes three principal theoretical contributions. First, it provides a principled account of why O*NET's domains are structured as they are, grounding an empirical taxonomy in a coherent theoretical framework. Second, it demonstrates that HD, despite its non-conventional epistemological status, can function as a high-resolution individual differentiation instrument when its structural elements are mapped systematically onto validated typologies. Third, it embeds occupational matching within Schank's learning cycle, transforming guidance from assessment to process.

5.2 The Fractal Principle and Scalability

The fractal architecture of the model has a significant practical implication: the same matching logic that operates at the individual level (HD → PoC → RIASEC → O*NET) can be applied at the team, organizational, and community levels. A team's collective PoC profile can be derived from the aggregated HD charts of its members and matched against organizational role profiles in the same O*NET space. This enables SWARP to address not only individual occupational guidance but also team composition, organizational design, and community-level talent mapping — the higher fractal scales described in the SWARP architecture (Konstapel, 2026a).

5.3 Limitations and Future Work

The mapping matrix from PoC weights to RIASEC scores (Section 4.2) is currently derived from theoretical correspondence rather than empirical calibration. Future work should validate this matrix through confirmatory factor analysis applied to a sample of individuals for whom both complete HD charts and validated RIASEC profiles are available. Similarly, the HD-to-PoC weight scheme requires empirical validation, ideally through a study correlating HD structural parameters with PoC-based behavioral assessments.

The epistemological status of Human Design as a predictive instrument remains contested. The present model does not require that HD's cosmological claims be true — only that its structural elements function as reliable differentiators of energetic and cognitive style. This is an empirical question that the SWARP platform is positioned to address at scale as user data accumulates.

6. Conclusion

This paper has presented a formal triadic data model — HD → PoC → O*NET — for hyperpersonal occupational matching within the SWARP Case-Based Learning System. The model's central contribution is the demonstration that Paths of Change functions as the deep structural architecture underlying O*NET's empirical taxonomy, and that Human Design provides the bio-energetic resolution required to operationalize that architecture at the individual level. Embedded within Schank's learning cycle, the model transforms occupational guidance from a one-time assessment into a self-correcting, fractal, developmentally responsive process.

SWARP's five-scale architecture — from the individual to the democratic system — means that occupational matching is never merely an individual affair. Every match generates a case; every case enriches the Community of Practice; every Community of Practice feeds the organizational, municipal, and democratic learning loops. In this sense, the model proposed here is not merely a matching engine but a contribution to what Konstapel (2026c) has called the Political Expectation Failure problem: the systematic failure of institutions to learn from the gap between promise and reality. Occupational guidance that is fractal, bio-energetically calibrated, and embedded in genuine learning may be one structural response to that failure.

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