



THE INFORMATION ARCHITECTURE DESIGN CANON

VERSION 1.0

JASON HOBBS

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Release Notes:

This publication forms part of the first complete public release of *The Information Architecture Design Canon*, Version 1.0.

The Canon is organised into three parts across two volumes. Volume I contains Part 1 – Modules and Part 2 – Glossary. Volume II contains Part 3 – Auxiliary Notes.

The Auxiliary Notes extend, contextualise and enrich the principal body of theory presented through the Modules. They are organised into three categories: Historical Notes, Philosophical Notes and Supplementary Notes. Each note identifies the Modules to which it most directly relates, supporting movement between the core theory and its historical, philosophical and supplementary contexts.

Version 1.0 marks the first formally constituted release of the complete two-volume Canon. It succeeds the Version 1.0 Developmental Release of Volume I, published in July 2026.

The Canon remains subject to continued editorial refinement and theoretical development. Subsequent versions may introduce corrections, clarifications, revised relations between texts and additional supporting material. Substantive stages in the development of the theory will be marked through future editions.

Questions, comments and constructive critique are welcomed.

TABLE OF CONTENTS

PROVENANCE	1
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VOLUME II — AUXILIARY NOTES

PART III: AUXILIARY NOTES

INTRODUCTION	3
--------------	---

HISTORICAL NOTES

HN 1 On Herbert Simon, Design Methods, and the Conditions of Design	9
HN 2 Frame-Scale: Origins	17
HN 3 Frame-Scale as Reflective Analytical Tool	20
HN 4 The Information Architecture of Roleplaying Games	23
HN 5 The Lineage of the Golden Thread	29
HN 6 Information Architecture Design Influences I	35

PHILOSOPHICAL NOTES

PN 1 On Abstraction as Infrastructure	46
PN 2 On <i>Doxa is Fate</i>	50
PN 3 On the Organisation of Meaning	54
PN 4 Second Intellectual Culture Information Architecture	58
PN 5 On the Principle of Articulated Grouping	65
PN 6 On the Cross-Scale Coherence of Articulated Grouping	70
PN 7 On the Principle of Operative Meaning	75

SUPPLEMENTARY NOTES

SN 1	The Two-Hands Model of Complexity (Frame-Scale)	81
SN 2	Frame-Scale and Multiple Ontology	84
SN 3	Social Theoretical Lenses for Contrived Ontology	89
SN 4	Axioms of a Second Intellectual Culture in Information Architecture	102
SN 5	Discursive Design and Information Architecture	110

TEXTUAL FOUNDATIONS

SCHOLARLY WORKS	117
ON THE CREATION OF THE CANON	122

PROVENANCE

Many concepts presented throughout the Canon first appeared in journal articles, conference papers, invited lectures and postgraduate research before being revised, extended and synthesised into their present form.

Particular significance is attached to the author's master's dissertation, *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction* (University of Johannesburg, 2021), in which many of the principal concepts of the Canon were first brought together. Throughout the Canon, "the dissertation" is referenced where it provides historical context, methodological detail, extended theoretical discussion or illustrative examples beyond the scope of the present publication.

The principal scholarly works underpinning the development of the Canon are listed in the **Textual Foundations** section at the end of this volume and may be read collectively as the primary textual foundations from which the present synthesis has emerged.

Readers wishing to trace the historical development of individual concepts are encouraged to consult these works alongside the Modules, Glossary and Auxiliary Notes.

PART III

AUXILIARY NOTES

INTRODUCTION

The Auxiliary Notes extend, contextualise and enrich the principal body of theory presented through the Modules. They provide historical, philosophical and supplementary contexts that are relevant to the Canon but do not form part of its core theoretical progression.

Many of the notes emerged during the writing of the Canon. Some began as material within individual Modules but acquired sufficient scope and independence to stand as texts in their own right. Others developed as candidate Modules before being recognised as too particular, contextual or extended to occupy a place within the principal sequence. Their separation allows such material to remain available without overloading the articulation of the core theory.

The Auxiliary Notes should therefore not be understood as an additional linear argument following the Modules. Nor are they intended to be read from first to last, whether across Part 3 as a whole or within each of its three categories. Their numbering identifies and locates the texts; it does not prescribe a reading sequence.

Instead, the notes operate as extension-interludes within the reading of the core Canon. A reader may temporarily move outward from a Module or Ritornello into a related historical lineage, philosophical question, conceptual clarification,

model or supplementary discussion, before returning to the principal theoretical movement with that context in view.

In this sense, the Auxiliary Notes orbit Part 1. The metaphor of orbit is not intended to position them as detached or incidental. Their movement remains centred upon the Modules, and the relations holding them in place are explicitly articulated. Each Module and Ritornello identifies the Auxiliary Notes relevant to it under Related Notes. Each Auxiliary Note, in turn, identifies the Modules and Ritornellos to which it most directly relates under Related Modules.

These reciprocal relations create a bidirectional navigational structure:

- Readers moving through Part 1 may follow Related Notes outward into Part 3;
- Readers encountering an Auxiliary Note may follow its Related Modules back into the core theory; and
- Readers pursuing a particular subject may move laterally between notes connected to the same Module or Ritornello.

The Auxiliary Notes are thus neither free-standing appendices nor deferred components of the core theory. They form a relational layer around it. Their value lies in allowing a particular question, origin, implication or conceptual relation to be pursued without interrupting the broader progression of the Modules.

THE THREE CATEGORIES

The Auxiliary Notes are organised into three categories: Historical Notes, Philosophical Notes and Supplementary Notes. These categories identify the principal

orientation of each text rather than establishing three independent reading sequences.

Historical Notes trace selected intellectual, disciplinary and methodological lineages relevant to the formation of IAD. They situate particular concepts and arguments in relation to earlier work, while also clarifying where the Canon extends, reframes or departs from those inheritances.

Philosophical Notes examine philosophical premises, concepts and implications that inform the Canon or become visible through it. They provide space for questions whose fuller treatment would exceed the immediate purpose of the Modules but whose consideration may deepen their interpretation.

Supplementary Notes elaborate models, distinctions, applications and theoretical relationships that support the use or comprehension of the Canon. They extend matters introduced in the Modules without becoming necessary steps in the core theoretical progression.

The boundaries between these categories are not absolute. A Historical Note may carry philosophical consequences; a Philosophical Note may clarify the development of a canonical concept; and a Supplementary Note may draw upon both. The categories provide orientation within Part 3, but the primary organising relationship remains that between each Auxiliary Note and the Modules or Ritornellos to which it relates.

READING THE AUXILIARY NOTES

Reading the Auxiliary Notes is not a prerequisite for understanding the broad theoretical progression of IAD. The Modules are intended to establish that progression in their own right.

The notes become particularly useful when a reader wishes to:

- Pursue the background or lineage of a concept;
- Examine a philosophical premise or implication more closely;
- Extend a model or distinction beyond its treatment in a Module;
- Follow a concern across several parts of the Canon; or
- Return to the core theory through a different contextual or interpretive route.

For a first encounter with IAD, readers may therefore choose to move principally through the Modules, consulting the Glossary and selected Auxiliary Notes as needed. On later readings, the relationships exposed through Related Notes and Related Modules allow the Canon to be traversed more recursively. A note first encountered as an extension of one Module may disclose its relevance to several others, making visible relations that were less apparent during a sequential reading.

Part 3 is consequently intended to be entered at multiple points. Its notes may be read individually, in clusters around a particular Module, across categories in pursuit of a shared question, or as part of a recursive movement through the Canon as a whole.

The Auxiliary Notes enrich the core theory not by extending its sequence, but by extending the field of relations through which it may be understood.

HISTORICAL NOTES

HISTORICAL NOTE 1

On Herbert Simon, Design Methods, and the Conditions of Design

Related Modules: Module 0 · Module 1 · Module 3b · Module 4 · Module 7

Module 1 – Epistemological Positioning discusses the distinction between descriptive modelling and compositional modelling. During the development of the Canon, an unexpected resonance appeared with an earlier moment in design theory: **Herbert Simon’s distinction between analysis and synthesis**.

The resemblance is striking enough that it deserves its own reflection. This note therefore situates that resemblance historically, beginning with Herbert Simon’s work in *The Sciences of the Artificial* and following a short intellectual arc through the Design Methods Movement, Christopher Alexander’s reaction to it, and the unexpected migration of those ideas into software engineering. The arc ends with the transition from historic to hyperhistoric conditions of design: a transformation that changes not only how artefacts are produced and revised, but the kinds of artificial structures through which meaning is organised and made operative.

Herbert Simon and the Sciences of the Artificial

Herbert A. Simon’s *The Sciences of the Artificial* was first published in 1969. The book originated as a set of lectures delivered at MIT and sought to establish a co-

herent intellectual framework for disciplines concerned with human-made artefacts.

Simon's central argument is deceptively simple: **much of the world humans inhabit is not natural but artificial**. Artefacts, organisations, infrastructures, and systems form an environment constructed by human intention. **Disciplines that deal with such artefacts therefore require their own intellectual foundation**.

Within this framework, Simon identifies two fundamental operations.

OPERATION	MEANING
Analysis	Understanding existing systems
Synthesis	Constructing new systems

Analysis examines the structure and behaviour of existing artefacts or systems. Synthesis constructs artefacts that will behave in desired ways. Simon famously defined design in this context as the activity of devising courses of action aimed at transforming existing situations into preferred ones.

The distinction is structurally similar to the modelling distinction discussed in **Module 1 – Epistemological Positioning**. In IAD terms, **analysis** corresponds closely to **descriptive modelling**, while **synthesis** corresponds to **compositional modelling**.

The Design Methods Movement

Simon's work emerged during a period when design disciplines were undergoing profound transformation. The decades following the Second World War saw unprecedented growth in technological complexity. Large-scale infrastructure, aerospace engineering, computing, and urban development demanded systematic approaches to design.

This context produced what is now known as the **Design Methods Movement** of the 1960s and early 1970s. The movement attempted to formalise design practice through methods derived from systems engineering, operations research, and decision theory.

The ambition was clear: design should become systematic, rational, and defensible. Designers were encouraged to decompose problems into components, explore solution spaces methodically, and justify decisions through explicit reasoning. The goal was not merely better artefacts but more predictable design outcomes in increasingly complex environments.

Simon's work provided a theoretical backbone for this ambition. His research on bounded rationality suggested that designers operate within limits of information and cognition, navigating complex problem spaces through heuristics rather than perfect optimisation. **Design therefore became a process of structured search through possible configurations.**

A limitation in Simon's framework

While Simon's work established an intellectual foundation for design as a legitimate domain of inquiry, his framework remained largely focused on **problem-solving and artefact construction**. The typical sequence looked something like this:

problem → search → solution → artefact

What remained underdeveloped was the question of what happens after the artefact enters the world. How do designed structures stabilise socially? How do they shape behaviour, meaning, and institutional life?

In other words, Simon addressed the **making of artefacts**, but not fully the **ontological consequences of what is made**. This is precisely the domain addressed in IAD through the concept of **contrived ontology (CO)**. Where Simon's framework emphasised the construction of functioning artefacts, IAD extends its concerns towards the relational structures that persist and become operative within the artificial world.

Christopher Alexander and the Reaction Against Methods

The Design Methods Movement did not go unchallenged. One of its most interesting critics was the architect Christopher Alexander.

Alexander initially participated in the movement but gradually became dissatisfied with its increasingly mechanistic tendencies. His early work, particularly

Notes on the Synthesis of Form (1964), contributed to the methods discourse. Yet by the late 1970s, he had turned towards a different approach.

In *A Pattern Language* (1977) and *The Timeless Way of Building* (1979), Alexander proposed the idea of **pattern languages**. Instead of formal optimisation procedures, Alexander described recurring design problems and corresponding solution patterns that could be combined to generate living environments.

Patterns were meant to capture design knowledge embedded in successful environments. They formed a generative grammar through which buildings, neighbourhoods, and cities could evolve organically rather than being imposed through rigid planning methods.

Alexander did not ultimately regard pattern languages as sufficient to produce the living environments he sought. By the late 1970s, he had begun to conclude that something more fundamental was missing: patterns could describe recurrent configurations, but did not adequately explain the generative processes through which coherent living structure unfolds. His later work therefore moved beyond pattern languages towards the deeper account of living structure, generative sequence, and morphological unfolding developed in *The Nature of Order*.

The Unexpected Migration into Software

Alexander's pattern language approach was not widely embraced within architecture itself. The profession moved towards different theoretical concerns, including postmodernism and, later, digital form-making.

Yet Alexander’s ideas found an unexpected audience in software engineering. During the early 1990s, programmers discovered that many recurring problems in object-oriented programming resembled the recurring design problems Alexander had described.

This discovery culminated in the influential book *Design Patterns: Elements of Reusable Object-Oriented Software* (1994), often referred to as the “Gang of Four” book. The authors translated Alexander’s pattern concept into a vocabulary for structuring software systems.

In software architecture, patterns such as Observer, Factory, and Adapter became standard tools for structuring complex systems. Alexander’s ideas therefore flourished not in architecture but in programming. The migration is especially notable because software successfully inherited pattern language as a powerful abstraction at roughly the point when Alexander himself was moving beyond its sufficiency for architecture.

From Historic to Hyperhistoric Conditions of Design

The environment in which Simon and the Design Methods Movement operated was dominated by physical artefacts. Buildings, infrastructure, and cities are expensive to modify once constructed. Design methods therefore attempted to produce reliable solutions before implementation.

Digital environments operate under very different conditions. On the web, structures are effectively written in code—HTML, CSS, and related languages. Modify-

ing a system may be as simple as updating files on a server. The cost of iteration is dramatically lower.

This difference changes the design problem. Instead of requiring near-perfect planning before construction, digital systems often evolve through cycles of deployment, observation, and modification. Design becomes an ongoing process rather than a single act of synthesis.

As discussed in Module 0, **under Hyperhistoric Condition and Meaning Formation**, this is a transition from historic to hyperhistoric conditions of design. The distinction is not merely between analogue and digital, or offline and online. It concerns artificial configurations whose persistence, mutability, reach, and social operation require design and social theories capable of spanning those classical divides.

Within this context, the concern shifts from achieving the correct design in advance to maintaining coherence across evolving configurations. Concepts such as **contrived ontology** and **Golden Thread 3: Movement Between Design and the World** become relevant precisely because digital designs can enter the world, operate there, return to design, and be iterated—as articulated through the first Ritornello. This recursive movement between design and the world was not available under the conditions in which Simon was writing in the same persistent, rapid, and continuous form.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 0 — Orientation	11
Module 1 — Epistemological Positioning	16
Module 3b — Contrived Ontology	43
Module 4 — Semantic Mechanics & Socio-Semantic Mechanics	60
Module 7 — The Golden Threads	88

Frame-Scale: Origins

Related Modules: [Module 3c](#) · [Module 5](#) · [Module 7](#)

Frame-scale now appears in the IAD Canon as a conceptual instrument for locating and reasoning about Information Architectures across spans of abstraction, information density, consequence, and time. Because the concept now performs a foundational role within the theory (Module 5), it is helpful to record where it originally emerged and what problem it was intended to address.

Frame-scale first appeared during the methodological development of the dissertation *Applying Information Architecture in Design Thinking* (Hobbs, 2021). At that time the concept was introduced as a way of reasoning about the relationship between design inquiry and complexity.

The immediate concern was how design research could remain capable of engaging with complex problems without collapsing under the cognitive load such problems impose. Frame-scale was introduced as an idea that would allow these challenges to be better conceptualised in relation to Design, and designing.

The Conceptual Origin

The phrase “frame-scale” draws on the idea of scale-ratio used in architecture and urban planning.

Scale-ratio allows spaces—a house, a neighbourhood, a region, a city—to be represented in abstract form while preserving relational proportions between elements. In a similar way, frame-scale allows design problems to be considered across different levels of abstraction while preserving the relationships between those levels.

This conceptual borrowing allows design problems to be interpreted across multiple spans simultaneously. A problem that appears small at one span may exist within a much larger ecology of relations when the frame is expanded. Conversely, some problems remain legitimately bounded even when viewed against wider systemic contexts.

Frame-scale therefore enables designers to move between spans of concern without invalidating the legitimacy of work performed at smaller scales.

From Research Device to Theoretical Instrument

Within the dissertation, frame-scale initially functioned primarily as a research orientation device. It helped situate research activity and problem framing within, and across, the Design Thinking process-method.

As the theoretical work surrounding Information Architecture Design developed further, the concept took on a broader significance. Frame-scale became a way of observing and describing how Information Architectures operate and relate across different spans of abstraction and consequence within the artificial world.

The concept therefore evolved from a methodological aid into a structural instrument within the IAD Canon.

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Hobbs, J., 2021. *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*. Master of Arts in Design Dissertation. University of Johannesburg.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 3c — IA Types	51
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88

Frame-Scale as Reflective Analytical Tool

Related Modules: Module 5 · Module 7

This note builds upon the historical note Frame-Scale: Origins (Auxiliary notes: HN 2). During the Research through Design (RtD) review conducted for the same research project (Hobbs, 2021), frame-scale became more than a conceptual device for discussing complexity. It became the analytic lens through which the design project itself was interpreted.¹

Recording this stage in the development of frame-scale helps clarify how the concept eventually contributed to several ideas that later became part of the IAD Canon.

Frame-Scale as Analytic Framework

The RtD evaluation examined the design project through criteria relating to process, invention, relevance, and extensibility. Frame-scale provided a conceptual structure through which the design activities could be situated and interpreted.

By plotting design work across levels of abstraction and stages of the Design Thinking (DT) process-method, it became possible to observe how design rea-

¹ See Hobbs 2021, Chapter 6 RTD Review, pp. 211–255.

soning moved across different spans of inquiry. This allowed patterns within the design process to become visible.

Emergence of the Golden Threads

Through this analysis, three recurring capacities within the DT process-method became apparent:

- **Synthetic reach**, associated with the fulcrum;
- **Synthetic resolution**, associated with the tesseract and pivot; and
- **Synthetic integrity**, associated with scaffolding.²

These capacities do not correspond directly to the three Golden Threads articulated in the Canon. Rather, their underlying logic was extended beyond the internal design process: across levels of abstraction, from Design into the Wild, and through the return movement from the Wild into Design.

Synthetic integrity is central to this development. In the dissertation, scaffolding maintained the extension, relevance and traceability of the design concept across the design process. In the Canon, this logic was extended into Golden Thread 1, while Golden Thread 3 completed the recursive movement from Design into the Wild and back into Design.

Frame-scale played a crucial role in making these dynamics visible because it allowed the design process to be interpreted across multiple spans and across time simultaneously.

² See Hobbs 2021, Chapter 6 Section 6.2 Process Evaluation, pp. 215–226.

REFERENCES

Hobbs, J., 2021. *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*. Master of Arts in Design Dissertation. University of Johannesburg, pp. 211–255.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88

The Information Architecture of Roleplaying Games

Related Modules: Module 1 • Module 3a • Module 3b

This note records the historical significance of late 20th-century roleplaying games as early instances of socially enacted, participatory information architectures. It situates these systems as part of the pre-networked genealogy of Information Architecture Design.

In reflecting on the origins of Information Architecture as a lived practice, roleplaying games emerge as a distinct and formative case. For many practitioners, particularly those encountering such systems prior to the widespread adoption of the World Wide Web, roleplaying games constituted a direct experience of structured rule systems, narrative world construction, shared meaning negotiation, and sustained, multi-session participation.

These systems demonstrate that complex information architectures were not only designed, but actively inhabited by participants—beyond formal design contexts, operating at artefact- and systems-levels of frame-scale—prior to the emergence of the World Wide Web. Participants co-produce the realised game through play, but do not ordinarily co-produce the originating Structural Logic of the roleplaying system.

Roleplaying Games as Information Architectures

Roleplaying games may be understood as artificial assemblages in which a configured game becomes an enacted game through play.

The Structural Logic (SL) is designed prior to a particular instance of play. It includes the rules, procedures, probabilistic mechanics, character structures and attributes, permitted actions, relationships, constraints, and the configured organisation of space. Characters occupy a particular position within this logic: they are structurally configured entities through which action becomes possible, but they do not themselves enact the Semantic Formation (SF).

Semantic Formation is enacted by the players and the Game Master. Players do so through their characters, while the Game Master does so through non-player characters, narration, adjudication, and the unfolding world. Within the game, it appears that characters act; from the perspective of the architecture, the agency through which meaning is enacted belongs to the players and Game Master.

Maps, locations, spatial relationships, movement constraints, and boundaries may be configured within SL and semantically formed as named and meaningful places. The particular game space that comes into existence through play, however, is neither SL nor SF in isolation. The configured roleplaying system constitutes a minimal Contrived Ontology (CO): an available composition of SL and SF prior to use. Through enactment by players and a Game Master, that composition becomes a particular shared game space—a maximal CO in which characters, places, events, and consequences become operative.

Unlike many later digital systems, these architectures were bounded but negotiable, structured but interpretable, and contingent upon ongoing participation. Meaning was not fixed in advance, but stabilised through use.

Structural Mutability and Ontological Thresholds

In analogue roleplaying systems, both Structural Logic (SL) and Semantic Formation (SF) remain open to modification within instances of use. The originating SL is not co-produced by players through ordinary play, but house rules, negotiated exceptions, and the adjudications of a Game Master may produce a revised or local SL.

This mutability operates within ontological thresholds. SL and/or SF can be modified while maintaining the identity of a specific game, as in a variant of Dungeons & Dragons. SF can be transformed to the point where the identity of the specific game is lost while the activity remains within the broader class of roleplaying games. SL can be altered to the point where the activity no longer constitutes a roleplaying game, but becomes a different kind of game altogether.

These thresholds are ontological by virtue of their structural-semantic formation: changes in SL and SF do not merely alter the system, but determine what the activity is.

The Role of the Game Master

A distinctive feature of these systems was the presence of a Game Master (or Dungeon Master), who operated as a live mediating agent within the architecture.

The Game Master interprets and applies rules (SL), enacts and modulates Semantic Formation, negotiates exceptions and ambiguities, and enables situated modification of both SL and SF during play.

This role exemplifies Information Architecture operating in real-time, where structure and meaning are continuously coordinated rather than statically defined.

Participatory Meaning-Making

Roleplaying games demonstrate a mode of meaning-making characterised by co-authorship, negotiated interpretation, emergent narrative development, and distributed agency across participants. Their co-authorship pertains primarily to the enacted game and its maximal CO, rather than to the originating SL.

In this sense, they represent socially enacted information architectures in which meaning is composed through SL and SF and stabilised through participation as CO, rather than delivered as a fixed system for interaction.

Transition to Networked Systems

With the emergence of the World Wide Web and later networked gaming systems, many aspects of participatory meaning-making became standardised, systematised, platform-mediated, and structurally closed to modification from within instances of use.

While these developments enabled scale and accessibility, they introduced a different structural condition in which the capacity to modify Structural Logic (SL) and Semantic Formation (SF) is externalised from participants, live negotiation is constrained by preconfigured rule systems, and co-authored evolution is limited to parameters anticipated in advance.

In contrast, analogue roleplaying systems allowed for the situated modification of both SL and SF during enactment, typically mediated by the Game Master as a live agent operating within the architecture.

This note does not claim that roleplaying games are more sophisticated than digital systems, but that they exhibit a distinct form of sophistication in their capacity for negotiated, participatory meaning-making.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 1 — Epistemological Positioning	16
Module 3a — Structural Logic & Semantic Formation	38
Module 3b — Contrived Ontology	43

HISTORICAL NOTE 5

The Lineage of the Golden Thread

Related Modules: Module 2 · Ritornello I · Module 3b · Module 3c · Ritornello II · Module 5 · Module 7

This note records the historical development of the Golden Thread concept within the lineage of IAD. It traces the concept from its early emergence in transdisciplinary design research through its later expansion into questions of operative meaning, Contrived Ontology, visibility, traceability, accountability, and sustainability.

The concept of the Golden Thread has developed across multiple projects, publications, and theoretical expansions over time. While the term initially emerged in relation to user journeys, complexity, and indeterminacy within design processes, it later expanded to address broader concerns regarding meaning transformation, ontological consequence, social operationalisation, and accountability within design and social reality.

Origins in Indeterminacy and Synthesis (2013)

The earliest articulation of the Golden Thread emerged in the text *Navigating Indeterminacy Through the Application of User Journeys* (Hobbs and Fenn, 2013) in relation to indeterminacy, transdisciplinary research, and Nicolescu's transdisciplinary formulation of the logic of the included middle (Nicolescu, 2002).

Within this context, user journeys were described not merely as mapping tools, but as mechanisms of synthesis capable of maintaining continuity across complexity:

...in addition to serving the function of synthesis tool, user journeys also become the map through which the life of the data can be traced back from final designed artifact to the original Discovery phase and problem-ecology. This traceability we refer to as the ‘Golden thread’ and it provides explicit evidence of the transformation of data that allows the design process to be both validated and self-reflective. (Hobbs and Fenn, 2013, p. 200)

The concept therefore emerged from a concern with transformation, continuity, traceability, validation, and self-reflection within design activity that was required to acknowledge or address complexity.

At this stage, the Golden Thread operated primarily within IA in Design.

Synthetic Integrity (2017)

The next major development occurred through the concept of synthetic integrity in the text *Conceiving and Applying Relationship Models for Design Strategy* (Fenn and Hobbs, 2017).

Synthetic Integrity addressed the relationship between research insights, abductive reasoning, and resultant design configurations.

‘Synthetic integrity’ is a term we introduce to describe the relationship of the resultant design solution to the research insights which informed it, whereby a favorable outcome is one in which the abductive thinking results in solutions that are both creative and/or innovative as

well as relevant to the originating problem context.” (Fenn and Hobbs, 2017, p. 517)

This development expanded the Golden Thread beyond traceability alone towards questions of coherence, relevance, integrity, and the preservation of conceptual continuity through transformation.

This period also introduced the foundations of scaffolding, synthetic reach, and synthetic resolution.

Visibility, traceability, accountability, sustainability (2019)

The 2019 Philosophy & Technology article *The Design of Socially Sustainable Ontologies* (Hobbs and Fenn, 2019) introduced a crucial dependency structure comprising visibility, traceability, accountability, and sustainability.

This work argued that semantic formations embedded within artefacts and systems frequently become obscured once socially operationalised. Visibility was therefore positioned not as documentation alone, but as a condition of ontological legibility within design.

The paper proposes a dependency chain in which traceability emerges from visibility; accountability emerges from visibility and traceability; and sustainability becomes possible through all prior conditions (Hobbs and Fenn, 2019, p. 763).

This structure later became foundational to Module 7.

Expansion through Conceptual IA and Contrived Ontology (2021)

By 2021, in the research project *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*, (Hobbs, 2021) the Golden Thread concept had expanded through its relationship to Conceptual IA, Contrived Ontology, frame-scale, and the movement between IA in Design and IA in the Wild. Three interrelated Golden Threads were identified.

GOLDEN THREAD 1

The first Golden Thread concerned scaffolding, synthetic integrity, and the maintenance of visibility and traceability across design transformation. It enabled continuity between enquiry, ideation, prototyping, and implementation.

GOLDEN THREAD 2

The second Golden Thread concerned the persistence of Conceptual IA across levels of abstraction. This thread addressed how minimal Contrived Ontology could remain coherent, traceable, and transformable across concept-, systems-, and object-level frame-scales.

GOLDEN THREAD 3

The third Golden Thread extended visibility and traceability beyond design activity itself and into the world.

The third golden thread, premised in the description of minimal and maximal contrived ontology, extends the visibility and traceability of sense- and meaning-making from the start of any design process, into the world, and in a circular manner, back into design. (Hobbs, 2021, p. 268)

This marked a major conceptual shift. The Golden Thread no longer concerned only continuity within design activity, but the movement of meaning between configuration and formation, composition and consequence, and design and social reality.

This movement later became formalised through Ritornello I, Ritornello II, and the Principle of Operative Meaning.

Operative Meaning and Tacit Stabilisation

Subsequent developments within the Canon expanded the Golden Thread further through operative meaning, tacit social acceptance, infrastructural mediation, and hyperhistoric conditions. This expansion introduced a major implication: **meaning may become socially operative before it becomes explicitly visible or contestable.**

The Golden Thread therefore evolved into a mechanism not only for continuity and traceability within design, but for maintaining visibility into how designed meaning becomes socially consequential across time and frame-scale in the Wild.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 2 — IA in the Wild and IA in Design	22
<i>Ritornello I</i>	30
Module 3b — Contrived Ontology	43
Module 3c — IA Types	51
<i>Ritornello II</i>	69
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88

Information Architecture Design Influences I

Related Modules: Module 0 · Module 1 · Module 2 · Module 3b · Module 3c ·
Module 8 · Module 9

The article "Footnotes to 'Re: The Future of Information Architecture'" (Hobbs, 2021), published in *The Journal of Information Architecture*, emerged directly from the historical moment surrounding the dissolution of the Information Architecture Institute (IAI) in 2019. Written first as a response to the dissolution and then expanded through retrospective commentary, it used the event as an occasion to reflect on broader tensions within the field of Information Architecture (IA) from the late 2000s through the early 2020s.

As the first in a series examining influences on Information Architecture Design, this note revisits the arguments advanced in that article and situates them in relation to the later emergence of IAD. It should not be understood as a history of the IAI itself, an account of views necessarily shared across the field, or an attempt to position IAD retrospectively as the inevitable outcome of these events. Rather, it records how the article interpreted a set of historical, disciplinary, and socio-technical conditions within which several concerns central to IAD first became explicit.

The article identified dissatisfaction with bounded and web-centric framings of IA, tensions between practice-led and research-led orientations, concerns regarding the disciplinary maturity of the field, the emergence of "second intellec-

tual culture” perspectives in IA, and a growing recognition that information architectures operate not only within digital artefacts, but across social, institutional, cultural, and civilisational realities.

It also raised questions concerning what constitutes the field of Information Architecture; which institutional forms might hold epistemological plurality within it; and what responsibilities emerge once information architectures are understood as materially operative in the world.

These were propositions and questions advanced by the article, not claims of consensus within the wider IA community. Their historical significance here lies in the path they opened towards the later formulation of IAD.

The Dissolution of the Information Architecture Institute (2019)

The Information Architecture Institute (IAI), originally founded as the Asilomar Institute for Information Architecture (AIfIA), operated between 2002 and 2019 as a primarily practice-oriented organisation focused on advancing Information Architecture as a professional field and community of practice (AIfIA, 2003).

While the organisation played a historically significant role in the early development of web-era Information Architecture, Hobbs (2021) interpreted its eventual dissolution as an occasion through which deeper tensions concerning the disciplinary scope of IA, the relationship between practice and theory, and the institutional maturity of the field could be examined.

In this account, the dissolution carried significance beyond the closing of a professional association.

The article argued that the moment created a pause in which the limitations of incumbent framings of IA, insufficient institutional support for disciplinary expansion, and the capacity of existing organisational forms to contain emerging theoretical and socio-technical concerns could be considered more directly. This was its interpretation of the moment rather than a position attributed to practitioners or researchers more generally.

From Practice to Field

A central argument in the 2021 Footnotes article concerned the distinction between an entity for the practice of IA and an entity for the field of IA. The distinction remains important.

A practice-oriented body may primarily concern itself with professional development, trade interests, methodologies, markets, and bounded applications. A field-oriented entity, by contrast, must be capable of containing multiple epistemologies, disciplinary plurality, and conflicting theoretical positions. It must also support the storage and dissemination of knowledge, educational concerns, historical continuity, and broader social and civilisational implications.

In this context, the notion of a contemporary learned society became increasingly relevant. The learned society model suggested the possibility of discourse without epistemological closure, coexistence between theory and practice, dis-

tributed participation, and institutional forms capable of supporting long-term disciplinary emergence.

This concern later became increasingly important to the development of IAD's participation ecology and public-facing structures.

First and Second Intellectual Cultures

The Footnotes article introduced a distinction between two intellectual cultures within Information Architecture: a First and a Second.

FIRST INTELLECTUAL CULTURE

The First Intellectual Culture refers broadly to the dominant and incumbent framing of IA inherited from applied Library and Information Science (LIS) around the turn of the millennium.

This culture primarily concerns websites, digital applications, navigation systems, information structures, and bounded digital artefacts. Within this framing, IA remains closely tied to the Web and digital product design.

This was not, however, the only form of IA to precede or coexist with web-era LIS IA. Resmini and Rosati (2011) distinguish three partially overlapping approaches within the history of IA: Information Design, associated most prominently with Richard Saul Wurman; Information Systems IA, concerned with the strategic organisation and management of information within enterprises; and the Information Science approach that became dominant through web-era practice. Wurman's conception extended beyond conventional graphic or information design

towards the systemic and structural ordering of artefacts, ideas, and policies in the service of understanding. Information Systems IA, by contrast, treated information as an organisational resource and addressed enterprise-wide data, systems, and business concerns. The First Intellectual Culture identified in Footnotes therefore refers specifically to the dominant web-era LIS framing, not to every preceding or parallel form of IA.

SECOND INTELLECTUAL CULTURE

The Second Intellectual Culture refers to a broader and more heterogeneous set of positions, either dissatisfied with bounded and web-centric framings of IA or intellectually curious beyond that frame.

Within this orientation, information architectures are understood as existent social phenomena; as artificial, human-made meaning structures which predate the Web; and as relevant across social, institutional, political, cultural, and civilisational realities. Garrett's account of IA as an ancient human activity through which associations are created to convey meaning provides one example of such a position (Garrett, 2021, p. v).

This shift represented more than disciplinary disagreement. It introduced a fundamentally different understanding of what information architectures are and how they operate in the world.

This Second Intellectual Culture perspective later became foundational to the emergence of IAD.

Socio-Technical Expansion and the Hyperhistoric

The emergence of Second Intellectual Culture perspectives occurred alongside broader socio-technical shifts associated with platform society, pervasive computation, networked infrastructures, algorithmic mediation, and the increasing entanglement of human and artificial systems. Within this context, the scope and consequences of information architectures could no longer reasonably be restricted to bounded digital artefacts alone.

Philosophies and theories associated with the infosphere, the hyperhistoric, on-life conditions, and socio-technical world-building became increasingly relevant to Second Intellectual Culture concerns.³

Information architectures no longer merely supported interaction within systems. They increasingly participated materially in the shaping of social reality itself, doing so more frequently, across expanding spans, and with unprecedented local and global effect.

Emergence of IAD concerns

While the 2021 article predates the formalisation of IAD terminology and structures, several themes later central to IAD are already visible in early form: IA as a field rather than merely a practice; the distinction between First and Second Intellectual Cultures; the understanding of information architectures as operative social phenomena; concern for institutional and civilisational consequence; and

³ See Luciano Floridi's *The Fourth Revolution: How the Infosphere is Reshaping Human Reality*, 2014.

the need for structures capable of holding multiplicity rather than enforcing epistemological closure.

The article can therefore retrospectively be understood as part of a broader historical transition from Information Architecture as a bounded practice towards Information Architecture as a design-theoretic, socio-ontological, and meaning-operative condition.

Axioms of a Second Intellectual Culture (2026)

The presentation *Axioms of a Second Intellectual Culture in Information Architecture* (Hobbs, 2026) was delivered at The 11th IA Academics and Practitioners Roundtable in 2026. Hobbs returned to the distinction introduced in the 2021 article and proposed a minimal set of axioms for a Second Intellectual Culture field of IA.

The presentation is significant within this lineage because it marks a movement from the exploratory and polemical position of Footnotes towards a more formal account of the Second Intellectual Culture's foundations, scope, and implications. By this point, the relationship between that culture and IAD could be expressed directly: information architectures are, “real, meaning-operative, non-neutral, context-composing, multi-scalar, and intrinsically responsible” (Hobbs, 2026, p. 20).

Contemporary Learned Society as Participation Ecology

One important implication emerging from this period concerns an appropriate institutional form, if any, for a Second Intellectual Culture IA.

Rather than replicating the structure of a conventional professional trade organisation, a contemporary learned society model suggests distributed participation, coexistence between theory and practice, discourse-oriented structures, educational and research continuity, public engagement, and long-term stewardship of meaning-oriented inquiry.

This concern later became increasingly visible in the evolving public ecology surrounding IAD, including framework encounters, masterclasses, discourse participation, Canon development, pedagogical structures, and participation pathways.

Within this orientation, the purpose of the ecology extends beyond professional advancement alone towards the cultivation of meaning-oriented inquiry, responsible participation in artificial worlds, and the ongoing development of structures capable of engaging the socio-semantic realities of contemporary life.

Footnotes explicitly identifies information architectures as socially pervasive systems of meaning and makes their human production and consequences central to its argument. It therefore raises the problem of meaning-making, although it does not yet name or formally theorise meaning-making as the compositional object and process later developed in IAD.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 0 — Orientation	11
Module 1 — Epistemological Positioning	16
Module 2 — IA in the Wild and IA in Design	22
Module 3b — Contrived Ontology	43
Module 3c — IA Types	51
Module 8 — Contrived Ontology Meta-Framework	96
Module 9 — Development Horizon	102

PHILOSOPHICAL NOTES

On Abstraction as Infrastructure

Related Modules: Module 3 · Module 3b · Module 5 · Module 8

How do abstractions—initially articulated as conceptual or design constructs—come to function as conditions within social reality?

Structural Logic (SL) and Semantic Formation (SF) describe how relational configurations are composed. Contrived Ontology (CO) concerns how such configurations may come to hold and exert consequence.

In which case, under what conditions might an abstraction become infrastructural?

From abstraction to formation

Within IAD, abstraction is not merely representational. It may also be compositional. Through SL and SF, relational configurations are articulated as models, concepts, classifications, designed structures or other artificial arrangements.

When such a configuration enters the world, its meanings and consequences are not settled by composition alone. Through use, interpretation, adoption, contestation and adaptation, it may stabilise and persist as formation. In this sense, an abstraction does not cease to be an abstraction. Rather, an abstract configuration may begin to operate materially and socially through the relations, practices and artificial assemblages in which it participates.

The Infrastructural Condition

An abstraction becomes infrastructural insofar as other actions, interpretations or configurations come to depend upon, proceed through or be conditioned by it.

A classification system, institutional category or conceptual schema may organise what can be recognised, connected, permitted or contested. Its infrastructural character lies in this conditioning function—not necessarily in its scale, permanence or invisibility.

Opacity may strengthen the effects of infrastructure by obscuring its contingency, but it is not a defining requirement. An abstraction may remain visible and recognisable as constructed while still organising practice. Equally, a configuration that appears natural or given may be better understood through *doxa* than through infrastructure alone.

Abstraction as infrastructure therefore describes neither a compulsory developmental sequence nor a final state. It names a possible relation: **a composed abstraction may become a condition through which other aspects of social reality are organised.**

Relation to Operative Meaning

This proposition extends **the principle of operative meaning**. A structured meaning becomes operative insofar as it is enacted, stabilised and consequential. Its operation becomes infrastructural when it supports, constrains or coordinates further meaning and action. The distinction is one of **function**.

Operative meaning concerns meaning that does something in the world. Abstraction as infrastructure concerns operative meaning that has become part of the conditions through which other things are done, interpreted or made possible.

Frame-Scale and Infrastructural Operation

Frame-Scale does not cause an abstraction to propagate or become infrastructural. It provides a means of examining the spans across which a relational configuration is interpreted, specified or coordinated.

Narrowing the frame may reveal how an abstraction operates within a particular artefact or encounter. Expanding it may reveal dependencies and consequences across services, organisations, institutions or conceptual formations. This does not mean that greater span produces greater infrastructural status. A locally bounded configuration may function as infrastructure within a particular practice, while a widely propagated abstraction may remain visible, contested and unstable.

Frame-Scale therefore helps make infrastructural relations available for inquiry. It enables the designer or researcher to ask where an abstraction is operating, what depends upon it, how its effects travel, and where it may be reinforced, altered or resisted.

Implications for IAD

Design does not only produce artefacts. It may also produce conditions. The abstractions embedded in taxonomies, classifications, service structures, institutional categories and conceptual models may shape what can be perceived, understood and done. Their consequences do not depend upon their becoming invisible, nor do those consequences unfold uniformly or inevitably.

The responsibility of design therefore extends beyond the composition of a relational configuration to the conditions that configuration may establish or sustain. **Treating abstraction as potentially infrastructural keeps both its constructed character and its worldly consequences available for examination.**

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 3 — The IAD Triad	34
Module 3b — Contrived Ontology	43
Module 5 — Frame-Scale	73
Module 8 — Contrived Ontology Meta-Framework	96

On *Doxa is Fate*

Related Modules: Module 1 · Module 3b · Module 5 · Module 7 · Module 8

Contrived Ontology describes the ways in which **configured relations** may become **socially operative as formations**. Once stabilised, **these formations persist and exert consequence within the world**. Doxa concerns how such formations may come to be experienced by those living within them, **no longer as constructed and contingent arrangements, but as natural, self-evident or simply given**.

The proposition *Doxa is Fate* names this experiential condition. It does not propose metaphysical determinism, nor does it suggest that the course of events is predetermined. It describes **the apparent inevitability of a relational order whose contingency has become difficult to perceive**. What has been made comes to be encountered as the way things are.

Doxa as Naturalised Formation

In IAD, doxa refers to stabilised formations of meaning that have become naturalised and taken for granted within social reality. The term is drawn from Pierre Bourdieu (1977), but is used in a narrower sense. It does not import his wider theoretical apparatus. It identifies the condition in which **the constructed character of a meaning-bearing formation recedes from view and its structure appears necessary or ontologically given**.

This does not mean that a doxic formation is false, nor that it is wholly invisible or beyond question. Rather, its organising relations no longer present themselves as one arrangement among possible alternatives. **They condition what may readily be thought, said or done while appearing to belong to reality itself.**

The Sense in which *Doxa* is *Fate*

From within a doxic order, **the constraints and affordances produced by relational configuration may not be experienced as the effects of configuration.** They are encountered as the ordinary conditions under which life proceeds. In this sense, doxa functions as a form of social fate: not because events are cosmically predetermined, but because **other potentialities have been written out of formation and are no longer readily available as possibilities.**

The formulation therefore turns on a **distinction between contingency and its experience.** A formation remains the outcome of artificial and social composition even when that composition is no longer apparent. **Its apparent inevitability is an effect of naturalisation,** not proof that it could never have been otherwise.

Doxa, Infrastructure and Consequence

Abstractions may become infrastructural when other meanings, actions or configurations come to depend upon or be conditioned by them. Doxa describes a related but distinct condition: the naturalisation of a stabilised formation within lived social reality. Neither infrastructural operation nor doxic experience follows automatically from formation, and one is not a compulsory stage on the way to the other. They name different aspects of how configured meaning may persist and exert consequence.

This distinction matters because a formation may operate infrastructurally while remaining visible as constructed, just as naturalisation may occur without requiring a fixed sequence from abstraction through infrastructure to doxa. The proposition *Doxa is Fate* concerns the lived appearance of inevitability, not a universal mechanism by which all formations develop.

Contingency and Intervention

Doxa is powerful precisely because a contingent order is experienced as necessary. Yet naturalisation does not make a formation ontologically final. The Canon's account of **Liminal Reality** provides the counterpoint: **socially stabilised formations may sediment and appear inevitable while remaining capable of deformation and reformation.**

IAD can therefore make the construction and consequence of such formations available for inquiry. By making their relational structure and constructed contingency visible, IAD restores the possibility of responsible intervention. Through analysis and acts of composition, it may reveal, sustain, reframe or reconfigure relations that have become taken for granted. This does not place IAD inherently "against" doxa. It establishes that the practice can engage doxic formations reflectively and with attention to the consequences of either sustaining or transforming them.

Implications for IAD

If designed configurations may enter social reality and become naturalised, then **design participates in shaping conditions that may later appear inevitable. Re-**

sponsibility therefore extends beyond the immediate coherence or usability of an artefact to the meanings and relations it may help stabilise.

The ethical concern is not invisibility in itself, but the loss of perceptible contingency and the consequent difficulty of recognising how an operative order has been composed. The Golden Threads support attention to the reach, resolution, integrity, traceability and accountability of meaning-bearing configurations across their movement between design and the world. They do not guarantee that doxa will be avoided. They provide resources for more responsible engagement with the formations that design may enable.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 1 — Epistemological Positioning	16
Module 3b — Contrived Ontology	43
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88
Module 8 — Contrived Ontology Meta-Framework	96

On the Organisation of Meaning

Related Modules: Module 3a · Module 3b

Can meaning be organised? This question appears simple, but it exposes a deeper ambiguity within the field of IA and beyond, particularly at the intersection of design, philosophy, and HCI.

In some accounts, meaning is treated as inherently emergent, arising only through situated interpretation and therefore resistant to organisation. In others, meaning is treated as if it were directly manipulable through structure, leading to overly deterministic claims. This note clarifies the position taken within the Canon.

The Apparent Problem

The hesitation around organising meaning is well established. It draws from traditions that emphasise situated interpretation, embodiment, and contextual variability.

Within these perspectives, meaning is understood as arising in the encounter between a subject and a world, rather than being contained within structures themselves. From this position, a caution follows: meaning cannot be organised directly, only the conditions under which meaning emerges.

This formulation protects against naïve claims that meaning resides fully “in the system,” and it preserves the variability of lived experience. However, taken as a general claim, it produces a limitation.

The Insufficiency of Emergence Alone

Within the Canon, Information Architecture does not operate solely at the level of enabling interpretation. As established in the broader theoretical position, IA organises semantic relations that condition interpretation prior to interaction or use.

This position entails that meaning is internally structured within artificial configurations, that such structure is not added post hoc, and that interpretation does not arise in the absence of prior organisation.

If meaning were only emergent at the moment of encounter, Information Architecture would be reduced to a set of preconditions rather than a compositional practice. This would collapse IA into facilitation rather than design.

Two Senses of Meaning

The difficulty arises from a conflation of two distinct senses of meaning: meaning as structured configuration; and meaning as lived interpretation.

MEANING AS STRUCTURED CONFIGURATION

Within the domain of IA, meaning exists as semantic relations, as coordinated structural logic and semantic formation, as stabilised configurations that persist across time, and as formations capable of exerting consequence. In this sense,

meaning is not separate from structure. It is constituted through it. Meaning, at this level, is organised.

MEANING AS LIVED INTERPRETATION

At the level of experience, meaning appears differently. Here, meaning is situated, embodied, context-dependent, and variable across instances of encounter. This is the domain emphasised by phenomenological and interpretive traditions. In this sense, meaning cannot be fully fixed or determined in advance.

Clarifying the Distinction

The claim that “meaning cannot be organised” rests on a substitution. What is resistant to organisation is not meaning as such, but interpretation. More precisely: interpretation cannot be fully controlled or predetermined.

This does not negate the organisation of meaning at the level of structured configuration. Rather, it establishes a relation between the two: structured meaning conditions interpretation, and interpretation actualises, varies, and extends that structure. Interpretation is therefore variable, but not unconstrained.

Organisation as Composition

Within IAD, to organise meaning is not to fix its interpretation. It is to compose the relational conditions under which meaning becomes intelligible, shareable, stabilisable, and consequential.

This composition occurs through the coordination of Structural Logic (SL) and Semantic Formation (SF), and propagates across Frame-Scales. Meaning is therefore organised not as a fixed content, but as a structured field of possibility.

Implications for IA

This clarification has several implications. First, it establishes meaning as a legitimate object of design, not merely an emergent byproduct of interaction. Second, it preserves the variability of lived experience without collapsing into relativism. Third, it reinforces the non-neutrality of IA: organised configurations privilege particular interpretations, and they render some meanings more visible, actionable, or durable than others. Finally, it aligns with the broader claims of the Canon: IA operates on meaning as a primary medium; it composes context rather than merely adapting to it; and it participates in the structuring of social reality.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 3a — Structural Logic & Semantic Formation	38
Module 3b — Contrived Ontology	43

Second Intellectual Culture Information Architecture

Related Modules: Module 0 · Module 1 · Module 2 · Module 3a · Module 3b · Module 7 · Module 8 · Module 9

The dominant and incumbent position of IA is as a specialised practice concerned with the organisation of information in digital systems. Lesser-known positions do, however, exist and, while not homogenised, share enough between them to constitute a substantive alternative space of field conceptualisation.

In the article *Footnotes to “Re: The Future of Information Architecture”* (Hobbs, 2021) published in the Journal of Information Architecture, the former is designated as a first intellectual culture, and the latter, as a second intellectual culture in the field of IA.

This note clarifies the position taken within the Canon by explicating Second Intellectual Culture Information Architecture and establishing it as the epistemic ground for Information Architecture Design (IAD).

The Field Condition

Information Architecture does not exist as a singular, unified discipline. Rather, it exists as a field containing multiple epistemological orientations, each making different claims regarding what information architectures are, where they exist, and how they may be known.

Within the contemporary field, these orientations stabilise into at least two distinct intellectual cultures.

FIRST INTELLECTUAL CULTURE IA (DOMINANT POSITION)

The First Intellectual Culture is grounded in applied Library and Information Science (LIS). Within this orientation, IA is primarily concerned with bounded artefacts (e.g. websites, applications), its scope is aligned to digital systems, and its practice is method-led and implementation-focused.

Here, IA is constituted as a specialised activity operating at the level of discrete objects. This position is coherent within its own scope.

SECOND INTELLECTUAL CULTURE INFORMATION ARCHITECTURE

Second Intellectual Culture Information Architecture is not a unified doctrine, but a plural set of positions. Across this plurality, a minimal set of shared assertions may be identified:

- Information architectures are real, existent phenomena in the world;
- They are artificial and human-made, and socially emergent;
- They predate digital technology;
- They operate pervasively across domains of human activity;
- They often operate tacitly in their making and being;
- They exert and receive force within the world; and
- Their study requires expanded epistemologies beyond the LIS frame.

Within the Canon, IA is treated as strictly confined to the artificial, human-made domain. Positions which extend IA into natural or non-artificial contexts are acknowledged as part of the broader field, but are not adopted within IAD.

Within this orientation, IA is not confined to artefacts, but understood as a condition of structured meaning within the artificial, human-made world.

Foregrounding

Within this note, and as articulated by Hobbs (2021), the emergence of IA, in a second culture sense and as a named discipline, is understood as a foregrounding. That is, the explicit recognition of a condition that has historically operated in the background of human activity. Information Architecture so conceived is not constituted in the present moment, it is brought into articulation.

The Insufficiency of the First Intellectual Culture

When IA is confined to bounded artefacts its historical continuity is obscured, its operation across domains is excluded and its role in structuring social reality is diminished.

This results in a reduction of IA to practice alone. Within the Canon, this reduction is insufficient. IA is not limited to the organisation of information within systems, it concerns the structuring of meaning within artificial configurations more broadly.

Positioning IAD

Within Second Intellectual Culture Information Architecture, Information Architecture Design (IAD) is situated as a design-theoretic articulation. It does not extend IA beyond its epistemic scope. It provides a formal account of how structured meaning within artificial configurations may be composed, examined, stabilised and transformed.

Structural Alignment with IAD

PN_Table 1 presents an interpretation of second intellectual culture assertions from the perspective of IAD.

This interpretation is specific to IAD. Other positions within the field of Information Architecture may interpret these assertions differently, according to their own epistemological and theoretical commitments.

Axiomatic Expression

The positions of Second Intellectual Culture Information Architecture were formalised as axioms by Hobbs in his presentation by the same name, at the IA Roundtable: Polycrisis, Positionality, Hyperlocality, and Information Architecture, convened at IAC26, Philadelphia, PA on April 14–18, 2026. This note provides the philosophical grounding from which those axioms emerge.

The axioms themselves are reproduced in **Supplementary Note 4. Axioms of a Second Intellectual Culture in Information Architecture** (Auxiliary note: SN 4).

PN_Table 1. Second Intellectual Culture Alignment with IAD

SECOND INTELLECTUAL CULTURE IA ASSERTION	STRUCTURAL LOGIC	SEMANTIC FORMATION	CONTRIVED ONTOLOGY
IA are real, existent phenomena	Configurations are structurally present within artefacts and assemblages	Meaning coheres through organised relations	Persistence and consequence constitute their existence in the world
IA are artificial and human-made	Relations are composed through acts of making	Meaning is constructed and resolved through the coordination of SL and SF	Ontology is contrived through composition and uptake
IA predate digital technology	Structure is not dependent on digital substrate	Meaning formation operates across historical contexts	CO manifests across time and material conditions
IA operate pervasively and tacitly	Structures exist across domains regardless of recognition	Meaning is often implicit in formation	CO operates whether named or not
IA exert and receive force	Configurations may condition action and constraint	Structured meaning conditions interpretation and use	CO manifests as consequence in systems and social reality
IA require expanded epistemologies	Structures exceed LIS modelling constraints	Meaning is not reducible to representational schemas	CO requires multi-scale and cross-domain analysis

Implications for Information Architecture

From the perspective articulated in this note IA operates across domains and Frame-Scales within the artificial, human-made world, meaning is internally structured within artificial configurations, structured configurations may condition interpretation and action, and such configurations may stabilise and exert consequence.

IA is therefore neither neutral nor incidental. It participates in the structuring of artificial, and in many cases, social reality.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 0 — Orientation	11
Module 1 — Epistemological Positioning	16
Module 2 — IA in the Wild and IA in Design	22
Module 3a — Structural Logic & Semantic Formation	38
Module 3b — Contrived Ontology	43
Module 7 — The Golden Threads	88
Module 8 — Contrived Ontology Meta-Framework	96
Module 9 — Development Horizon	102

On the Principle of Articulated Grouping

Related Modules: Module 3a · Module 5 · Module 6

Across many systems, groupings (e.g. categories, folders, sections) are treated as structural devices for organising content. Their role is understood as classificatory, rather than compositional.

However, in certain environments—most notably the web—groupings may be instantiated as objects in their own right. In such cases, the grouping itself becomes a site at which meaning may be composed and encountered.

This note formalises this distinction as the *Principle of Articulated Grouping* and establishes its implications for Information Architecture Design (IAD).

The Condition of Grouping

Grouping is a fundamental operation in Information Architecture. It establishes relations between elements, boundaries of inclusion and exclusion, and conditions for navigation and interpretation.

In all cases, grouping implies the presence of Structural Logic (SL): elements are arranged in relation to one another and constraints are imposed on how elements may be encountered. However, the presence of grouping does not guarantee that its Semantic Formation (SF) will be explicitly articulated. Structural Log-

ic and Semantic Formation remain synthesised even where the semantic rationale of a grouping is implicit, distributed or deferred to the elements contained within it. This produces a condition in which structure operates without explicit articulation of its meaning.

Latent and Articulated Grouping

Two distinct conditions may be identified: latent and articulated grouping.

LATENT GROUPING

In latent grouping, grouping constructs exist structurally, their rationale is not explicitly articulated, and meaning is inferred from contained elements. This condition is typical of file systems, folders in knowledge management tools (e.g. Obsidian), and navigational structures where categories are not encounterable as objects.

Here, SL structures the relations while SF remains implicit, distributed or displaced to the contained elements.

ARTICULATED GROUPING

In articulated grouping the grouping construct is instantiated as an object, the rationale for grouping is explicitly composed, and the grouping itself becomes an encounterable site of meaning. This condition is typical of category pages, section landing pages, and structured entry points within web environments.

Here SL is present and SF is explicitly composed at the level of relation.

The Principle

From this distinction, the following principle is established: A grouping that is not articulated as an object cannot fully participate in the composition of meaning.

Or more precisely: In Information Architecture, grouping constructs are not merely containers of relations, but potential sites of semantic formation.

The Web as a Compositional Environment

The web is distinctive in that it permits every node to function as both container and content, relations to be staged as encounters, and structure to be made explicit and navigable as meaning.

This enables a condition in which grouping may be composed, rather than merely assumed. In such environments, the rationale of grouping may be declared, shaped, and stabilised rather than inferred post hoc.

Meta-Notes and Compensatory Structures

In systems where grouping is not natively articulated auxiliary constructs such as “meta-notes” often emerge and these act as proxies for category-level meaning. Such constructs indicate a requirement for semantic articulation at the level of grouping and a limitation within the host system.

The meta-note is therefore not a primary form, but a compensatory one. In environments that permit articulated grouping the category page constitutes the proper ontological realisation of grouping.

Articulation and Cross-Scale Consequence

The Principle of Articulated Grouping may be interpreted through the constructs of IAD. In both latent and articulated grouping, relations are structurally defined through SL. In latent grouping, however, SF remains implicit or distributed, reducing the potential for meaning to stabilise at the level of the grouping. In articulated grouping, SF is explicitly composed at that level, increasing the potential for stabilisation and cross-scale consequence.

Grouping is therefore not neutral: its articulation alters the conditions under which meaning may hold. Articulated grouping should be considered necessary, or complementary, where an IA is intended or desired to span frame-scales or instantiate beyond a single, particular and local manifestation.

From the perspective articulated in this note, groupings must be designed rather than assumed, the rationale of relation must be composed rather than left implicit, and structural hierarchies require semantic articulation to function fully.

Failure to articulate grouping results in latent meaning, reduced coherence, and diminished capacity for meaning to stabilise and exert consequence.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 3a — Structural Logic & Semantic Formation	38
Module 5 — Frame-Scale	73
Module 6 — IA as Heuristics	83

On the Cross-Scale Coherence of Articulated Grouping

Related Modules: Module 3a · Module 5 · Module 6

The Principle of Articulated Grouping (Auxiliary note: PN 5) establishes that grouping constructs may be instantiated as objects of meaning, and that such articulation enables Semantic Formation (SF) to be made explicit at the level of grouping. However, in systems where groupings re-instantiate across frame-scales, the articulation of grouping introduces a further condition.

Groupings are not monolithic. Where grouping is articulated across frame-scales, re-instantiation does not guarantee semantic continuity. Shifts in frame-scale may require reconfiguration of Structural Logic and recomposition of Semantic Formation in order for meaning to remain coherent. These points of re-articulation constitute sites at which meaning may be extended, amended, or transformed.

Groupings therefore do not exist in isolation. They relate to one another across levels of abstraction, domains, and contexts.

This note formalises the requirement that articulated groupings must be considered in relation to one another, and establishes coherence—rather than consistency—as the primary governing condition of their interaction.

From Articulation to Relation

Once grouping is articulated, it becomes an object of meaning, it participates in the composition of SL and SF, and it enters into conditions of stabilisation (CO). This produces a system in which multiple articulated groupings coexist, each composing meaning at its own frame-scale, with relations between these groupings becoming consequential.

The problem is no longer the absence of meaning at the level of grouping. It becomes the relation between meanings across groupings.

The Condition of Scale

Groupings operate at different frame-scales. These may include object-level groupings, systems-level groupings, conceptual groupings, and institutional or domain-level structures.

At each frame-scale, Structural Logic (SL) defines relations, while Structural Logic and Semantic Formation (SF) together compose the relations through which coherence may be achieved. However, SF does not necessarily remain invariant across frame-scales. Meaning may persist, shift, specialise or be recomposed.

Coherence and Consistency

Two governing strategies may be distinguished: Consistency and Coherence.

CONSISTENCY

Under consistency, meaning is maintained as sameness across groupings, labels, structures, or definitions are repeated, and variation is minimised. Consistency is appropriate where a stable conceptual frame is required, and where divergence would produce confusion or breakdown.

COHERENCE

Under coherence, meaning is maintained through relational integrity, variation is permitted and often required, and groupings may extend, reframe, or transform meaning. Coherence is required where frame-scale shifts occur, abstraction levels differ, or domains or contexts change.

The Principle

From these conditions, the following principle is established: **Where grouping is articulated across frame-scales, its semantic formation must be composed in relation to other groupings.** Coherence, not consistency, governs how meaning holds across levels.

Repetition and Recomposition

The articulation of grouping across frame-scales introduces a further condition: Repetition without recomposition may result in semantic drift or collapse.

Where meaning is reproduced without regard for frame-scale, coherence may be lost, relations may become incoherent, and the conditions for stabilisation (CO) may weaken. Conversely, recomposition enables alignment across frame-scales,

variation becomes structurally meaningful, and coherence is maintained through relation rather than sameness.

Tectonic implication

Where articulated groupings are related across frame-scales, a further condition emerges: A shift in the semantic formation of a single articulated grouping may, in principle, reconfigure meaning across a wider frame of the system.

This reflects a tectonic relation in which instances participate in the formation of a whole, and the whole is expressed through its instances.¹ This implies that category-level transformations are not localised, that they may propagate across the system, and that they may reconfigure conceptual integrity at higher levels.

Articulated grouping therefore operates not only as a local compositional act, but as a potential point of systemic transformation.

Cross-Frame-Scale alignment

Cross-frame-scale consistency repeats relations across frame-scales and preserves meaning as sameness. This may support stabilisation, but risks rigidity. Cross-frame-scale coherence instead structures relations relative to frame-scale and recomposes meaning in relation to context. Stabilisation may thereby be supported through adaptive alignment.

¹ See Hobbs 2021, Chapter 6 Section 6.5.3 Instantiation Three and Four: As Tectonic.

Design and Analysis

Articulated groupings must be designed as interrelated systems. Semantic Formation at one frame-scale must be considered in relation to others, and category-level meaning may require maintenance, extension, or recomposition.

For analysis, category-level structures become diagnostic surfaces of IA: sites at which assumptions and constraints may stabilise and become available for examination.

REFERENCES

Hobbs, J., 2021. *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*. Master of Arts in Design Dissertation. University of Johannesburg.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 3a — Structural Logic & Semantic Formation	38
Module 5 — Frame-Scale	73
Module 6 — IA as Heuristics	83

On the Principle of Operative Meaning

Related Modules: Module 1 · Module 2 · Ritornello I · Module 3b · Module 4 · Ritornello II · Module 5 · Module 7

Within IAD, the Principle of Operative Meaning establishes the conditions under which meaning becomes socially real. The principle emerges from a central distinction in the Canon: IA in the Wild concerns formations already operative within social reality, while IA in Design concerns the intentional composition of configurations through design.

This distinction introduces a fundamental problem: **How does meaning move between composition and social reality?**

The Principle of Operative Meaning addresses this transition. It establishes that meaning does not become operative merely through articulation, declaration or intention. Meaning becomes operative when relational configurations stabilise through use, uptake and enactment sufficiently to exert consequence within social reality.

Meaning and Operation

Within IAD, meaning is not treated as solely interpretive, symbolic, or representational. Meaning becomes consequential when it conditions understanding, behaviour, action, expectation, coordination, institutional practice, or social possibility.

Operative meaning therefore refers to meaning which has acquired the capacity to organise or condition reality through its stabilisation within formations. This stabilisation may occur across artefacts, interfaces, services, institutions, procedures, systems, discourses, infrastructures, and social practices.

Use and Social Uptake

The principle proposes that use constitutes a primary mechanism through which meaning becomes operative. In IAD, use triggers transcendence: the movement through which a configured meaning may pass beyond its designed configuration and become socially realised. Use is not itself transcendence.

Meaning frequently becomes socially real not through explicit agreement, but through repeated enactment and participation. This process may include adoption, repetition, habituation, procedural embedding, institutionalisation, infrastructural reinforcement, or tacit acceptance.

In many cases, meaning is not declared; it is enacted. This introduces a critical condition: Meaning may become socially operative before it becomes explicitly visible or contestable, if at all.

Tacit Transformation

The operation of meaning frequently occurs beneath ordinary awareness. Transformations in meaning may emerge gradually through systems, interfaces, incentives, procedures, defaults, classifications, governance structures, or repeated interaction.

Such transformations may eventually alter expectations, norms, assumptions, relations, or conditions of participation, without requiring explicit ideological declaration. This condition applies equally to banal everyday practices, organisational systems, institutional structures, technological environments, economic systems, and broader socio-cultural formations.

Operative Meaning and Contrived Ontology

The Principle of Operative Meaning provides a mechanism through which Contrived Ontology (CO) may be understood.

Configurations composed through design may stabilise sufficiently to become formations operative within social reality. This movement does not guarantee permanence, legitimacy, coherence, or ethical validity. However, it does establish the condition through which designed meaning may become socially consequential.

The principle therefore functions as a bridge between: composition and formation; design and consequence; intention and enactment; and configuration and ontology.

Visibility and Responsibility

If meaning becomes operative tacitly and through use, then the conditions through which meaning stabilises may remain partially obscured. This introduces a major implication for IAD.

The field does not merely concern the composition of meaning, but also the visibility of how meaning becomes socially operative across time and frame-scale. This condition grounds the necessity for visibility, traceability, accountability and sustainability within the Canon. These concerns are formalised in Module 7 — The Golden Threads.

Operative Meaning in the Hyperhistoric

Within hyperhistoric conditions, the velocity and scale through which meaning may become operative increases significantly. Digital systems, platforms, algorithms, infrastructures and networked environments may accelerate the propagation of meaning across social reality; its stabilisation remains contingent upon use, uptake and enactment.

Under such conditions, operative meaning may scale rapidly, transformations may become difficult to perceive, and consequences may propagate across multiple frame-scales simultaneously.

The Principle of Operative Meaning therefore establishes one of the central conditions requiring IAD as a field of inquiry and practice.

From Composition to Social Realisation

In design composition, relations are intentionally structured but have not yet stabilised socially; meaning remains proposed. Through social realisation, configurations are enacted through use, meaning may stabilise within social reality, and meaning may become operative. Where relations are reinforced procedurally

through institutionalisation, formations may persist across time and frame-scales and may condition social reality.

Meaning must therefore be considered in relation to its potential stabilisation within the world. Use constitutes a central mechanism of ontological consequence, while designed configurations may exceed their original intentions once socially operative. Systems may propagate tacit transformations in meaning over time, making visibility into these movements a responsibility of design.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 1 — Epistemological Positioning	16
Module 2 — IA in the Wild and IA in Design	22
<i>Ritornello I</i>	30
Module 3b — Contrived Ontology	43
Module 4 — Semantic Mechanics & Socio-Semantic Mechanics	60
<i>Ritornello II</i>	69
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88

SUPPLEMENTARY NOTES

The Two-Hands Model of Complexity (Frame-Scale)

Related Modules: Module 5

At the time of developing the concept of Frame-Scale,¹ a helpful conceptual description emerged for understanding the forces that led to its creation as an instrument. This description can be summarised as the two-hands model of complexity.

The model captures two complementary observations about the nature of design problems and the limits of human cognition when dealing with them. Recording this description helps clarify the conceptual motivations behind Frame-Scale.

Hand One — The Span of Problems

At the widest imaginable frame-scale, a designer confronts the full complexity of the world. Multiple perspectives, explanations, and competing realities intersect simultaneously. Problems appear deeply entangled and solutions become difficult to identify.

¹ See Hobbs 2021, Chapter 3 Methodology.

At smaller frame-scales, problems appear more bounded. They may take the form of concrete design tasks such as creating a website, a service interface, or a product artefact.

Frame-Scale makes it possible to recognise that both conditions can be true at the same time. Local problems may remain legitimate and solvable even when they exist within larger systemic contexts. Expanding the frame may simply reveal additional relations and consequences surrounding the problem.

Hand Two — The Span of Imagination

Even when the broader systemic nature of a problem is visible, the designer may lack the conceptual tools necessary to imagine solutions that operate at that span. In practice, the limits of imagination can be as constraining as the limits of knowledge. Limits of imagination can be confused with limits of knowledge.

This observation highlights the importance of research and skill in abstraction in design practice. As information complexity increases, abstraction becomes a crucial cognitive instrument. When used effectively, abstraction allows designers to manage large informational landscapes without becoming overwhelmed by detail.

Creative dexterity may be retained in complexity if appropriate cognitive tools are employed.

The Two Hands Together

The first hand recognises that problems exist across different spans of concern. The second hand recognises that the designer’s capacity to imagine solutions across those spans may be limited. Frame-Scale emerged as an instrument for navigating the relationship between these two conditions.

REFERENCES

Hobbs, J., 2021. *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*. Master of Arts in Design Dissertation. University of Johannesburg.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 5 — Frame-Scale	73

Frame-Scale and Multiple Ontology

Related Modules: Module 1 · Module 3c · Module 5 · Module 8

During the research that informed Hobbs' dissertation design project (2021), the work of psychologist and philosopher Guy du Plessis provided an important ontological perspective on addiction as a complex social phenomenon.

Du Plessis was distinctive among the addiction researchers considered in approaching addiction explicitly as a problem of ontology. His conception of addiction as a multiple object created an important connection with Contrived Ontology and the possibility that Information Architecture might contribute to an ontological response through the composition of a Conceptual Information Architecture.

Frame-Scale did not produce this connection. Initially employed as a conceptual mechanism within the Research Through Design review, it made the relationship available for structured examination across differing breadths, depths and levels of abstraction. In this capacity, Frame-Scale helped reveal which dimensions, relations and realities of addiction were brought into view by different explanatory accounts, without determining their validity or reconciling them into a single explanation.

Addiction as a Multi-Domain Phenomenon

Du Plessis described addiction as a phenomenon whose ontological complexity cannot be fully captured by a single explanatory model. The explanatory perspectives brought to bear upon it include:

- Genetic or physiological models
- Social and environmental models
- Personality models
- Behavioural reinforcement models
- Biopsychosocial models
- Spiritual or altered-states models

Each brings particular aspects of addiction into focus while leaving others partially or wholly beyond its explanatory span. A neurobiological account may explain processes occurring in the brain and their relationship to behaviour, while a social account may bring family relations, economic conditions, institutional structures or cultural meanings into view.

From the perspective of Frame-Scale, the difference between these accounts does not lie only in their subject matter. Each frames the phenomenon across a particular breadth and depth of relations, contexts and consequences. As the span changes, so too may the problem or reality presented for interpretation.

Narrowing the Frame-Scale is not inherently problematic. It becomes problematic when the account available at a particular span is treated as exhaustive of the phenomenon. Conversely, expanding the Frame-Scale does not guarantee a more

valid explanation. It admits further relations and contexts into consideration while increasing the complexity to be held and related.

Frame-Scale as an Analytic Instrument

Du Plessis' proposition of Multiple Ontology recognises addiction as a multiple object situated along a continuum of ontological complexity. The different accounts brought to bear upon it should therefore not be reduced to alternative perspectives upon an otherwise singular and stable object.

Frame-Scale does not establish the validity of these accounts, determine whether they are ontologically compatible or integrate them into a unified explanation. Within IAD, it provides an analytic instrument for varying and reflecting upon the span of inquiry. In doing so, it helps make visible the particular relations, contexts, problems and realities that become available at different breadths, depths and levels of abstraction.

Its relevance to Multiple Ontology therefore lies in supporting orientation within plurality. Different explanations may be held and related without being prematurely reconciled or reduced to a single account. Movement across Frame-Scale can reveal where an explanation possesses particular force, where its limits become apparent and where further realities or forms of explanation need to remain available.

The formative connection in the dissertation was therefore between Du Plessis' Multiple Ontology and Contrived Ontology. This opened the possibility of using Conceptual Information Architecture to compose an ontological response to ad-

diction as a multiple object. Frame-Scale subsequently made this connection and its development through the design project available for study within the Research Through Design review.

Its broader relevance to IAD lies in this analytic capacity: not as an adjudicator between ontological claims, but as an instrument through which movement across the different spans of complex phenomena can be examined and reflected upon.

REFERENCES

Du Plessis, G., 2012. Towards an integral model of addiction: By means of integral methodological pluralism as a metatheoretical and integrative conceptual framework, *Journal of Integral Theory and Practice*, 7(3), pp. 1–24.

Du Plessis, G., 2014. An integral ontology of addiction: A multiple object as a continuum of ontological complexity, *Journal of Integral Theory and Practice*, 9(1), pp. 38–54.

Du Plessis, G., 2017. *An Integral Foundation for Addiction Treatment*. Tucson: Integral Publishers.

Hobbs, J., 2021. *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction*. Master of Arts in Design Dissertation. University of Johannesburg.

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 1 — Epistemological Positioning	16
Module 3c — IA Types	51
Module 5 — Frame-Scale	73
Module 8 — Contrived Ontology Meta-Framework	96

In memory of Guy du Plessis (1962–2025)

Social Theoretical Lenses for Contrived Ontology

Related Modules: Module 2 · Module 3b · Module 4 · Module 5 · Module 8

The Contrived Ontology (CO) Meta-Framework (Module 8) examines the condition under which relational configurations composed through artificial making become socially operative.

The meta-framework is presented in full in *A Meta-Architectural View of Contrived Ontology: Meaning-Making in the Wild* (Hobbs, 2026).

While CO is articulated within Information Architecture Design (IAD), questions concerning the formation and possible stabilisation of meaning structures within social reality have long been examined within multiple traditions of social theory. These theories offer interpretive perspectives through which Information Architecture formations in the world may be analysed and researched.

The purpose of this note is therefore supplementary rather than historical: social theoretical frameworks are offered as lenses through which Information Architecture formations operating within social systems, including the processes through which they may stabilise, may be studied. Such lenses may be used within IAD research and may also support interdisciplinary inquiry into meaning structures embedded within technological, organisational, and cultural environments.

Stabilisation of Meaning in Social Theory

Many strands of social theory address the question of how meaning structures become stabilised within society. Although these traditions differ in epistemology and scope, they share a common concern: the processes through which interpretive structures become embedded within social practice and begin to organise behaviour, perception, and institutional life.

Contrived Ontology examines this phenomenon from a design-theoretic perspective, focusing specifically on relational configurations composed through artificial making.

Inclusion criteria

The social theories presented in this note were selected because they provide conceptual tools for analysing how meaning structures become stabilised within social reality.

The purpose of the selection is not to provide a comprehensive survey of social theory, but to identify theoretical perspectives that are particularly relevant to the analysis of Information Architecture formations operating in the wild.

Candidate theories were considered appropriate for inclusion if they satisfy the following criteria.

1. STABILISATION OF MEANING

The theory must address, either explicitly or implicitly, how meaning becomes operative within social environments: how interpretations, norms, or symbolic structures stabilise sufficiently to organise perception, behaviour, coordination, or institutional life.

This may occur through mechanisms such as discourse, institutions, practices, activity systems, or fields of social interaction.

2. RELATIONAL STRUCTURES

The theory must treat social phenomena as structured relational configurations rather than isolated individual behaviours.

This orientation allows the theory to illuminate how patterned relationships organise interpretation, coordination, and action across groups, systems, or institutions.

3. ANALYTICAL RELEVANCE TO FORMATIONS

The theory must provide conceptual constructs that can assist in analysing observable formations of meaning within social systems. Examples include constructs such as discursive formations, fields, institutional logics, activity systems, or practice bundles.²

These constructs allow researchers to examine how stabilised Information Architectures manifest within real-world environments.

² From Foucault's Discourse theory; Bourdieu's Field theory; Institutional theory; Activity theory (particularly Engeström); and Schatzki's Practice theory, respectively.

4. CAPACITY ACROSS SPANS OF SOCIAL ANALYSIS

The theory should support analysis across multiple spans of social organisation. Social theory commonly names these external analytic levels as:

- Micro-level interactions and practices
- Meso-level organisational or system structures
- Macro-level cultural or institutional formations

These are terms of social theory, not fixed frame-scale categories within IAD.

5. COMPATIBILITY WITH ARTEFACT-MEDIATED ENVIRONMENTS

Because Information Architecture Design examines relational configurations composed through artificial making, theories are particularly relevant when they can account for the role of artefacts, tools, systems, or symbolic structures in shaping social behaviour and meaning.

Theories that address mediation through artefacts, technologies, or institutional structures are therefore especially valuable for analysing Information Architectures embedded within technological and organisational environments.

6. ANALYTICAL RATHER THAN FOUNDATIONAL USE

Theories included in the CO Meta-Framework are not treated as foundational to IAD. Instead, they are used as analytical lenses that may assist in interpreting and researching stabilised Information Architectures within social reality.

Future theories may be added to this list if they meet the criteria above and provide additional explanatory insight into how relational configurations of meaning stabilise and operate within the world.

Social Theoretical Lenses

The following theoretical perspectives are particularly relevant to the study of meaning structures and the contingent processes through which they may stabilise. Each provides conceptual tools that can assist in analysing Information Architectures operating in the wild.

DISCOURSE THEORY

FOCUS

Discursive systems that organise knowledge, institutions, and social power.

KEY AUTHOR

Michel Foucault

KEY CONCEPTS

- Discursive formations
- Regimes of truth
- Power/knowledge
- Episteme

In the work of Michel Foucault, social reality is structured through discursive formations that organise what may be said, known, and legitimised within a society. Discourses do not merely describe reality; they actively organise it by establishing regimes of truth through which knowledge and practice are coordinated (Foucault, 1972; 1977; 1980). These discursive systems shape institutions,

professional practices, and forms of subjectivity. Through their stabilisation, particular interpretations of reality become authoritative while others are marginalised.

Through the lens of IAD, discursive formations may be interpreted as Conceptual Information Architectures where they can be shown to operate as large-scale relational configurations of meaning across institutions, practices, and knowledge systems. The concepts are not automatically equivalent.

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Foucault, M., 1972. *The Archaeology of Knowledge*. New York: Pantheon.

Foucault, M., 1977. *Discipline and Punish*. New York: Pantheon.

Foucault, M., 1980. *Power/Knowledge*. New York: Pantheon.

FIELD THEORY

FOCUS

The stabilisation of social order through field, habitus, and capital.

KEY AUTHOR

Pierre Bourdieu

KEY CONCEPTS

- Field
- Habitus
- Capital
- Doxa

Pierre Bourdieu's sociology examines how social structures reproduce themselves through the interaction of field, habitus, and capital (Bourdieu, 1984).

Fields describe structured arenas of social activity in which actors compete for influence and resources. **Habitus** refers to internalised dispositions that guide behaviour within those fields. **Capital** exists in multiple forms — economic, social, cultural, and symbolic — and functions as a resource through which actors maintain or transform positions within the field.

When assumptions within a field become sufficiently stabilised, they become **doxa**: taken-for-granted beliefs that structure perception and behaviour without appearing contingent.

Within the CO meta-framework, such conditions can be interpreted as instances where relational configurations have stabilised into durable formations operating across social practice.

SELECTED REFERENCES

Bourdieu, P., 1984. *Distinction: A Social Critique of the Judgement of Taste*. Cambridge, MA: Harvard University Press.

Bourdieu, P., 1990. *The Logic of Practice*. Stanford, CA: Stanford University Press.

Bourdieu, P., 1993. *The Field of Cultural Production*. New York: Columbia University Press.

INSTITUTIONAL THEORY

FOCUS

How shared systems of meaning become stabilised through institutions and organisational structures.

KEY AUTHORS

John Meyer, Brian Rowan, Paul DiMaggio, Walter Powell, and W. Richard Scott.

KEY CONCEPTS

- Institutionalisation
- Systems of meaning
- Institutional logics
- Isomorphism

Institutional theory examines how organisational behaviour and social structures become stabilised through shared norms, rules, and cultural expectations. Institutions persist not only through formal governance systems but also through **systems of meaning** that shape organisational legitimacy (Scott, 2014). One key mechanism is **institutional isomorphism**, through which organisations adopt similar structures and practices in order to maintain legitimacy within their environments (DiMaggio & Powell, 1983).

Institutional theory is particularly useful for analysing Information Architectures embedded within organisational environments such as governance systems, standards, or digital infrastructures.

SELECTED REFERENCES

DiMaggio, P.J. and Powell, W.W., 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields, *American Sociological Review*, 48(2), pp. 147–160.

Meyer, J.W. and Rowan, B., 1977. Institutionalized organizations: formal structure as myth and ceremony, *American Journal of Sociology*, 83(2), pp. 340–363.

Scott, W.R., 2014. *Institutions and Organizations: Ideas, Interests, and Identities*. 4th edn. Thousand Oaks, CA: Sage.

ACTIVITY THEORY

FOCUS

Artefact-mediated activity systems and the role of tools in shaping meaning within human practices.

KEY AUTHORS

Lev Vygotsky, Alexei Leontiev, Yrjö Engeström, and Bonnie Nardi.

KEY CONCEPTS

- Activity systems
- Mediating artefacts: psychological and technical instruments (tools)
- Object-oriented activity
- Information ecologies

Activity Theory examines how human activity is mediated through artefacts, tools, and social relations. Meaning arises within **activity systems** in which subjects pursue goals through the use of **mediating artefacts** (Engeström, 1987).

Within HCI, Activity Theory has been applied to the study of technological environments (Kaptelinin and Nardi, 2006). Nardi and O'Day's (1999) account of **information ecologies** is an adjacent HCI framework concerned with interacting artefacts, practices and communities, rather than a later development of Activity Theory itself.

This perspective is particularly valuable for analysing object-level and system-level Information Architectures embedded within everyday practice.

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Engeström, Y., 1987. *Learning by Expanding*. Helsinki: Orienta-Konsultit.

Kaptelinin, V. and Nardi, B.A., 2006. *Acting with Technology: Activity Theory and Interaction Design*. Cambridge, MA: MIT Press.

Nardi, B.A. and O'Day, V.L., 1999. *Information Ecologies: Using Technology with Heart*. Cambridge, MA: MIT Press.

STRUCTURATION THEORY

FOCUS

The recursive relationship between social structures and human practice.

KEY AUTHOR

Anthony Giddens

KEY CONCEPTS

- Structuration
- Duality of structure

- Social reproduction

Anthony Giddens' **Structuration Theory** proposes that social structures both constrain and enable human action. Through the **duality of structure**, social systems are continuously reproduced through everyday practice (Giddens, 1984). Structures exist not only in institutions but also in the **recurrent patterns of action** through which social life is organised.

This perspective helps illuminate how stabilised Information Architectures may persist through repeated social use.

SELECTED REFERENCES

Giddens, A., 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley, CA: University of California Press.

PRACTICE THEORY

FOCUS

The stabilisation of social order through routinised practices.

KEY AUTHORS

Theodore Schatzki and Andreas Reckwitz.

KEY CONCEPTS

- Social practices
- Routinisation
- Practice bundles

Practice theory examines how social order emerges through the **repeated performance of practices**. Rather than focusing on institutions or individuals alone, practice theorists emphasise the **routines and activities** that constitute everyday life (Schatzki, 2001). These routinised practices form **bundles** that stabilise patterns of behaviour, meaning, and coordination across social environments.

For IAD research, practice theory offers a way to examine how Information Architectures are enacted and reproduced through everyday activity.

SELECTED REFERENCES

- Schatzki, T.R., 2001. Introduction: practice theory, in Schatzki, T.R., Knorr Cetina, K. and von Savigny, E. (eds.) *The Practice Turn in Contemporary Theory*. London: Routledge, pp. 10–23.
- Reckwitz, A., 2002. Toward a theory of social practices: a development in culturalist theorizing, *European Journal of Social Theory*, 5(2), pp. 243–263.

Relation to Frame-Scale

The theoretical perspectives above are commonly applied across different spans of social analysis. The micro–meso–macro terminology in the table belongs to social theory. The IA Type column indicates the kinds of architecture to which a lens may often be relevant; it does not convert either set of terms into fixed Frame-Scale categories.

Frame-Scale remains the adjustable span across which relations, contexts and consequences are brought into view. It can be expanded or contracted within an

inquiry and is not reducible to the table’s social-theory levels or IA Types. The mapping is illustrative rather than prescriptive.

FURTHER READING

Hobbs, J. 2026. *A Meta-Architectural View of Contrived Ontology: Meaning-Making in the Wild*. Theoretical Extension TE-002, Version 1.0. Johannesburg: IAD Framework.
Available at: https://iadframework.com/Publications/TE_002/IAD_TE-002-CO_Meta_Framework_v1.0.pdf

RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 2 — IA in the Wild and IA in Design	22
Module 3b — Contrived Ontology	43
Module 4 — Semantic Mechanics & Socio-Semantic Mechanics	60
Module 5 — Frame-Scale	73
Module 8 — Contrived Ontology Meta-Framework	96

Axioms of a Second Intellectual Culture in Information Architecture

Related Modules: Module 1 · Module 2 · Module 3a · Module 3b · Module 4 · Module 5 · Module 7

This note records six axioms developed as part of an articulation of Second Intellectual Culture Information Architecture. They were first presented publicly in *Axioms of a Second Intellectual Culture in Information Architecture* at the 11th IA Academics and Practitioners Roundtable, convened at the IA Conference, Philadelphia, PA, on 14 April 2026.

Status in relation to the Canon

Second Intellectual Culture Information Architecture refers to a broad and heterogeneous set of positions that extend beyond bounded and web-centric framings of IA. Within this orientation, information architectures are understood as existent social phenomena: artificial, human-made meaning structures which predate the Web and remain relevant across social, institutional, political, cultural and civilisational realities.

IAD situates itself within this broader intellectual culture. The axioms intersect with IAD but are not reducible to it. They make visible assumptions that often

remain tacit in IA practice, support pedagogical development and help to stabilise discourse under conditions of epistemic plurality.

As an Auxiliary note, they form part of the Canon, but not part of its core theoretical Modules. They do not articulate a complete theory of Information Architecture and do not summarise or replace the Canon's Modules.

Framing and constraints

The axioms are explicit orienting commitments: a minimal framework intended to support reflection, pedagogy and disciplinary coherence under conditions of epistemic plurality. They are context-sensitive and historically situated rather than universal truths or a closed theoretical system. They neither replace existing methods and heuristics nor invalidate First Intellectual Culture IA practice. They also do not unify the field, adjudicate between existing schools or prescribe a single mode of practice. Their role is to stabilise discussion and orientation while remaining open to extension and critique.

The Axioms

1. WORLD-SHAPING REALITY OF INFORMATION ARCHITECTURE

ASSERTION

Information architectures are real, world-shaping phenomena, not merely analytical lenses, representations or technical artefacts.

CLARIFICATION

IA exists as a socially real condition that structures meaning, action and possibility in the world.

Within a First Intellectual Culture, IA can be treated as a descriptive or instrumental practice whose effects appear bounded by artefacts and interfaces. Second Intellectual Culture Information Architecture attends to how information architectures persist beyond documentation and design intent, shaping how realities are encountered, navigated and sustained over time. Recognising IA as real does not imply physical materiality or determinism, but social reality in the same sense as institutions, laws or economic systems.

2. MEANING AS A PRIMARY DESIGN MEDIUM

ASSERTION

Information architecture operates fundamentally on meaning, not only on structure, logic or navigation.

CLARIFICATION

IA organises semantic relations that condition interpretation prior to interaction or use.

First Intellectual Culture IA can assume meaning as given and focus on optimising access, clarity or efficiency. Second Intellectual Culture Information Architecture addresses conditions in which meaning is unstable, plural or contested and cannot be treated as a background constant. IA becomes a medium through which meaning is framed, stabilised or transformed.

3. ONTOLOGICAL IMPLICATION AND NON-NEUTRALITY

ASSERTION

Information architectures are not neutral; their structures privilege particular interpretations, actions and actors.

CLARIFICATION

Any structured organisation of meaning necessarily conditions what becomes visible, actionable or marginal.

Within a First Intellectual Culture, claims of neutrality can function as a pragmatic stance allowing IA to operate as a technical service. Under the conditions addressed by Second Intellectual Culture Information Architecture, such claims obscure rather than remove consequence. The absence of explicit intent does not eliminate effect; it renders it tacit.

4. CONTEXT-COMPOSING AND ENVIRONMENTAL BINDING

ASSERTION

Information architecture does not merely adapt to context; it may compose context across spaces, channels and time. Whether that context stabilises remains contingent.

CLARIFICATION

Context emerges through structured relations, not independently of them.

First Intellectual Culture IA tends to treat context as an external constraint. Second Intellectual Culture Information Architecture attends to context as actively

produced through orientation, placemaking and cross-channel continuity. IA binds environments together, enabling coherence across heterogeneous conditions.

5. SCALE AND ABSTRACTION AS CORE IA CONDITIONS

ASSERTION

Information architecture necessarily operates across multiple frame-scales and spans of abstraction.

CLARIFICATION

IA phenomena manifest differently across the Canon's Object-Level, Systems-Level and Conceptual IA Types, and may be examined across broader spans of analysis.

First Intellectual Culture IA often remains anchored to artefact-level concerns. Second Intellectual Culture Information Architecture addresses how structures may persist and exert consequences across broader spans of concern. These frame-scales are analytic perspectives through which relations, contexts and consequences become visible; they are not fixed layers of reality.

6. INTRINSIC RESPONSIBILITY OF IA PRACTICE

ASSERTION

Responsibility is intrinsic to information architecture because it shapes meaning and possibility in the world.

CLARIFICATION

World-shaping practices cannot be ethically neutral by default.

Within a First Intellectual Culture, responsibility may be treated as downstream from the practice of IA. Second Intellectual Culture Information Architecture recognises responsibility as structurally embedded in organising meaning itself. Responsibility follows from ontological implication, not professional intent.

Role and Limitations

Taken together, the axioms establish Information Architecture as real, meaning-operative, non-neutral, context-composing, multi-scalar and intrinsically responsible. They remain intentionally minimal: they do not articulate mechanisms such as Structural Logic or Semantic Formation, describe Contrived Ontology or its degrees, provide a full account of composition or transformation, or prescribe methods and practices. Their role is orienting rather than explanatory.

Relation to IAD

The axioms assert that IA operates on meaning and participates in the structuring of reality. The Canon explains how this occurs through structural, semantic and ontological mechanisms. In this sense, the axioms establish the stakes while the Canon provides the means.

Pedagogical Function

The axioms support reflection on the assumptions underlying IA practice, orientation across scales and contexts, attention to consequence and responsibility, and the cultivation of judgement under uncertainty. Pedagogy is treated here not as curriculum alone, but as the site at which a field's epistemological commitments become visible.

Notes on Scope

The axioms respond to limitations observed in dominant, practice-led framings of IA: confinement to bounded digital artefacts, a lack of explicit theoretical grounding, and insufficient engagement with consequence, scale and responsibility. They are working commitments within an evolving field rather than final statements.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 1 — Epistemological Positioning	16
Module 2 — IA in the Wild and IA in Design	22
Module 3a — Structural Logic & Semantic Formation	38
Module 3b — Contrived Ontology	43
Module 4 — Semantic Mechanics & Socio-Semantic Mechanics	60
Module 5 — Frame-Scale	73
Module 7 — The Golden Threads	88

Discursive Design and Information Architecture

Related Modules: Module 2 · Module 3a · Module 3b · Module 4 · Module 5 ·
Module 8

This note distils the relationship between Discursive Design (DD) and Information Architecture (IA) developed in *Applying Information Architecture in Design Thinking: Ideating Solutions to the Wicked Problem of Addiction* (Hobbs, 2021). It introduces no new model of that relationship. Instead, it makes available within the Canon an argument otherwise found only in the dissertation.

Discursive Design and Internal Meaning

Discursive Design is a field of Design in which the meaning within or behind an artefact is given primacy over the artefact itself. A discursive artefact is intentionally created to communicate a system of thought or knowledge: discourse is not merely a possible consequence of its existence, but its reason for being (Tharp and Tharp, 2019, p. 77).

This places internal meaning at the centre of the design. The artefact is a means through which a position, argument or consideration is communicated and encountered. Its value lies not only in what it enables a person to do, but in the meaning with which that person is invited to engage.

Tharp and Tharp distinguish three related aspects of this communication: message-content, message-form and the artefact through which the message is made present.

Message-content refers to what is being said about a subject or topic. It is not mere content, but a discourse situated in relation to other voices, ideas and systems of thought. This wider background is the **meta-discourse** (Tharp and Tharp, 2019, pp. 166–169). **Message-form** concerns the organisation and composition through which message-content is communicated. It is not a surface treatment applied after the content has been decided. By structuring and shaping the content, the designer gives it a form through which it can become an artefact. An individual artefact may contain more than one message-form, while a work of Discursive Design may extend across several artefacts and elements of the semantic environment (Tharp and Tharp, 2019, pp. 169–181).

The Structural Relationship to Information Architecture

The relationship to IA becomes visible in DD's account of three design acts: the design of content, the design of a form for that content, and the realisation of the two as an artefact. This bears a strong resemblance to the relationship between Structural Logic, Semantic Formation and the artefact in IAD.

Message-content corresponds structurally to **Structural Logic**: each concerns an internal composition through which elements are selected, related and organised. **Message-form** corresponds structurally to **Semantic Formation**: each concerns the formed expression through which that internal composition becomes

coherent and encounterable. In both cases, content and form are mutually dependent within the realised artefact.

The correspondence is not an equivalence. Message-content and message-form belong to the theory and practice of Discursive Design; Structural Logic and Semantic Formation belong to IAD. Their importance here lies in what the comparison makes visible. DD provides a design vocabulary for the deliberate composition of meaning, while IAD explains how a Structural Logic and Semantic Formation operate together as an information architecture.

The relationship therefore strengthens an account of IA as a mode of design. Structuring and shaping information cannot be separated from the meaning that the resulting information architecture brings into the world. Meaning-making is not secondary to the architecture's organisation, nor is it merely an interpretation added by a user after the fact. It is internal to the act of composition and to the formed architecture that results.

Where the Relationship Diverges

DD and IA share a concern with internally composed meaning and with a constructed social reality. The difference between them, however, is consequential.

In Discursive Design, an artefact is intentionally made to carry and provoke discourse. In IA, discourse may be tacit within a Semantic Formation through which behaviour and interaction occur. The meanings brought into the world by an information architecture exist within the practical mechanics of social reality, rather than only being about that reality. People navigate content, encounter

classifications, interact with functions, gain or lose access, and act through structures of meaning. Information architectures are therefore not only read or interpreted; they operate as tools through which people engage with the world.

This distinction can be seen in the difference between a discursive artefact addressing racial classification and a racial classification system used by an institution. The former may provoke reflection upon a social reality. The latter participates materially in producing and sustaining that reality by organising how people are identified, treated and permitted to act. The example is extreme, but the same principle is present in more ordinary information architectures, such as those through which a person posts an update online or books a flight.

Contrived Ontology extends this distinction. In IAD, the synthesis of Structural Logic and Semantic Formation entails an internal composed meaning before use, whether or not that meaning was consciously or discursively designed. This synthesis does not itself constitute Contrived Ontology. Use triggers externalisation and the possibility of social realisation as minimal and maximal CO. In DD, by contrast, message-content and message-form are deliberate objects of design. DD foregrounds the intentional communication of discourse; IAD accounts additionally for meaning that may remain tacit in the making yet become operative through what is made.

Why the Relationship Matters

Discursive Design brings an explicit acknowledgement of meaning-making to the design of artefacts. Its relationship to IA helps reveal that an information ar-

chitecture also communicates and materialises an internal meaning through the mutual dependence of structure and form.

The divergence between the two then clarifies the particular reach and responsibility of IA. An information architecture may do more than carry discourse: it may establish structures of meaning within which practical behaviour and interaction take place. When these structures enter use, their meanings may become involved in the ongoing mediation of social reality.

The relationship does not make DD and IA equivalent, nor does it subordinate one to the other. It offers a productive comparison through which the meaning-making activity of IA, and the consequences of that activity in the world, become easier to see.

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RELATED MODULES — IN VOLUME I, PART 1.	PAGE
Module 2 — IA in the Wild and IA in Design	22
Module 3a — Structural Logic & Semantic Formation	38
Module 3b — Contrived Ontology	43
Module 4 — Semantic Mechanics & Socio-Semantic Mechanics	60
Module 5 — Frame-Scale	73
Module 8 — Contrived Ontology Meta-Framework	96

TEXTUAL FOUNDATIONS

SCHOLARLY WORKS

The IAD Canon represents the first intentional consolidation of a body of theory that has developed through almost three decades of professional practice, teaching, research and scholarly publication.

Many concepts presented throughout the Canon first appeared in journal articles, conference papers, invited lectures and postgraduate research before being revised, extended and synthesised into their present form. Consequently, the principal scholarly works contributing to the development of the Canon are not always cited individually within the Modules, Glossary or Auxiliary Notes.

The works listed below document the principal stages in the emergence of IAD and may therefore be read collectively as the primary textual foundations from which the Canon has developed. **Theoretical Extensions** are texts that have emerged, and continue to emerge, from the core Canon, providing for the ongoing development of the theory of IAD.

THEORETICAL EXTENSIONS

Theoretical Extensions are governed companion texts to the IAD Canon. They provide extended treatment of particular concepts, models or arguments introduced within the Canon's Modules or Auxiliary Notes. While Auxiliary Notes support and enrich the reading of the core Canon, Theoretical Extensions specifically develop the theory of IAD in new directions. They do not independently alter the Canon, but participate in the continuing theoretical progression of IAD beyond its currently constituted form. Individual texts are identified through unique codes—TE-001, TE-002 and so forth—and versioned through Canon Governance, managed within the IAD Framework.

TE-001

A BOUNDED EPISTEMOLOGY OF ARTIFICIAL RELATIONAL CONFIGURATION

https://iadframework.com/Publications/TE_001/IAD_TE-001_Bounded_Epistemology_v1.0.pdf

CITE AS:

Hobbs, J., 2026. *A Bounded Epistemology of Artificial Relational Configuration*. Theoretical Extension TE-001, Version 1.0. Johannesburg: IAD Framework.

TE-002

A META-ARCHITECTURAL VIEW OF CONTRIVED ONTOLOGY: MEANING-MAKING IN THE WILD

https://iadframework.com/Publications/TE_002/IAD_TE-002_CO_Meta_Framework_v1.0.pdf

CITE AS:

Hobbs, J., 2026. *A Meta-Architectural View of Contrived Ontology: Meaning-Making in the Wild*. Theoretical Extension TE-002, Version 1.0. Johannesburg: IAD Framework.

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INVITED ACADEMIC LECTURES

University of Michigan, School of Information, 2025. **SI658 Information Architecture.**

Lecture 3. *Realising Discourse: On the Becoming of Meaning and the Mediation of Social Reality by Information Architecture in Use.* 20 March 2025.

Available at: <https://youtu.be/R3NdBQS--7U?si=m8xeCHV5ff5VDAp->

Lecture 2. *Message-Content & Message-Form: On the Formal Composition and Encoding of Meaning by Discursive Design.* 7 March 2025.

Available at: <https://youtu.be/Epq3WIdFjpA?si=TBKKU3A0ASDIMSzu>

Lecture 1. *Structural Logic & Semantic Formation: On the Formal Composition and Encoding of Meaning by Conceptual Information Architecture*. 20 February 2025.

Available at: https://youtu.be/dzs2LMET3tY?si=ZknIbF698A_k2-xH

KEYNOTES, PRESENTATIONS AND WORKSHOPS

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The works presented here document the principal stages in the development of IAD from early investigations into the relationship between Information Architecture and Design through to the synthesis represented by the IAD Canon. Readers wishing to explore the historical development of individual concepts are encouraged to consult these works alongside the Modules, Glossary and Auxiliary Notes.

ON THE CREATION OF THE CANON

The theory of Information Architecture Design (IAD), as presented within this Canon, has developed across almost three decades of professional practice, teaching, research and scholarly publication. Throughout this period, many of the concepts, models, distinctions and propositions presented here emerged gradually through projects, lectures, conference papers, journal publications and sustained theoretical reflection. As the body of work expanded, recurring patterns of thought began to stabilise, demonstrate coherence across multiple contexts, and establish increasingly explicit relationships with one another.

The IAD Canon represents the first intentional consolidation of the principal concepts, terminology and propositions of IAD into a single organised body of theory.

The Canon exists to provide a stable reference point for the theory; to make relationships between concepts explicit; to support teaching, research and practice; to create a foundation for future extension and critique; and to preserve conceptual continuity as both the theory and the field continue to evolve. In this sense, the Canon is intended as an intellectual infrastructure rather than a final destination.

The development of the Canon has also benefited significantly from long-standing scholarly collaboration with Dr. Terence Fenn, whose partnership over many years contributed substantially to the clarification, testing and refinement of many of the ideas presented throughout this work.

The preparation of this release additionally involved sustained dialogical engagement with a large language model (ChatGPT, OpenAI). The system was employed as a reflective writing and editorial partner to assist with conceptual clarification, editorial review, consistency checking, publication preparation and refinement of language. It did not originate the theory of IAD, nor did it introduce independent conceptual commitments, theoretical positions or arguments. Responsibility for the content of this publication rests solely with the author.

While this release has been authored by Jason Hobbs, the IAD Canon is not conceived as a permanently closed body of work. As both IAD and the broader field of Information Architecture continue to mature, it is anticipated—and actively welcomed—that future editions may benefit from additional scholarship, critique, authorship and expansion by others engaged in the IAD Framework.

In this sense, the Canon is intended not only to document a body of theory, but also to provide a shared foundation upon which a scholarly community may continue to build.