



PART 1 OF 3

STRUCTURAL LOGIC & SEMANTIC FORMATION

ON THE FORMAL COMPOSITION AND ENCODING OF MEANING BY
CONCEPTUAL INFORMATION ARCHITECTURE

A Lecture Series For SI 658 Information Architecture
By Jason Hobbs (2025/02/20)

This talk should be understood as one emerging from a second intellectual culture to be found in the field of IA.

Jason Hobbs
Footnotes to “Re: The Future of Information Architecture”

Introduction

The article “Re: The Future of Information Architecture” was first published on September 24 2019 (Hobbs 2019). Although written in relation to the dissolution of the Information Architecture Institute (IAI), its content presented a reflection on the field at that time with an eye to the future. The present article serves three purposes: preservation and historic record of the original text; documentation of concerns facing the field at that time, with regards to its institutional status; and as a commentary and further conceptual elaboration roughly two years post the dissolution of the IAI.

The IAI operated between 2002 and 2019, originally as the Asilomar Institute for Information Architecture (AIIA), as a 501(c)(6) non-profit organization within the jurisdiction of the USA “dedicated to advancing and promoting information architecture” (AIIA 2019). “Advance” has to be interpreted broadly in this context, since the IAI, as a 501(c)(6) organisation, took on the role of a board of trade formed on the promotion of the field and

Distinct from a **first culture view** of IA as an applied LIS primarily concerned with the web and bounded objects, such as websites or mobile apps, **the second intellectual culture** views information architectures as existent phenomena in the world, which predate digital technology and the Internet.

This second view recognises information architectures as **capable of affecting the human condition** in terms far broader than those we associate with a first culture concern limited to discreet, bounded digital objects.

Upon a sunny morning in Johannesburg, South Africa.

...so based on our previous discussions how would you articulate structural logic and semantic formation?

- ▶ **Structural Logic:** This is the underlying organisation or framework of the information. It concerns how content is grouped, labeled, and connected—essentially the “blueprint” or “architecture” by which audiences navigate or make sense of the design.
- ▶ **Semantic Formation:** This is about the meaning that content carries—what is being said or signified and why it matters. It explores how we choose words, symbols, or conceptual models and how those get understood by people who engage with the system.

In other words, structural logic answers “How is the information arranged?”, while semantic formation answers “What does it mean, and how is it interpreted?”

Almost, but no.

One more time?

They Are Distinct but Mutually Dependent

Yes!

Distinct:

“Structural logic” ensures there is a coherent architecture or shape. “Semantic formation” ensures we have something of significance to say.

No, you’re saying the same thing as before. You just swapped it around.

Mutually Dependent:

Without coherent structure... blah blah blah.

Compositional:

In an information architecture, these two come together as a composition. By carefully encoding both the “how” (structure/form) and the “what” (semantics/content), the design realises an intended meaning for the audience.

No. It doesn’t.



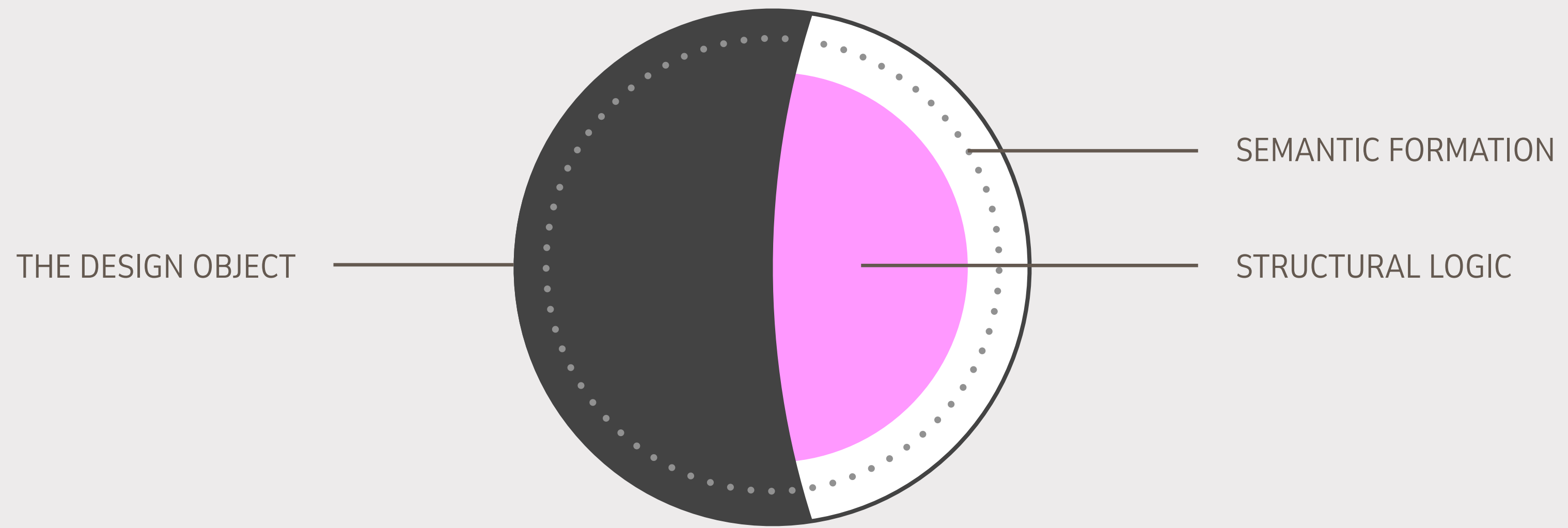
Later that sunny day.

Your understanding is still not quite correct. Let's use the example of a website.

We can think of a **sitemap as the structural logic** (that hidden aspect of the websites IA) underpinning the various webpages that constitute the website as a whole.

The navigation presented on the website allows people to interact with the structural logic in myriad meaningful ways and in so doing operates **as a semantic formation** (that visible aspect of the websites IA).







Welcome to Volkswagen South Africa

Explore

Learn more about our models & packages

- > Help me choose a car
- > Plan your package: Models
Finance | Maintenance & warranty
- > Mastercars

Maximise

Make the most of your Volkswagen

- > Your maintenance plan
Services info
Your warranty & Finances
Repairs | Car care

Just bought?
Start here to get going



Repurchase

Fast track towards your new Volkswagen

- > Plan your car package
- > Evaluations & Trade-ins
- > Contact your dealer
- > Refinancing



Commercial Vehicles

Reliable and cost-effective transportation solutions.

Corporate Sales

Life really is easier with Volkswagen Fleet.

Parts & Accessories

View our parts and accessories microsites.

About Volkswagen

All about our past, present and very bright future.

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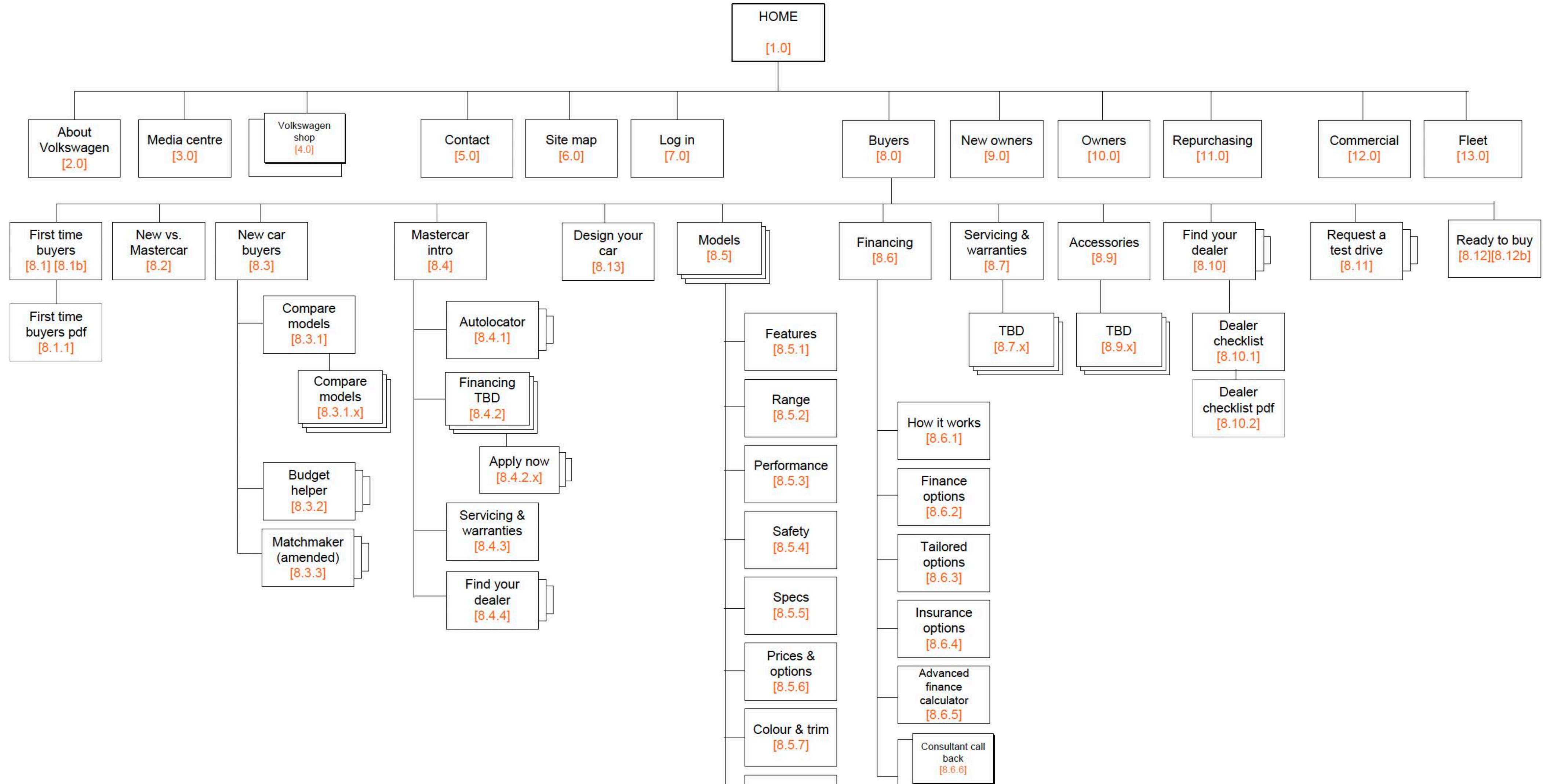
2005.12.11
Volkswagen of South Africa wins 2005 international HIV/Aids award

Volkswagen of South Africa's tenacious fight against the spread of HIV and Aids among its employees has earned the company a...

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STRUCTURAL LOGIC





Explore

Learn more about our models & packages

- > Help me choose a car
- > Plan your package: Models
Finance | Maintenance & warranty
- > Mastercars

Maximise

Make the most of your Volkswagen

- > Your maintenance plan
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SEMANTIC FORMATION



SEMANTIC FORMATION



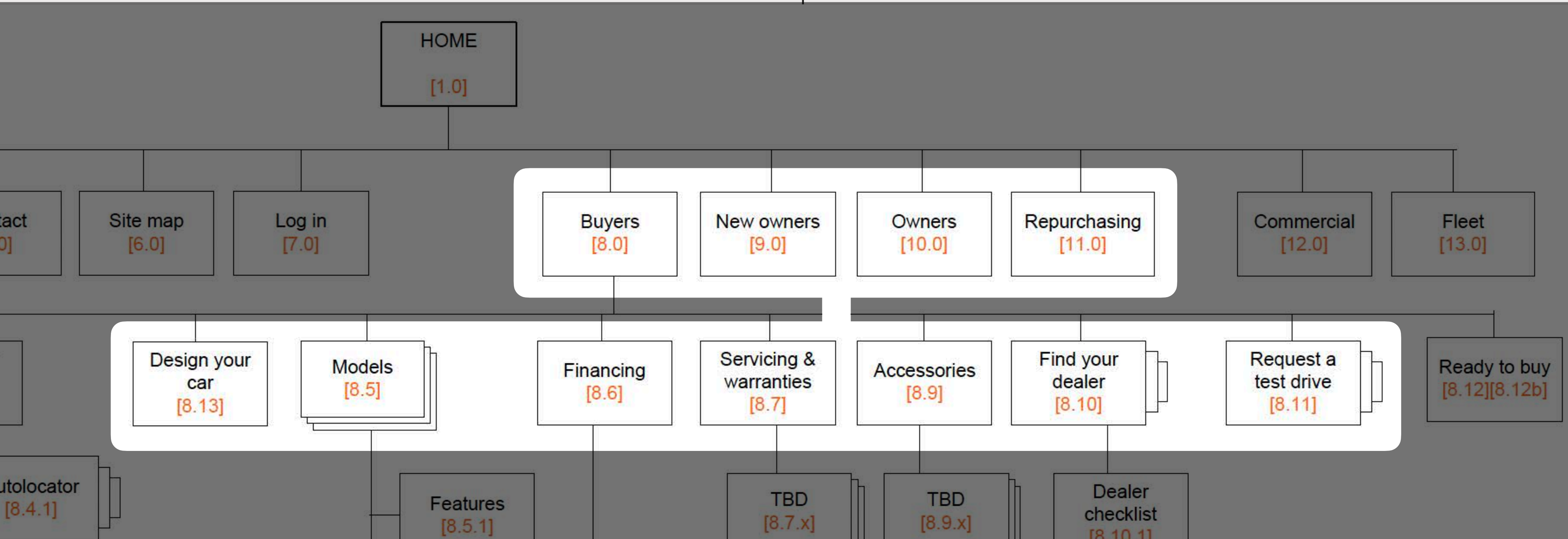
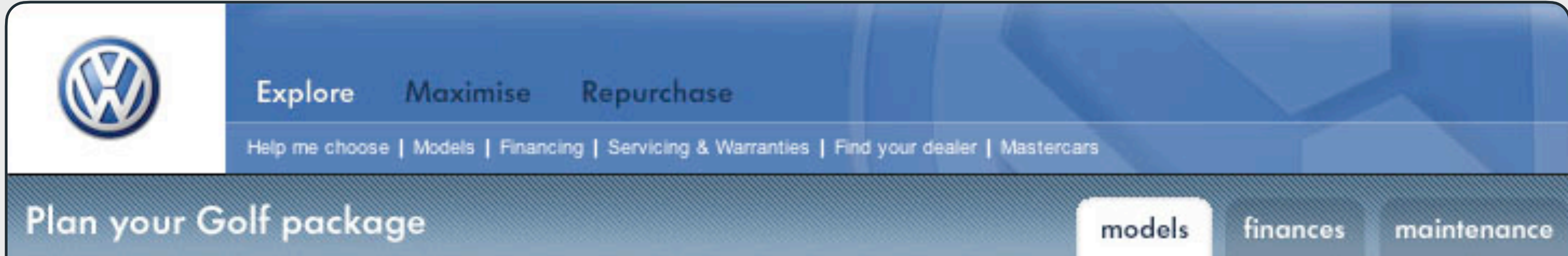
Explore Maximise Repurchase

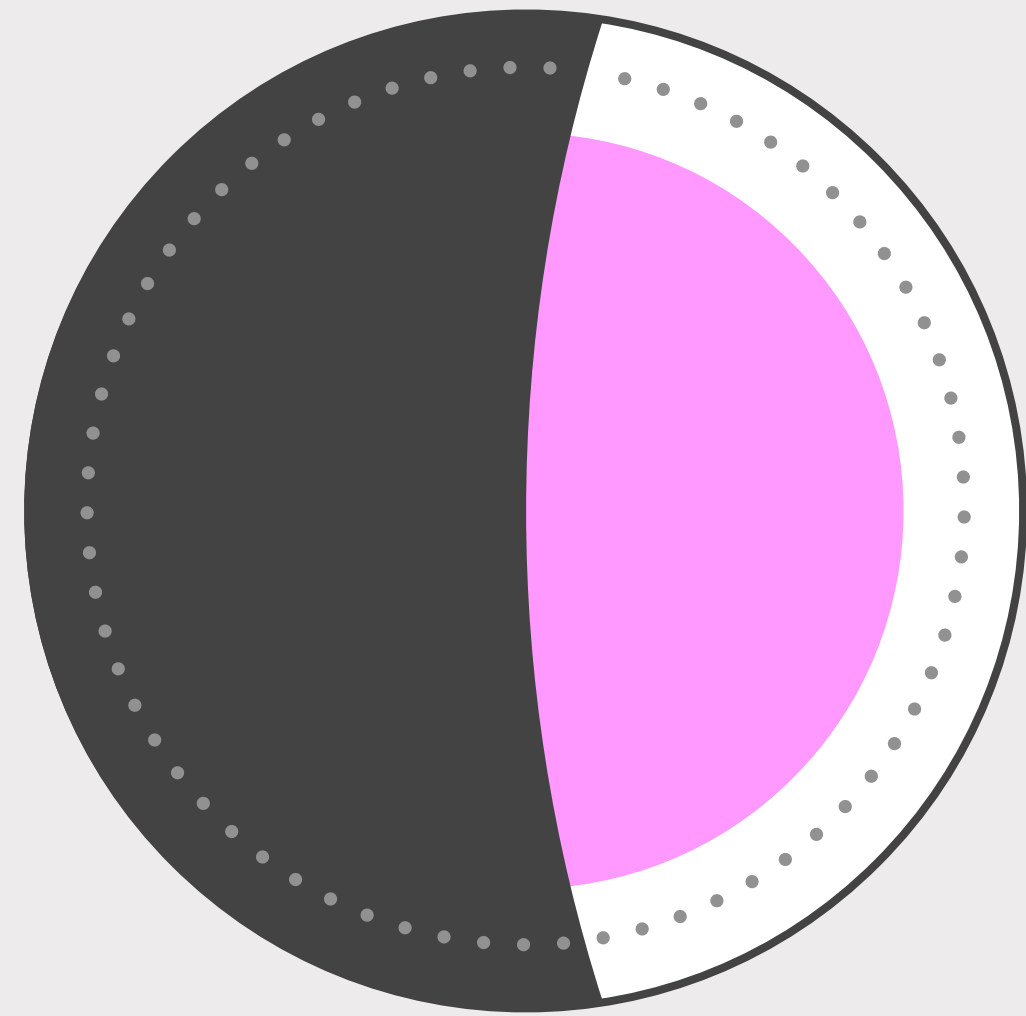
Help me choose | Models | Financing | Servicing & Warranties | Find your dealer | Mastercars

Plan your Golf package

models finances maintenance

The image shows a navigation bar for a Volkswagen website. It features the VW logo on the left, followed by three main navigation items: 'Explore', 'Maximise', and 'Repurchase'. Below these is a secondary navigation menu with links for 'Help me choose', 'Models', 'Financing', 'Servicing & Warranties', 'Find your dealer', and 'Mastercars'. The main heading 'Plan your Golf package' is positioned on the left side of the bar. On the right side, there are three tabs: 'models', 'finances', and 'maintenance', with 'models' being the active tab.





**THESE ARE COMPOSITIONAL DEVICES WHICH DEEPLY
ENCODE AND BIND MEANING WITH THE FORM AND
CONTENT OF OBJECTS**

Does that make sense to you?

Yes, I follow you now. Let me restate it in my own words to ensure clarity:

Structural Logic (the “Hidden” Aspect of IA)

- ▶ This is like the sitemap or blueprint that underlies the entire website.
- ▶ It determines how pages and content are grouped, related, and ordered.
- ▶ Users don’t directly see a “sitemap” in front of them, but it shapes how everything fits together.

Semantic Formation (the “Visible” Aspect of IA)

- ▶ This surfaces in the actual navigation menus, labels, links, or categories that people encounter on each page.
- ▶ When users click around, they see (and interpret) the meaning or logic of the structure through these labels and navigational pathways.
- ▶ In effect, the navigation is how the underlying structure is “expressed” to users, allowing them to move through the site in ways that feel meaningful.

So, the **structural logic** is “behind the scenes,” ensuring there’s a coherent architecture to the website, while the **semantic formation** is what’s “in the spotlight,” letting people navigate and understand that structure by way of labels and navigation cues.

The two go hand in hand: one shapes the other, but they operate at different levels (hidden vs. visible).

That all makes sense to me.

Does it though? Really?



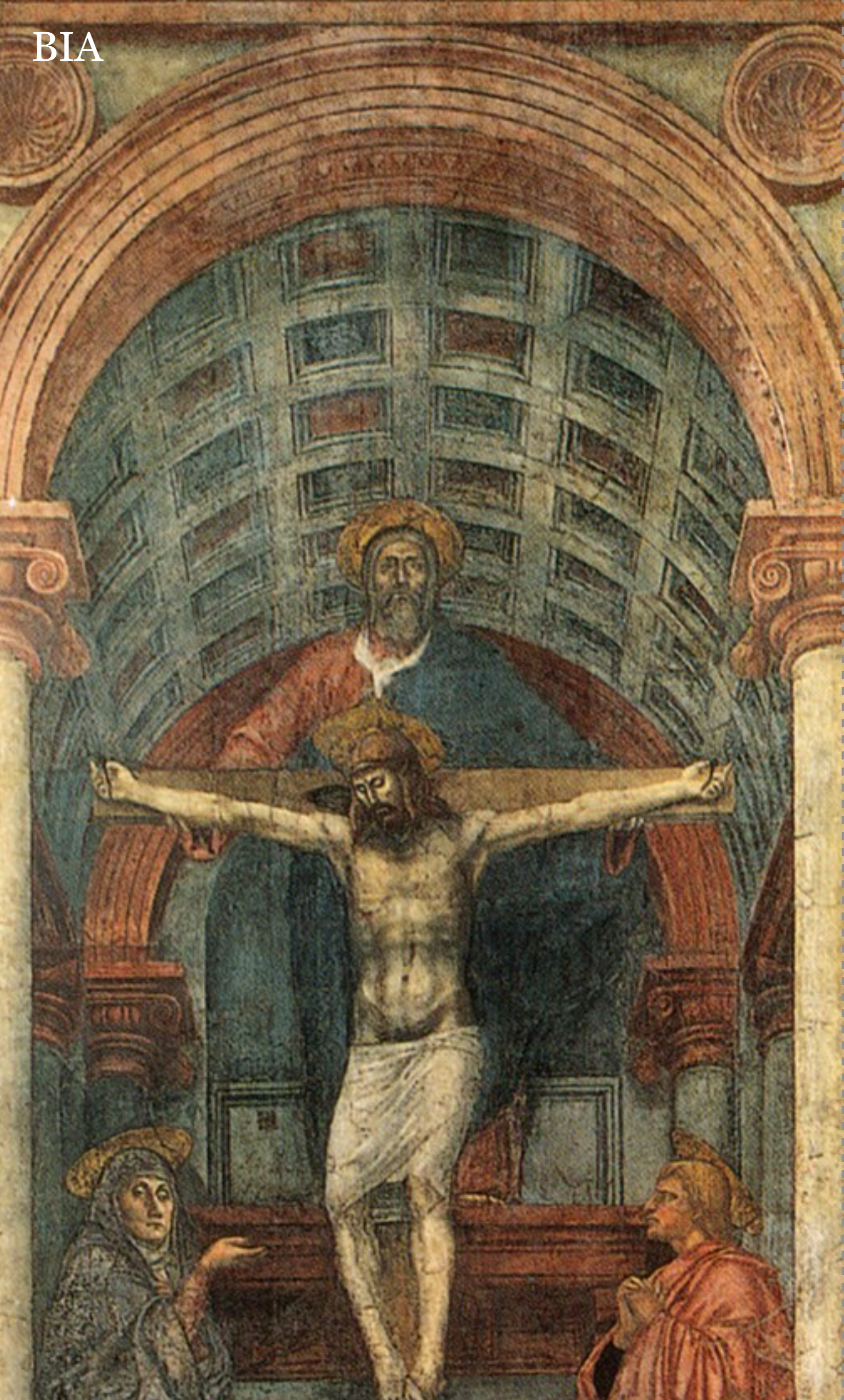
Right, so let's go back to my original request and give it one more try:

Please can you assist me with performing an information architecture analysis of the concept of "democracy" using the mechanics of structural logic and semantic formation?

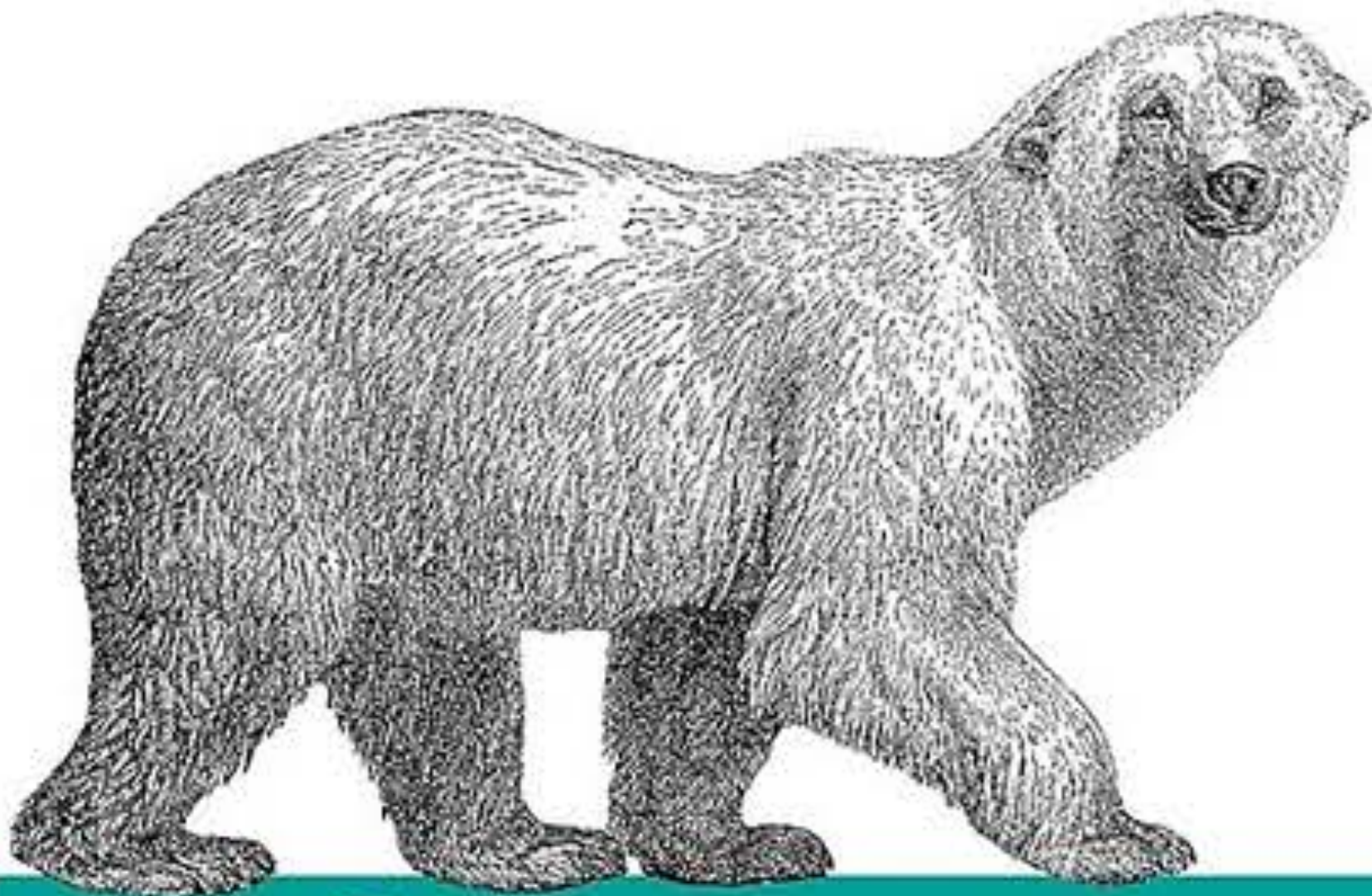


(I, me)

THIS ENCODING OF MEANING IS LIMITED NEITHER TO WEBSITES NOR (LIS) IA.



1997



Information Architecture

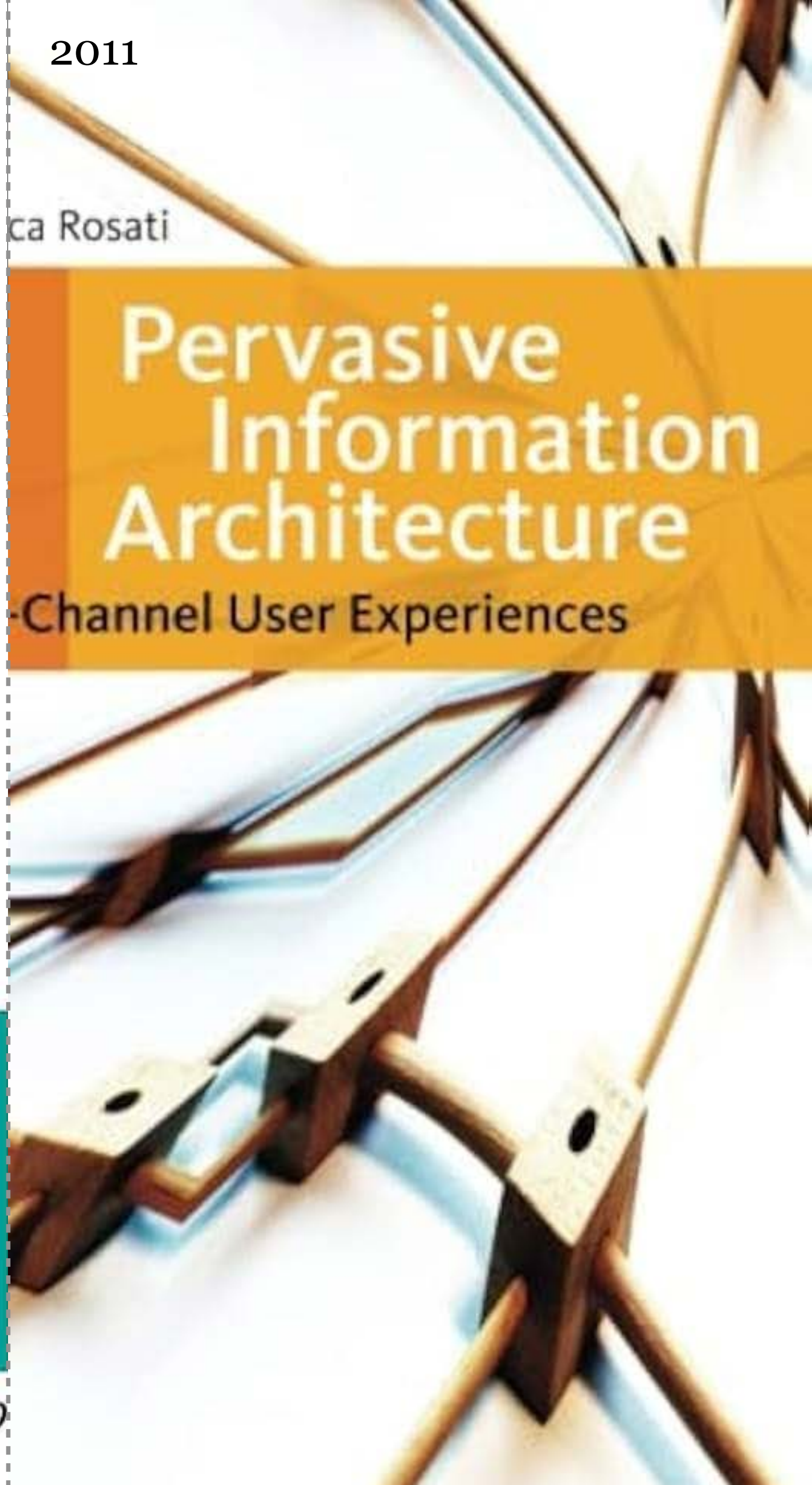
for the World Wide Web

2011

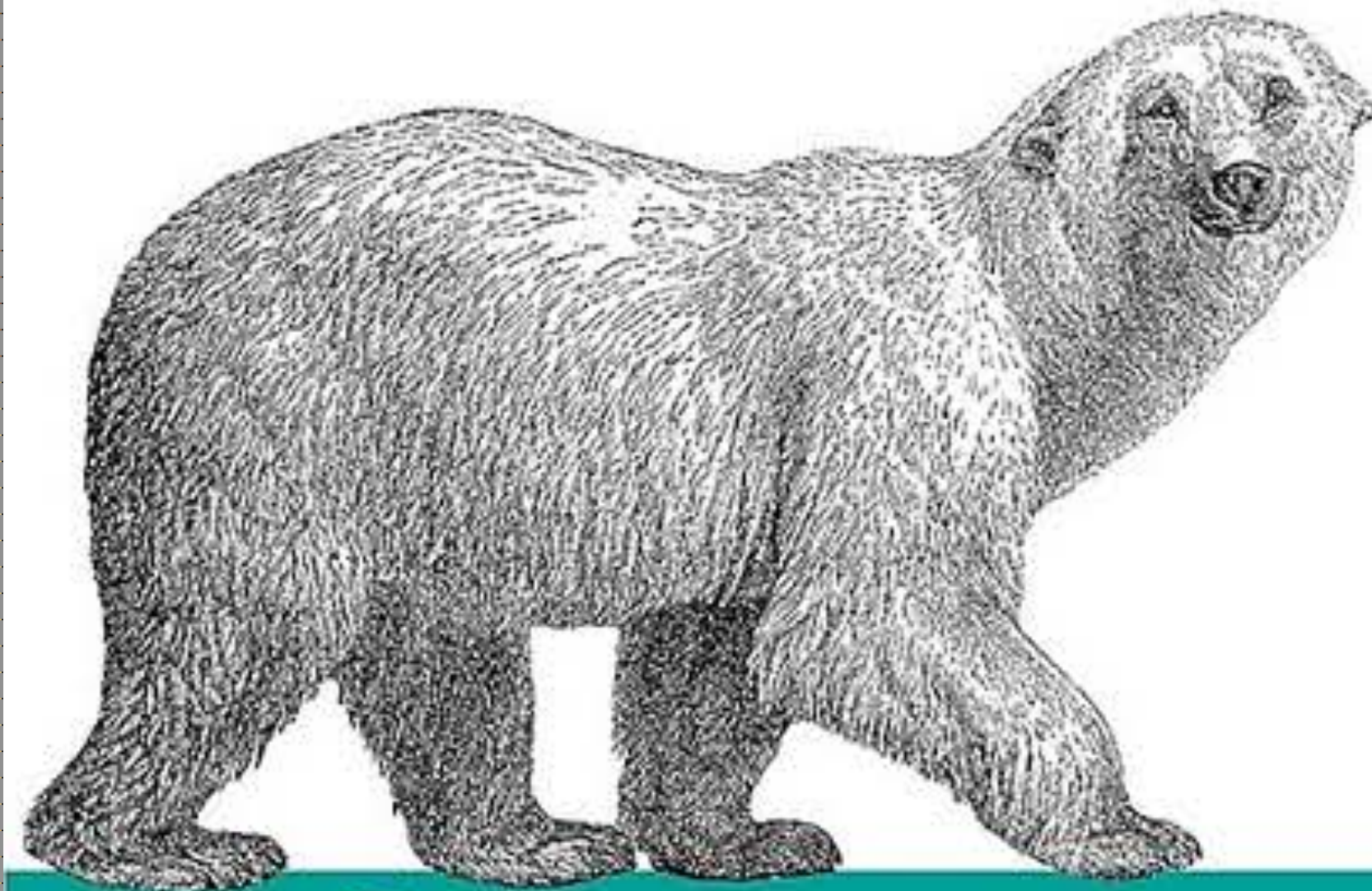
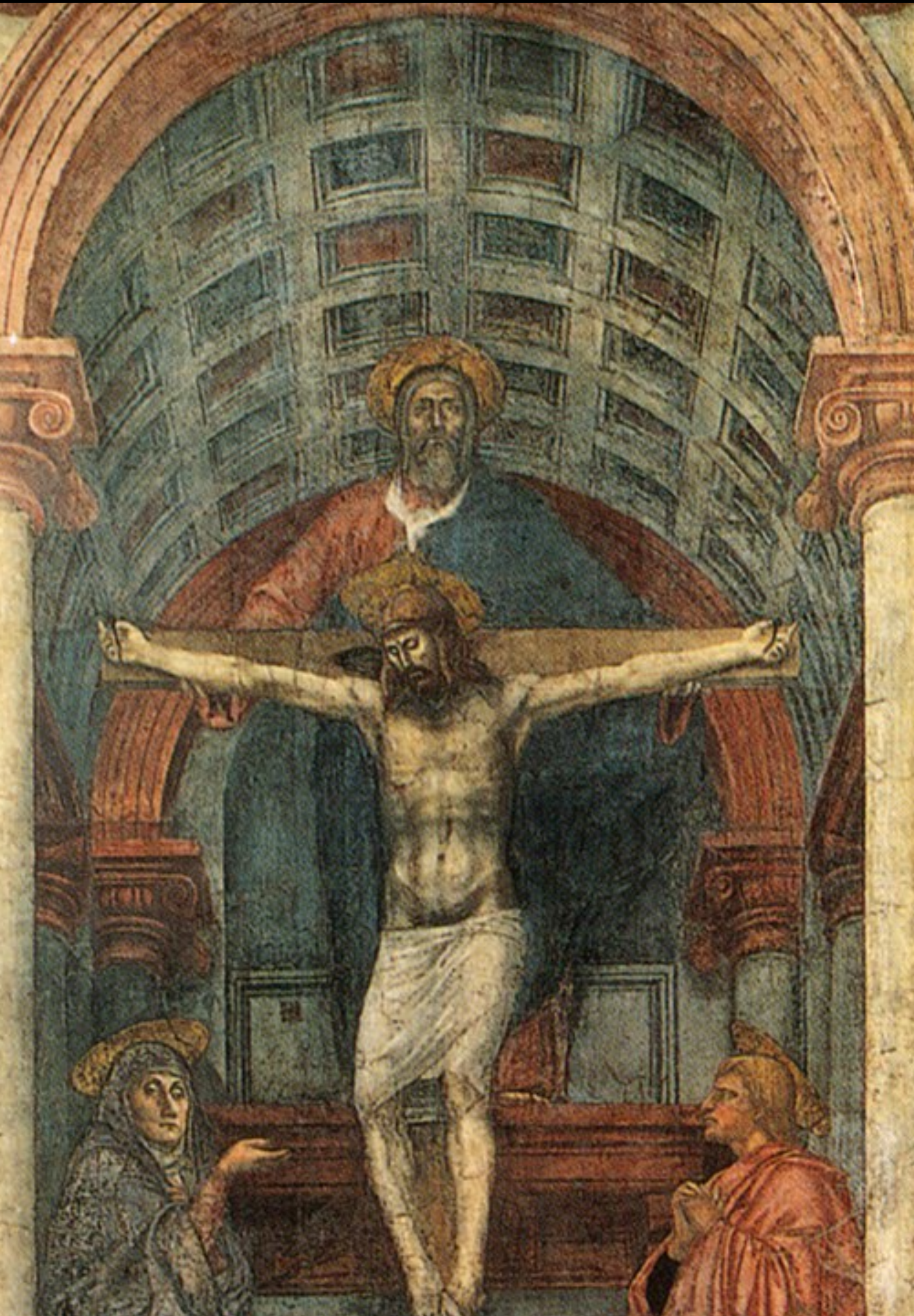
ca Rosati

Pervasive Information Architecture

-Channel User Experiences



“IA may be viewed as having three distinct but mutually inclusive dimensions (amongst potential others), which we will term Bounded, Cross-Channel and Poetic IA...”



Information Architecture

for the World Wide Web

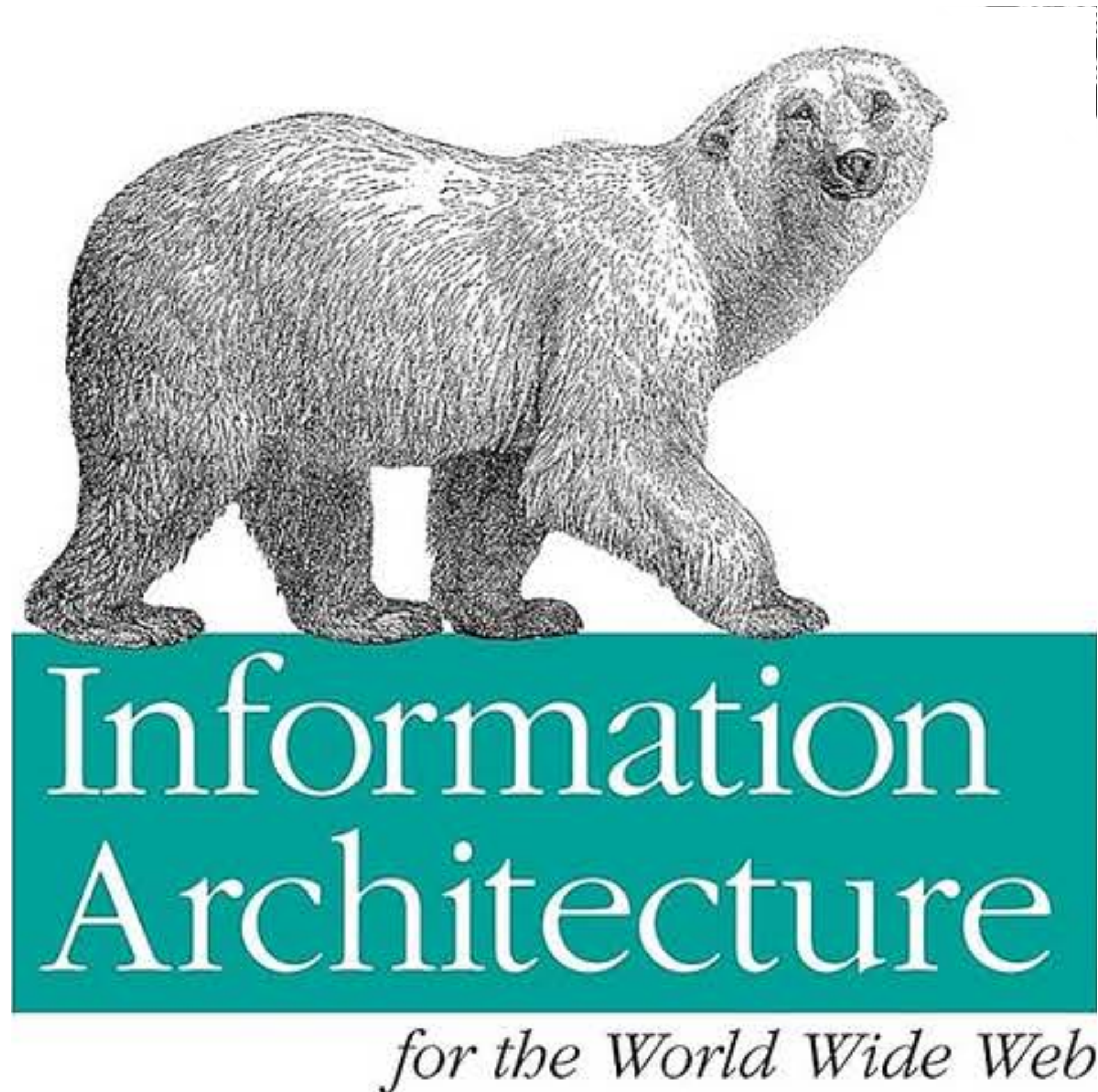
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Pervasive Information Architecture

-Channel User Experiences



“IA may be viewed as having three distinct but mutually inclusive dimensions (amongst potential others), which we will term Bounded, Cross-Channel and Poetic IA...”



Bounded IA tends to address single spaces of interaction and experience (for example a website, a mobile application or an intranet). It may derive its content and functionality from one or more sets of data however they manifest in that single space and the (IA) design is intended for that environment.

In these circumstances the use and purpose of the IA intervention is clear and the design is outcomes-based.

“IA may be viewed as having three distinct but mutually inclusive dimensions (amongst potential others), which we will term Bounded, Cross-Channel and Poetic IA...”

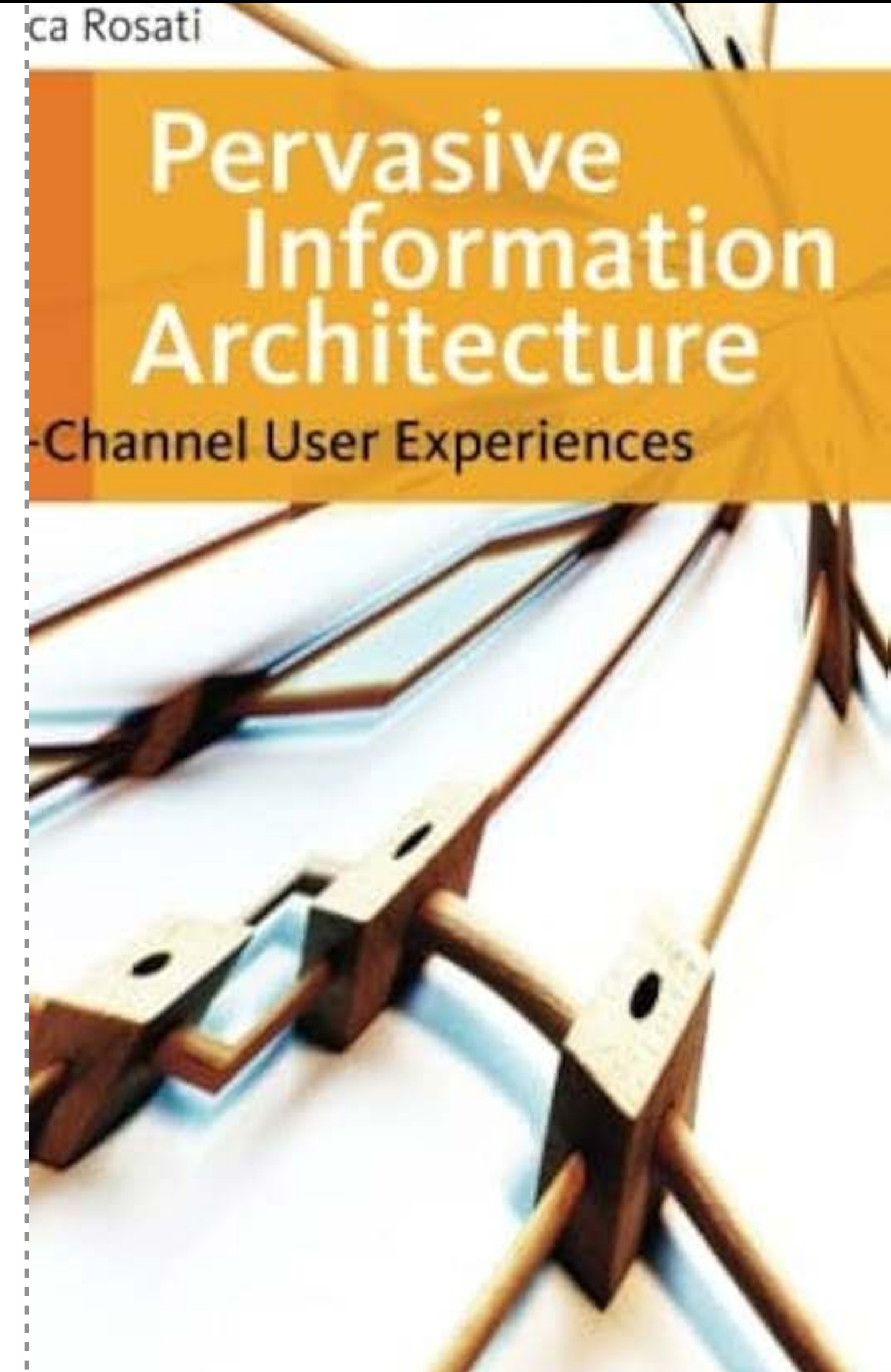
Cross-channel IA offers models of structure and organisation that endure across multiple environments and data sets be they digital or non-digital.

For example, a business requiring a pervasive IA across call centres, physical retail stores, a website and mobile application.

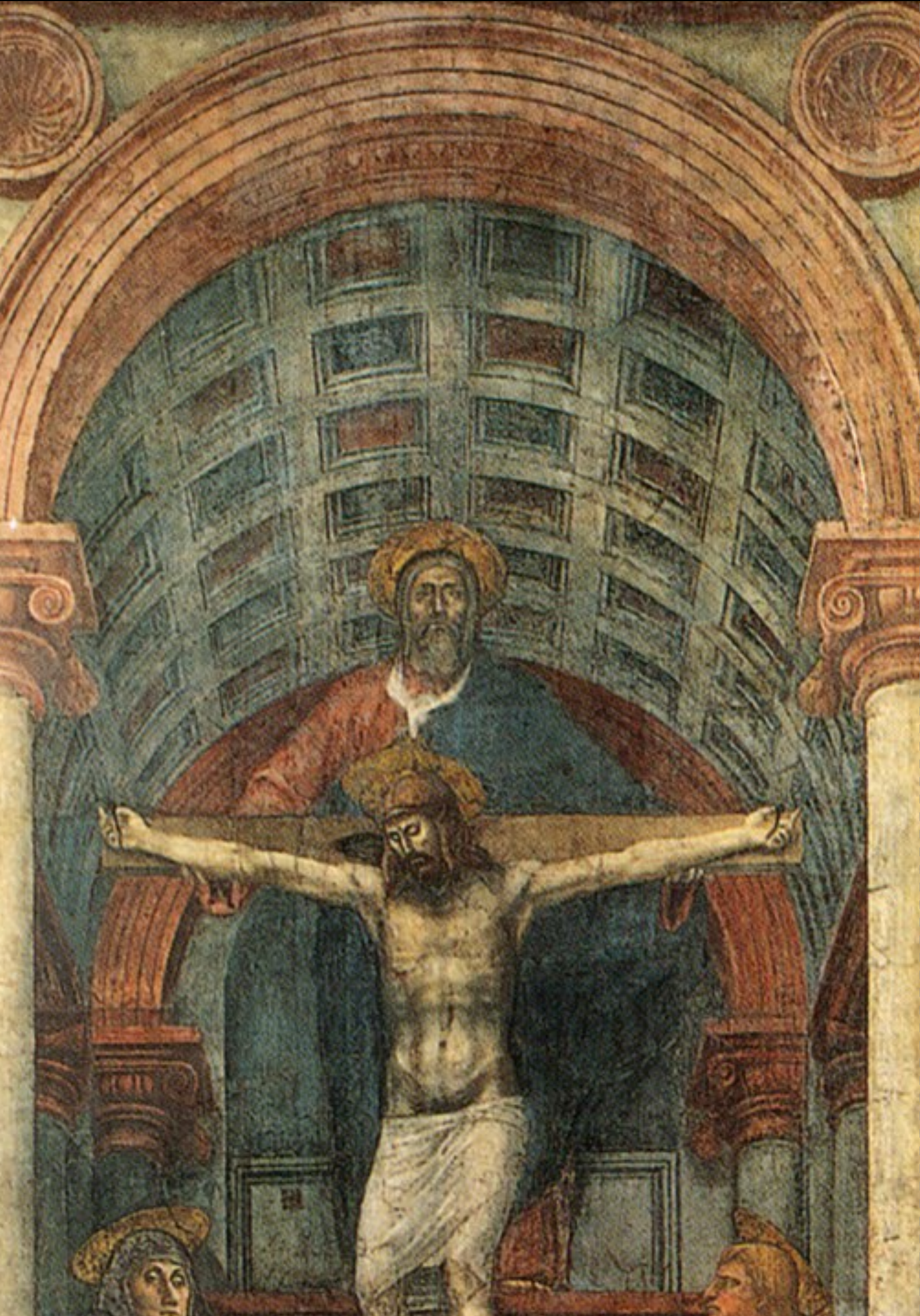
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Pervasive Information Architecture

-Channel User Experiences



“IA may be viewed as having three distinct but mutually inclusive dimensions (amongst potential others), which we will term Bounded, Cross-Channel and Poetic IA...”



Poetic IA is unbounded, without physical or digital context and abstract in the sense that it is interested in the pure structure of data [information] (potentially abstracted from a distinct outcomes based objective).

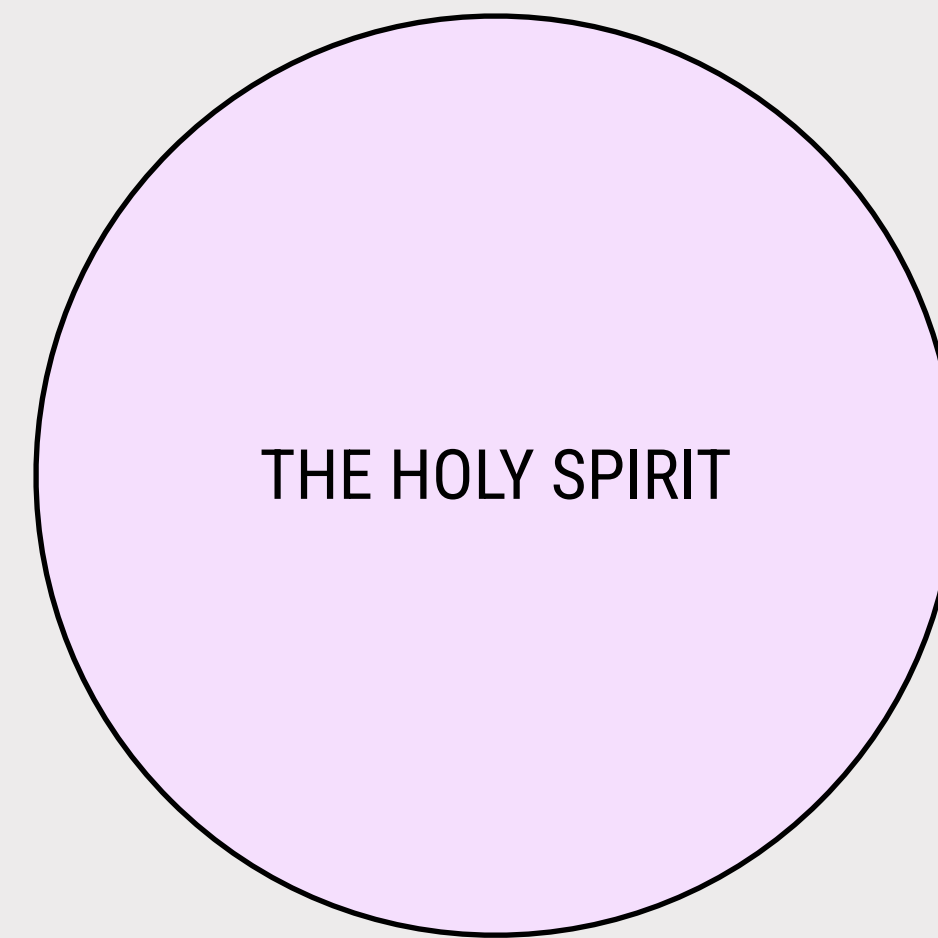
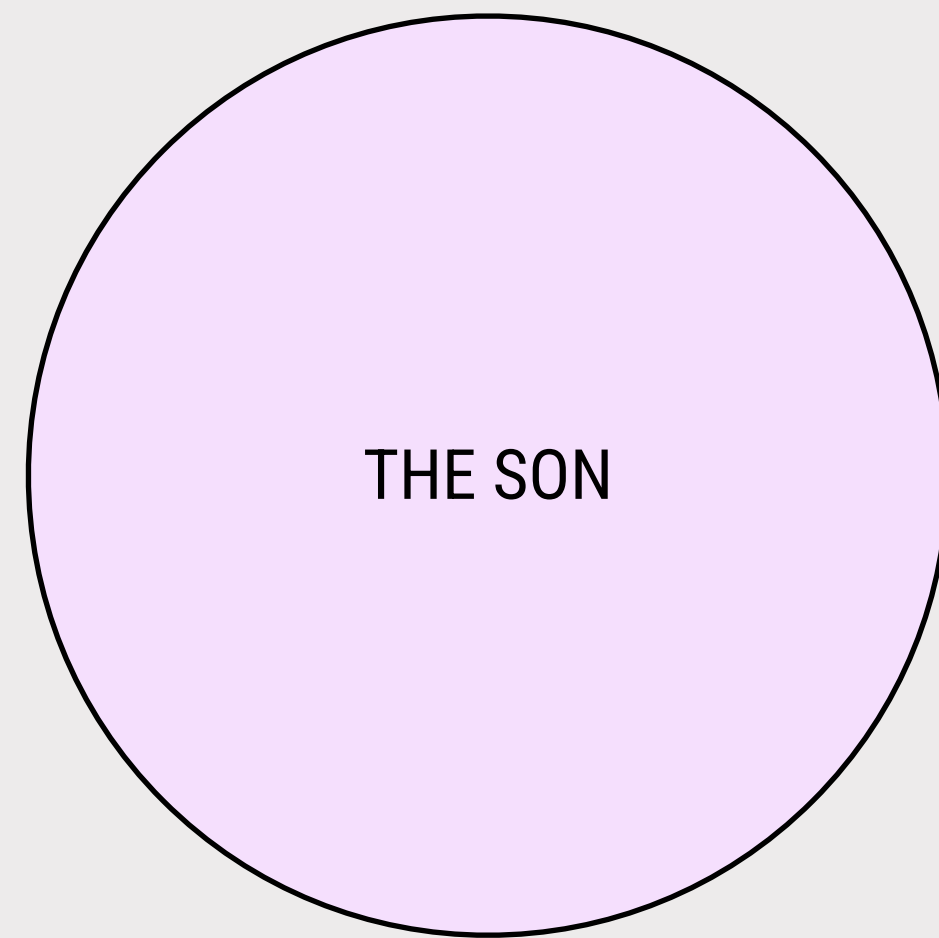
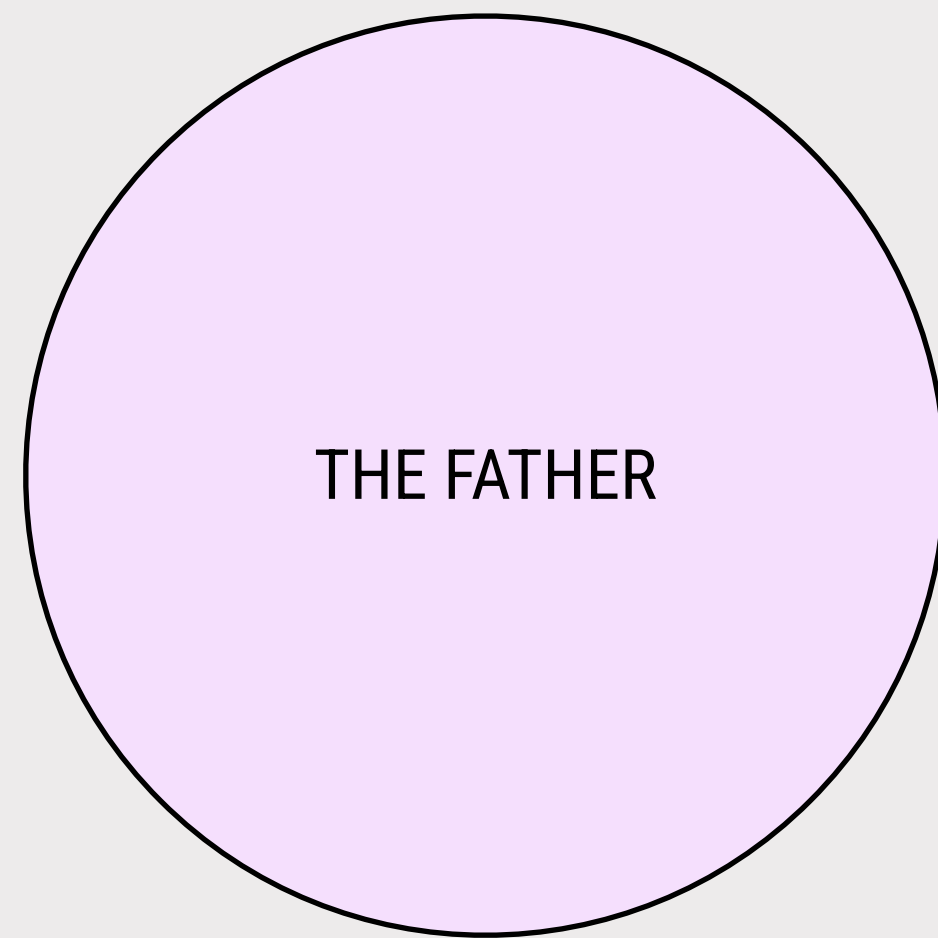
It is principally concerned with composing meaning as an end in itself, in an undirected yet structural, semantic and ontological way. It is rare that one will find examples of poetic IA in a stand-alone manner and yet the shift it provides to one's experience of new information formations, and the meaning they hold, is profound enough to warrant identification and categorisation here.

An example of poetic IA could be the creation of a taxonomy that breaks from conventions within an industry sector that creates a fundamental shift in the way people understand the industry, its purpose or promise.

Poetic or Unbounded Information Architectures

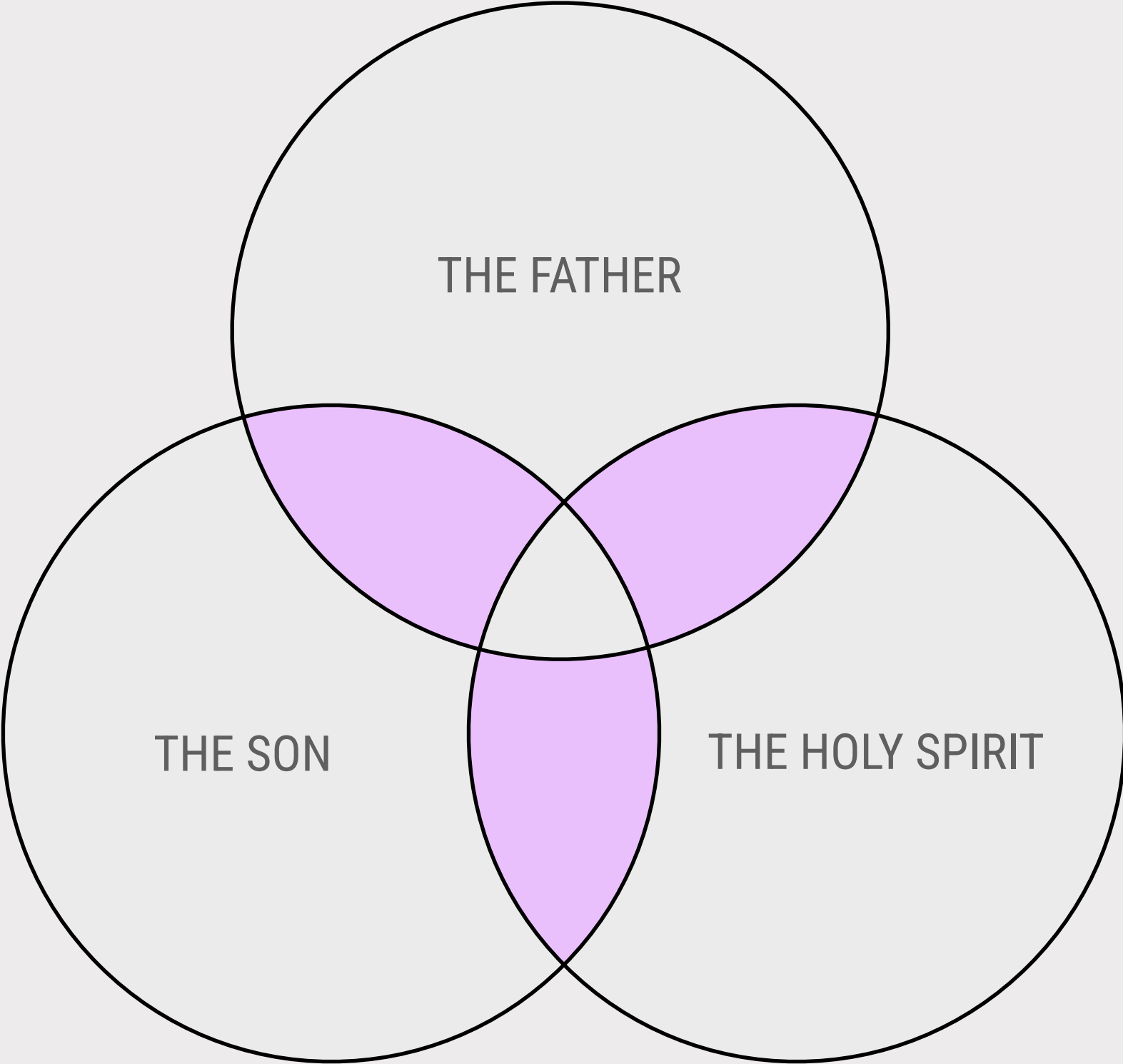
THEIR ESSENTIAL OPERATION, DETACHED FROM ANY USUAL SENSE OF AN OBJECT, IS THE ENCODING OF MEANING IN COMPOSITIONAL FORMS WHICH EMBODY, AND THUS BECOME, NEW CONCEPTS FOR THE WORLD.

3 PARTS



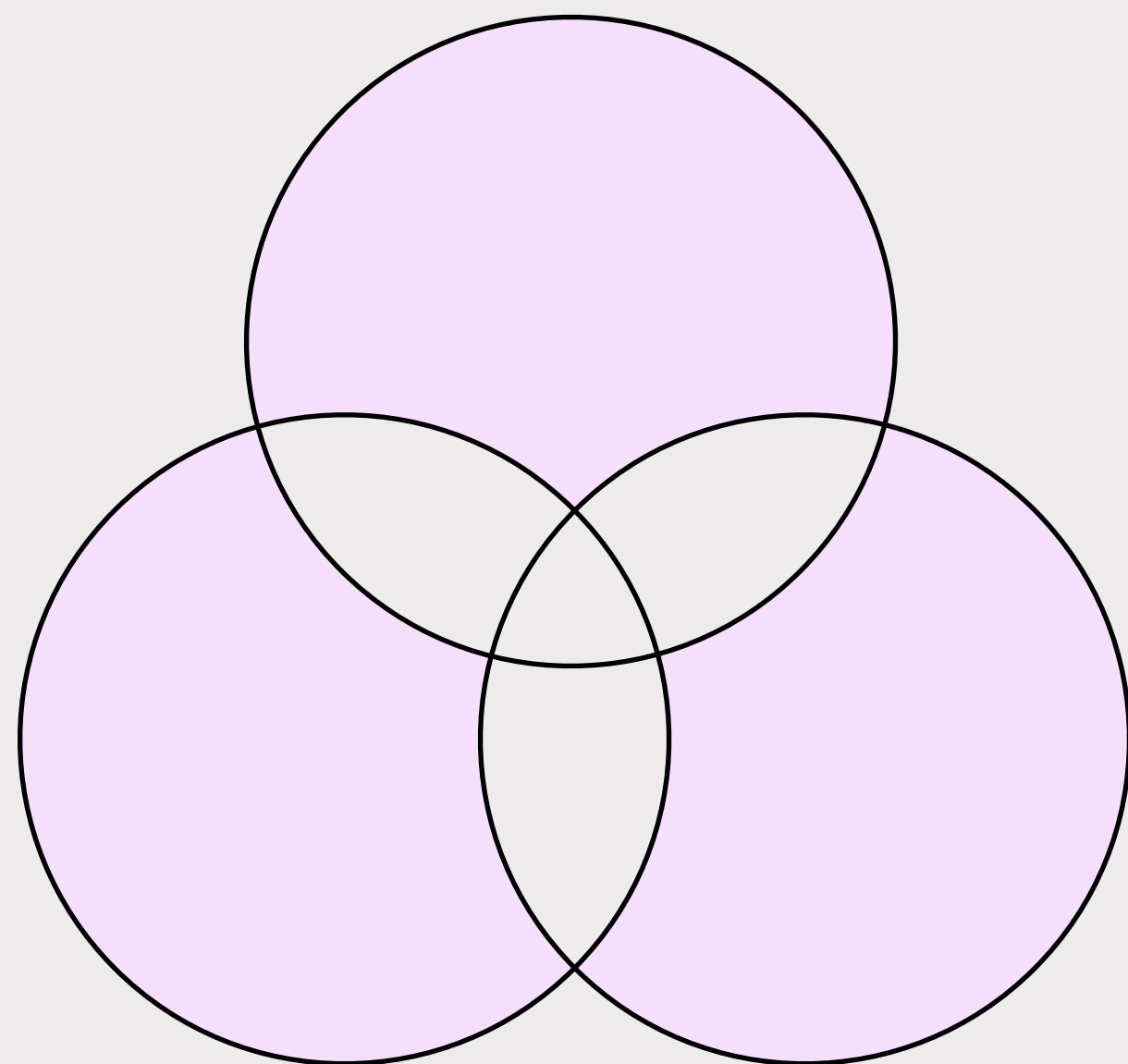
THE HOLY TRINITY

A SEMANTIC FORMATION

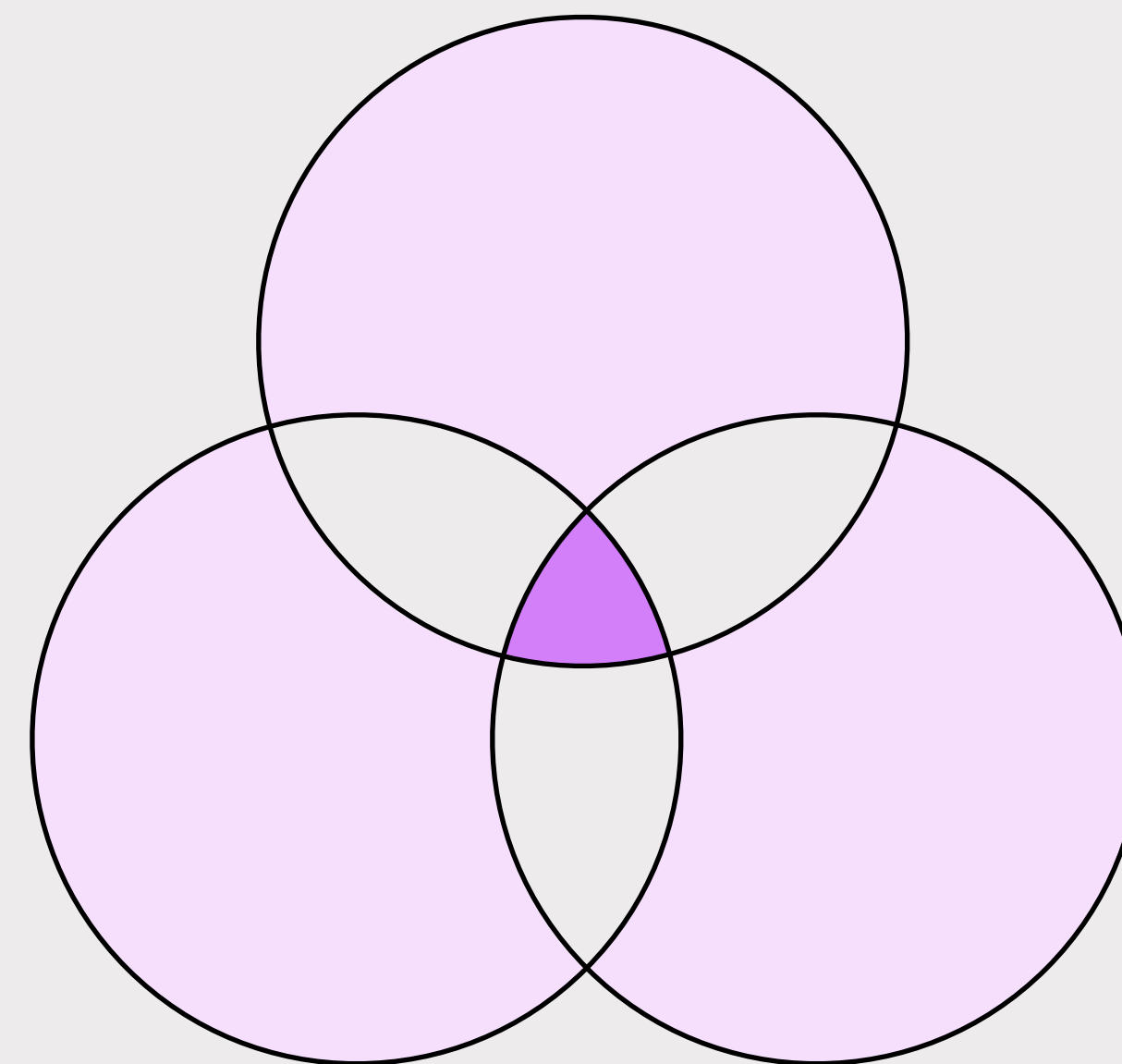


THE HOLY TRINITY

STRUCTURAL LOGICS



The Father is not the Son, The Son is not the Holy Spirit, The Holy Spirit is not the Father...

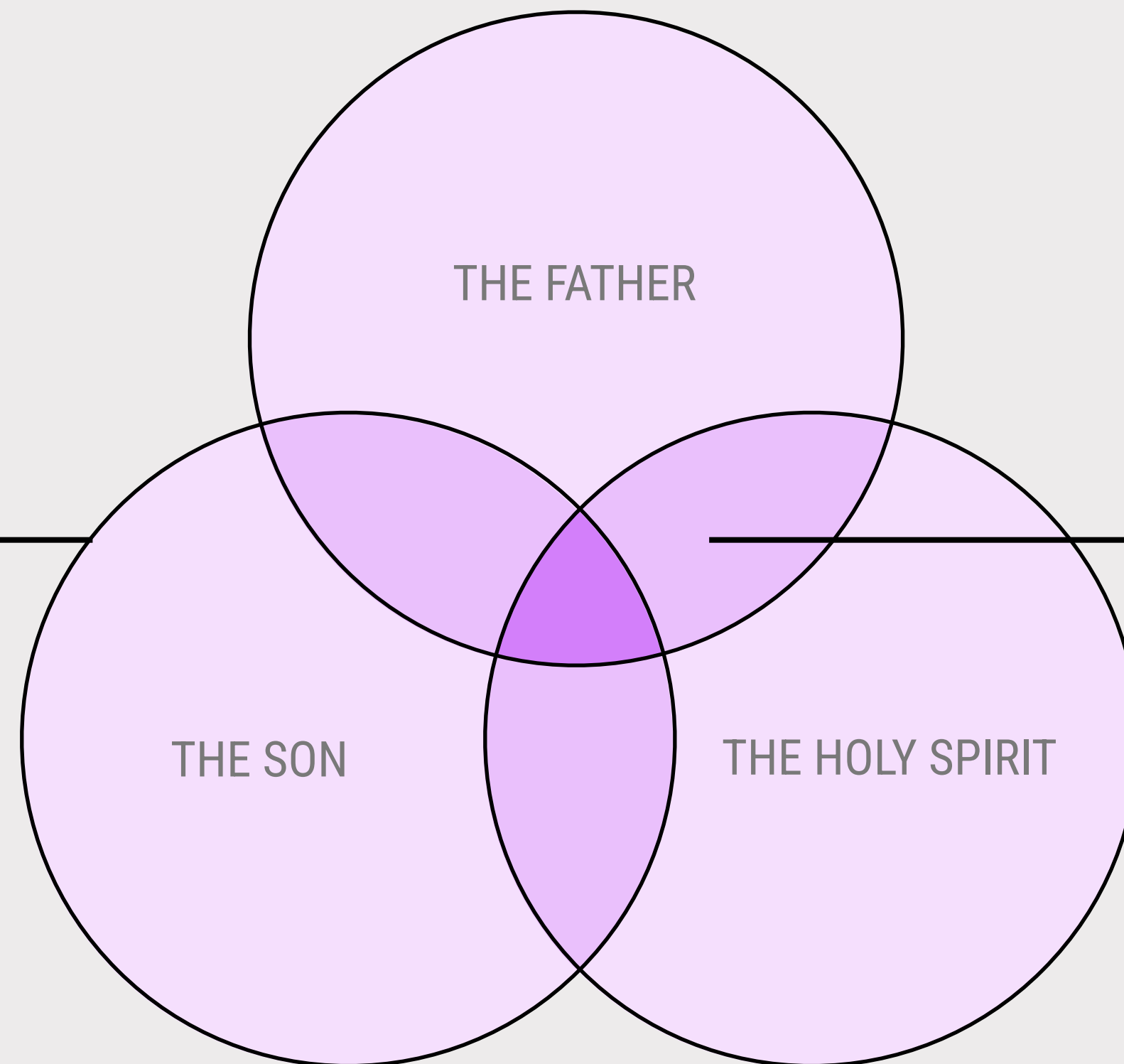


The Father is God, the Son is God, and the Holy Spirit is God.

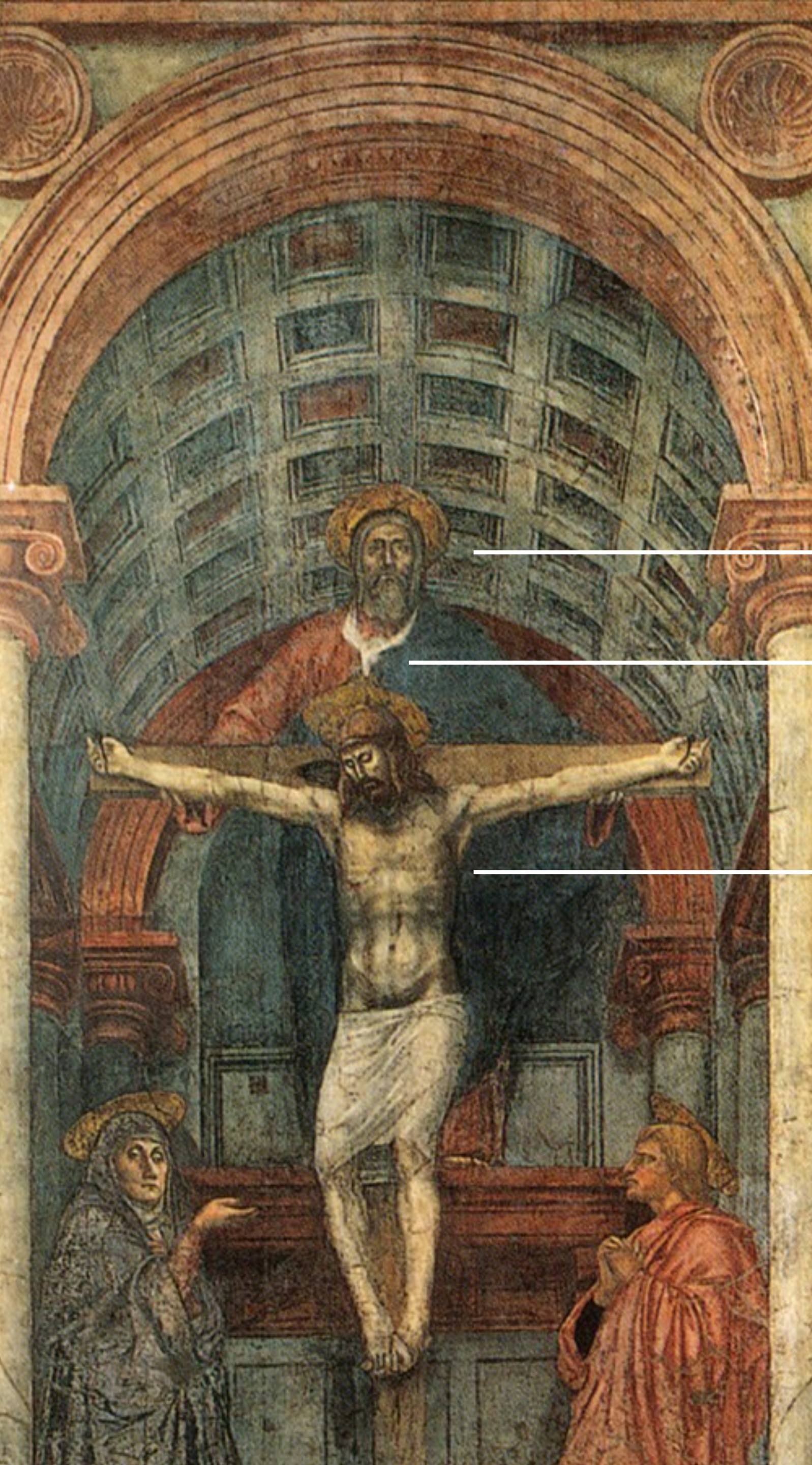
A CONCEPTUAL IA FOR

The Idea of God

STRUCTURAL LOGIC
A relational logic for the Trinity



SEMANTIC FORMATION
A form for the Trinity concept



THE FATHER

THE HOLY SPIRIT

THE SON



THE HOLY TRINITY



God

Holy Trinity. 1425 – 1427. Masaccio.
Fresco (Santa Maria Novella. Florence)

BEFORE IT WAS A FRESCO, IT WAS AN IDEA



Conceptual IA
is transportable



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Learn more about our models & packages

- > Help me choose a car
- > Plan your package: Models
Finance | Maintenance & warranty
- > Mastercars

Maximise

Make the most of your Volkswagen

- > Your maintenance plan
Services info
Your warranty & Finances
Repairs | Car care

Just bought?
Start here to get going



Repurchase

Fast track towards your new Volkswagen

- > Plan your car package
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- > Refinancing



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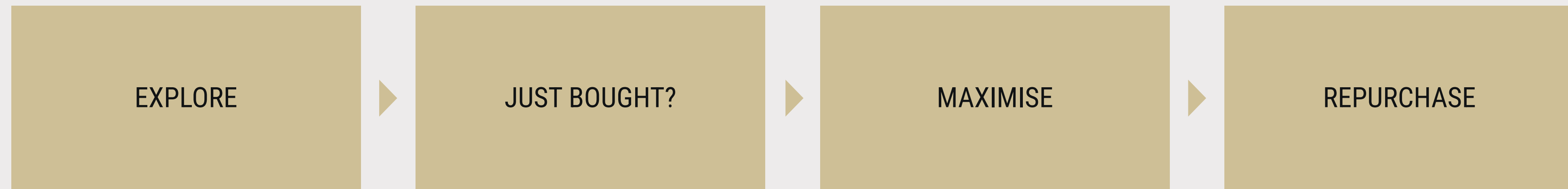
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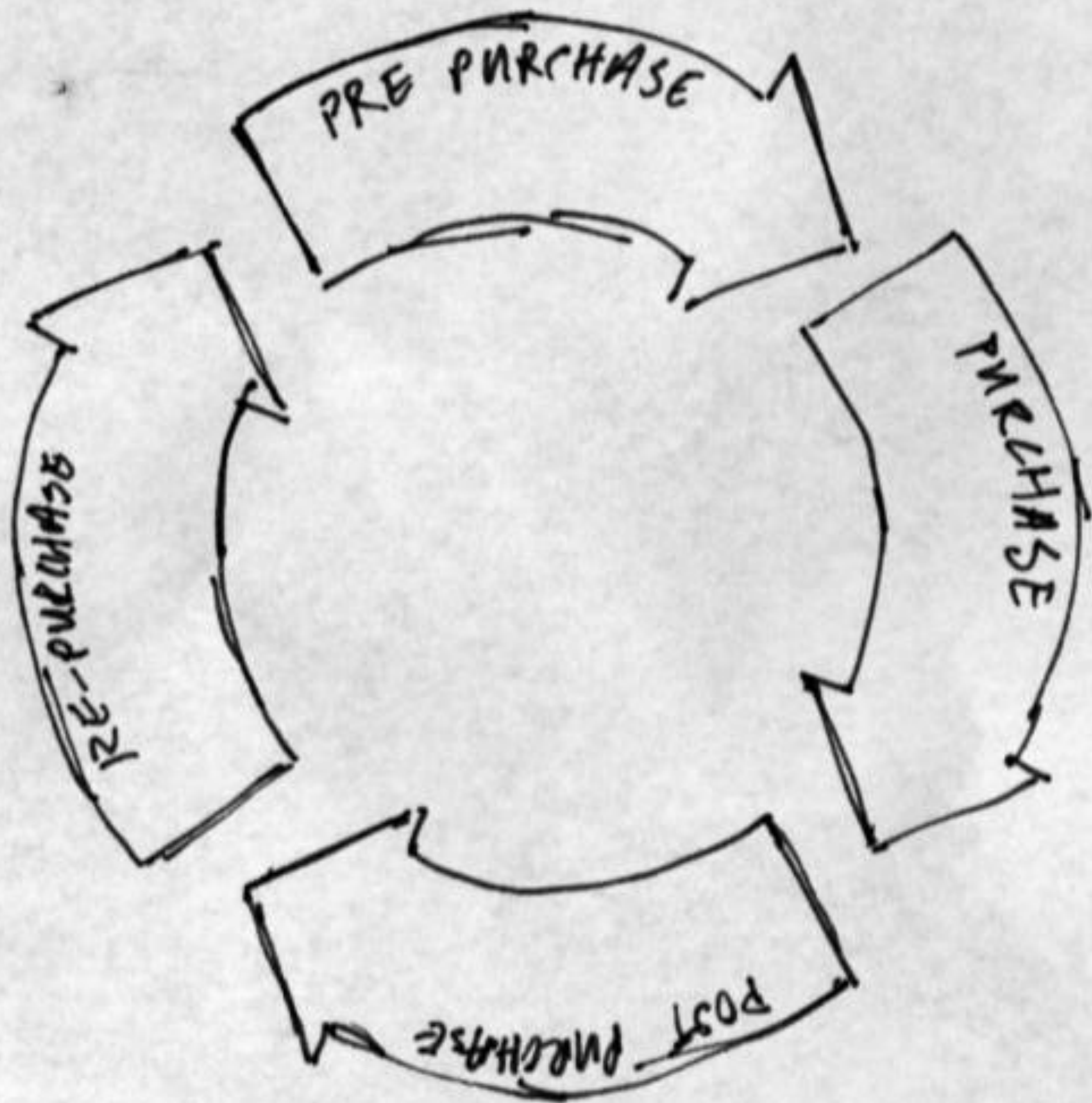
Where might one find the Conceptual IA behind this design?

Which isn't to suggest that I consider it Godly even though it was rockin' design for 2005 / 2006.



SEMANTIC FORMATION





... for the "pre-purchase" slides.



... for the "purchase" slides.



... for "post purchase" slides.



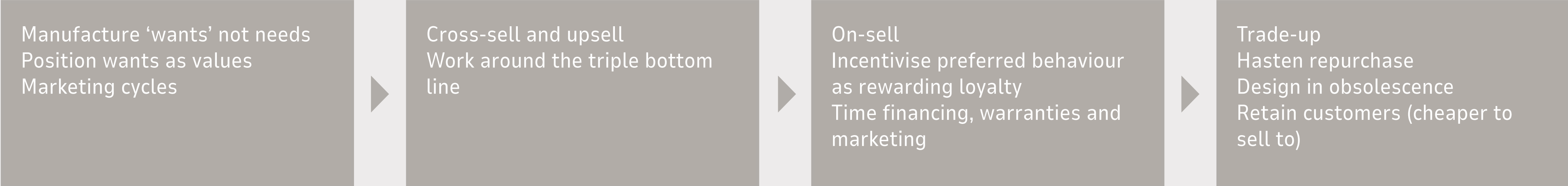
... for "re-purchase" slides.

A CLASSIC CUSTOMER LIFECYCLE MODEL



THE CONCEPTUAL IA

SEMANTIC FORMATION



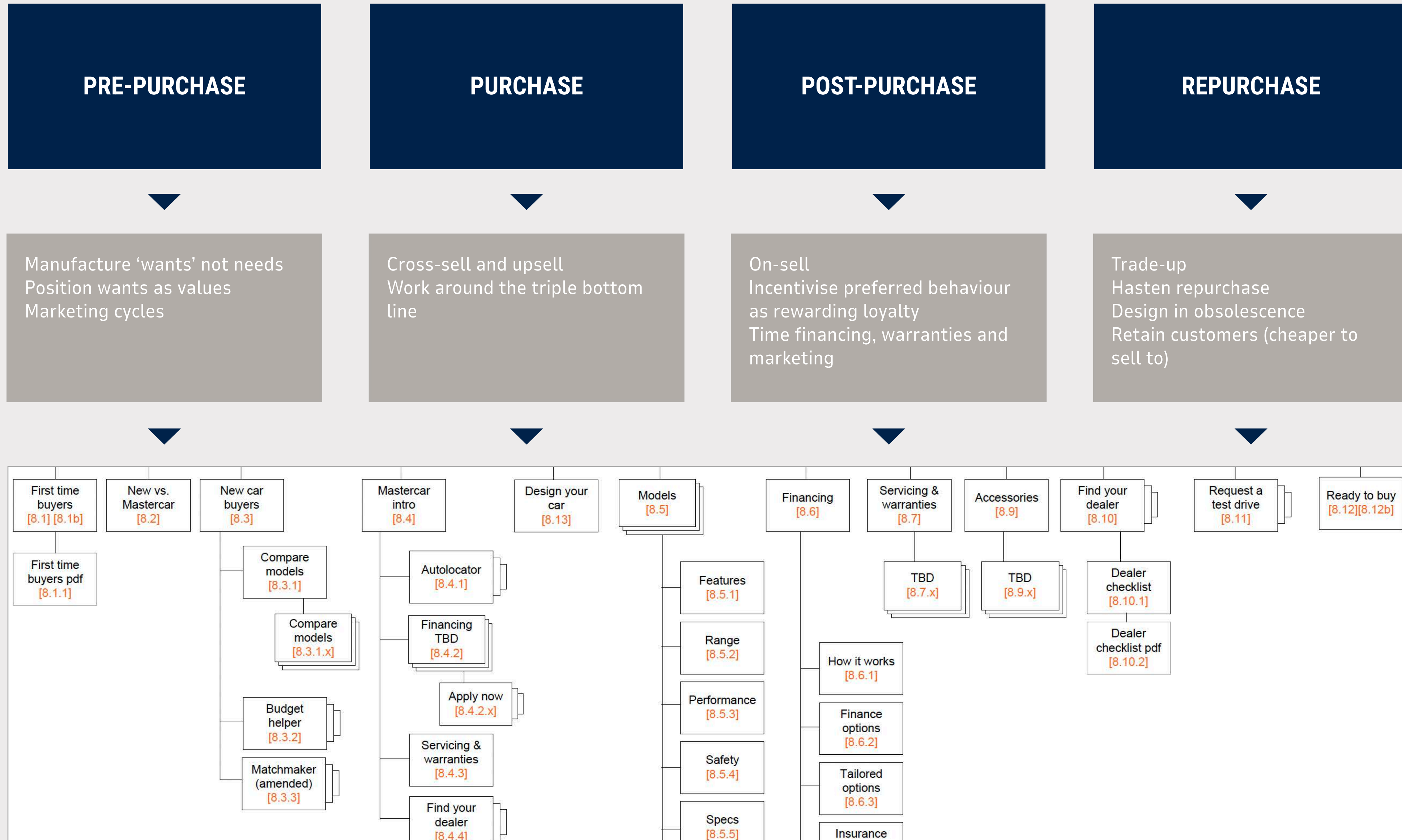
STRUCTURAL LOGIC

THE CONCEPTUAL IA PROVIDES VISIBILITY OF THE PORTABILITY OF CONCEPT



It's like Trickle Down Theory for Design

...AND THE SEMANTIC (AND RELATED) MECHANICS FOR ITS BECOMING IN THE WORLD



Later that evening.

One more time: How might I refer to SL and SF by way of their purpose?

Here are a few terms you might consider that capture the role of structural logic and semantic formation as essential “building blocks” for robust meaning-making:

Compositional Pillars

- Emphasises that structural logic (SL) and semantic formation (SF) are the two “pillars” holding up your conceptual IA.
- Communicates that they undergird the design’s meaning

Undergird. Nice.

Foundational Dimensions

- Conveys that each is a fundamental “dimension” that must be addressed in creating an IA that encodes meaning well.

Core Framework Elements

- Suggests these are central elements of any coherent IA “framework,” rather than a step-by-step set of instructions.
- Each element shapes how meaning is both formed (SF) and organized (SL).

Structuring Conditions

- “Condition” indicates that SL and SF set the terms under which meaning is realised in an IA.

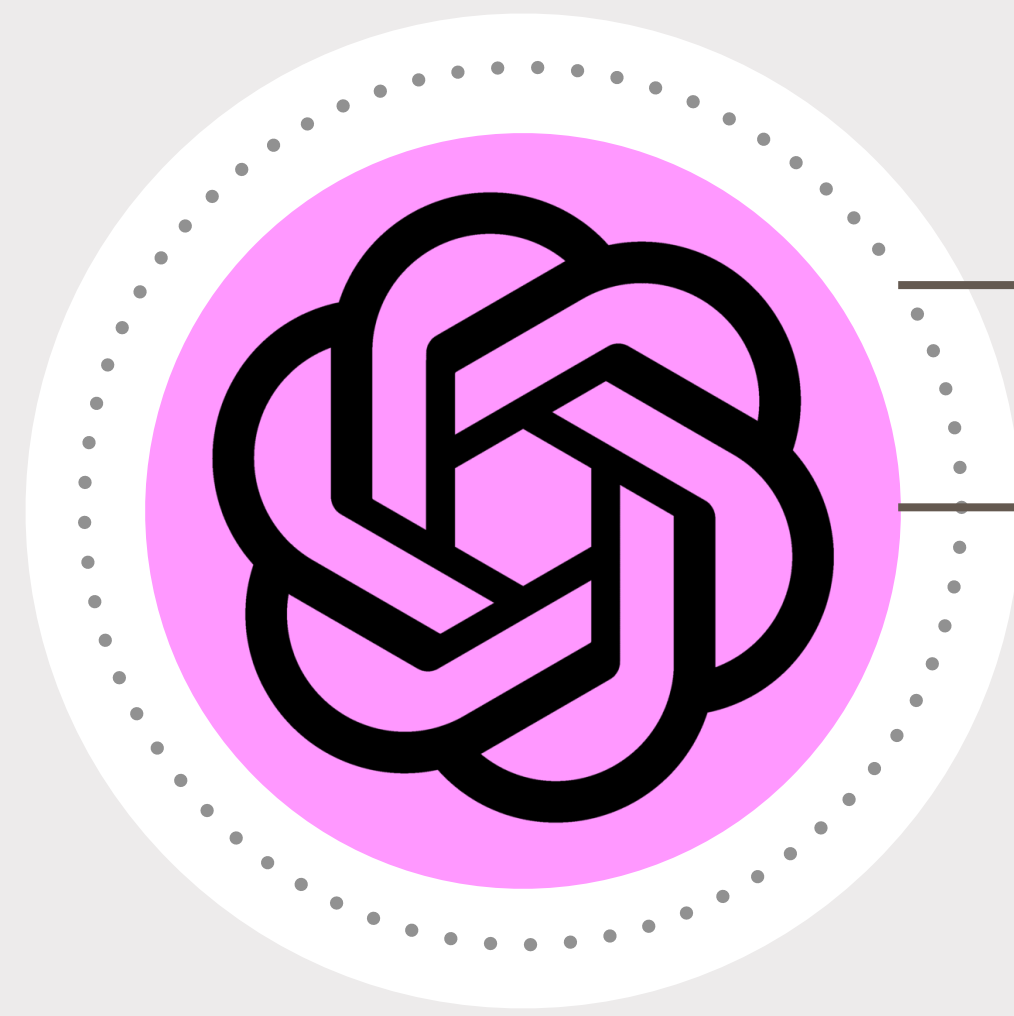
Generative Coordinates

- A bit more abstract, but it underscores how SL and SF form the coordinates or axes from which all meaning in the IA is “mapped.”
- Conveys that they generate possibilities and structure the design space

In all of these, the idea is the same: **Structural Logic and Semantic Formation** are not rigid laws you must obey but rather essential, conceptual “factors” or “conditions” that an information architect must intentionally compose to encode meaning.

This could work.





SEMANTIC FORMATION

STRUCTURAL LOGIC

CREEPY THOUGHT

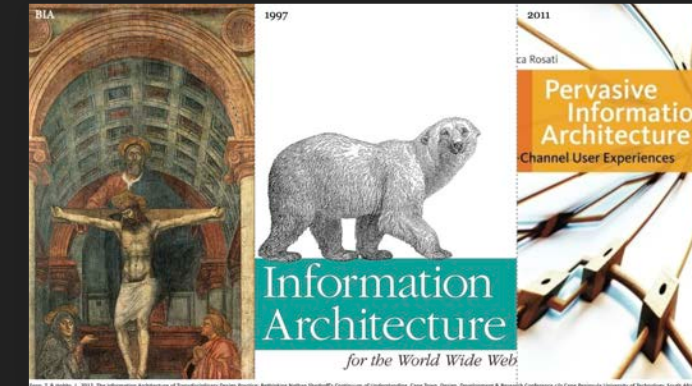
END OF PART 1

REFERENCES & BIBLIOGRAPHY



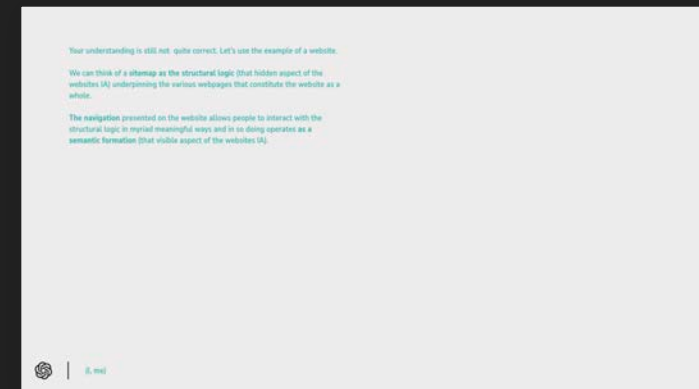
SLIDE 2

Hobbs, J. (2021) Footnotes to “Re: The Future of Information Architecture”. Journal of Information Architecture. Vol. 06. Iss. 01. Pp. 79–91. <http://journalofia.org/volume6/issue1/05-hobbs/>.



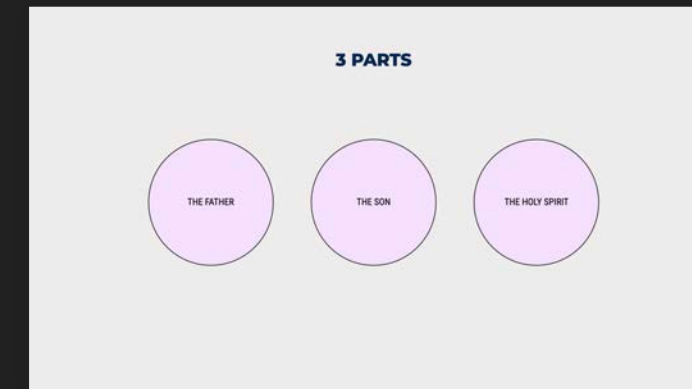
SLIDE 20

Fenn, T. & Hobbs, J. (2012). The Information Architecture of Transdisciplinary Design Practice: Rethinking Nathan Shedroff's Continuum of Understanding. Cape Town, Design, Development & Research Conference c/o Cape Peninsula University of Technology, South Africa.



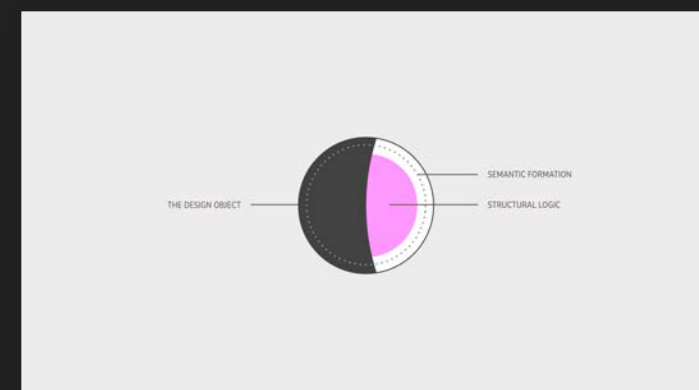
SLIDE 8

Hobbs, J., & Fenn, T. (2019). The design of socially sustainable ontologies. Philosophy & Technology, 32, 745-767.



SLIDE 26

Hobbs, J. (2021). Applying Information Architecture In Design Thinking : Ideating Solutions To The Wicked Problem Of Addiction. Dissertation, University of Johannesburg. <http://hdl.handle.net/10210/485650>



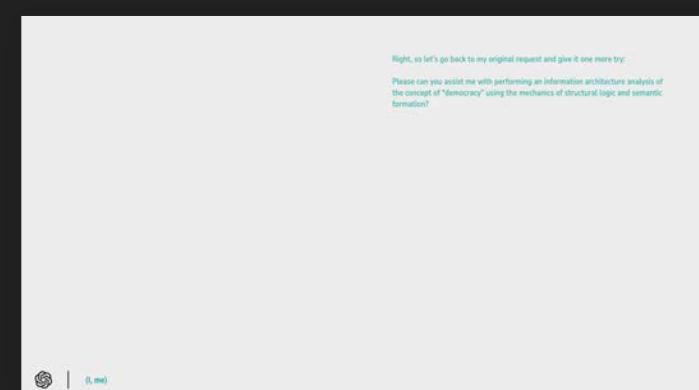
SLIDE 9

Hobbs, J. (2021). Applying Information Architecture In Design Thinking : Ideating Solutions To The Wicked Problem Of Addiction. Dissertation, University of Johannesburg. <http://hdl.handle.net/10210/485650>



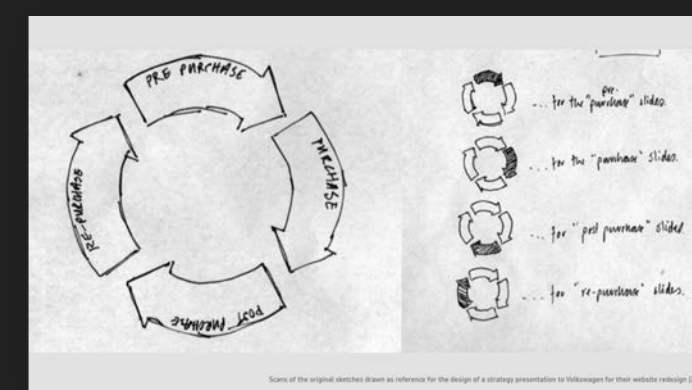
SLIDE 32

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SLIDE 17

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SLIDE 35

Hobbs, J. (2006). Journeys, Needs, and Trust: A Volkswagen Case Study. Available: <https://boxesandarrows.com/journeys-needs-and-trust-a-volkswagen-case-study/> [Accessed 19 February 2025]

doesn't.

Undergird? Sounds like underwear. No it