Periodic Table of Information

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Basic issue of privacy

```
"Since everything lies open to view there is nothing to explain. For what
is hidden, for example, is of no interest to us" (no.126).
- Ludwig Wittgenstein
```

L.W. was talking about zero knowledge systems of private transactions: “transaction at a distance”.

The private language argument is a channel coding problem in disguise. Funny, that!

Basic issue of privacy (redux)

```
With democracy stalled at the Web access starting gate, our ability to assert
dissention is regulated by the folks who make the rules. Rules we don't
really even know about. There is a fundamental flaw in the basic reference
architecture that defines the Internet system itself. It's built on an
inadvertent misapplication of transaction identity rules to people identity
requirements. This is bad business practice and about to get worse.
- [Model of Everything](http://www.google.com/patents/US7774388).
- Margaret Runchey. Late 2007.
```

Getting Started

- TCP for the Web?

- STOMP
- DualApi

Establishing a simple protocol to support a logical layer for REQ-TCP simulation within REST to align and shape hardware drivers at a lower layer.

Identity

```
Ontology     Mode             Metastructure
People       (Attributal)     Social
Corporations (Relational)     Political
Content      (Attitudinal)    Aesthetical
Machines     (Extensional)    Biological
```

Too Spinozistic? *Probably.*

People: From Justice

- StoryBook Generators (Narratology)
- Minimalistic School (Computational Linguistics)
- HLA Hart (Retributive Justice, Rule of Recognition)

Corporations: From Fairness

- Rule of Recognition
- Fairtrade
- NAFTA
- EDGAR
- DUNS Number
- Banks
- Federal
- Factom

Interoperable? Continuous? Federated?

Content: From Provenance

- P2P Platforms
- The Web
- W3C
- Bittorent
- JS (Stripe, jQuery, CDN, etc.)
- Ascribe (SPOOL)
- ChangeTip

Decentralized? Distributed? Authorized?

Machines: From Rule

- CRISPR
- Transaction Continuums: Bitcoin, Ethereum, etc.; Transactions open to View (privacy)
- See Blockchains wiki.

Publishing — yuck! Regulatory nightmares. Fees. Authoritative?

Mathematics is ontology

Establishing mathematical models based on negative cycle detection:

```
Notice    TRX
Related   TRX
Continue  TRX
Organize  HVM
Order     HVM
Rearrange HVM
```

Abstract, generalize Nakamoto/Piketty:

```
Compute identity statements for entity sets on weighted acyclic graphs.
```

More Platforms, More Problems

- Tokenized Action Spaces
- Bank in a Box
- Deploy

Component Level Digital Signing

- Code Signed Continuous Build Processes
- E2E Encryption (JScrambler, seifnode, etc.)
- Sandboxed Personas
- Machine-to-Machine Identity
- Surrogate Identity
- Metanomic Identity
- Hyperdata
- Content-to-Content Identity
- Automated Identity
- Identity encoded into Quantum Algorithms (no measurement approach)
- Stateless Quantum Events

Logarithmic Category Systems

- Classifiers
- Bitcoin
- Software-defined Communications
- Perceptron Modeling of QLS/QLD interactions, logical event spaces, etc.
- Frequency-based Fault Tolerant Systems
- State Machine Structural Relations

- “Web is fundamentally a distributed hypermedia application.”
- “Web is the most hostile development environment imaginable.”
- Prediction Machines (Link Prediction, Transaction Prediction)

Figure 1: bob

Logarithmic Measurement

- Logarithmic Categories discovered based on predictions about Log Pairs
- Generalized adjunction to determine inductional structure (metastructure)
- Logarithmic Ramification between Pairs to extend nonconstant, holomorphic maps (birational surface of hardware layer constraints)

Constructivistic Advantage

- Logarithmic Metastructure Systems: Building network interfaces from generated log pairs.
- Logarithmic Block Universe based on Category Equalisation

Existing Ideas

- IPFS
- "Infocology"
- W3C
- MaidSafe, Storj, "Bitcoin", Dogecoin, CryptoNote, Darkcoin, Monero, Potcoin, Satoshi Dice, ChangeTip, – lots of "metadata".

Who creates the Standard cannot be allowed to assume the hyperparameters of Identity (metastructures).

Applies boolean satisfiable ideal information channel model:

```
( ) = log(  -  )
```

Where else can this be applied?

Logical Layer

- Transitive Metastructures (Notice TRX)
- 'Pataphysics of Metastructure (Related TRX)
- Countable Metastructures (Continue TRX)
- Non-natural, Non-neutral Information
- Information - Meaning = Data

Transitive Metastructures

Thinking: "[represent] the maximum possible equilibrium between belonging and inclusion … [It] is the ontological schema for normality.

Extended: a probability amplification technique applied to amplify the assignment which maximizes the number of weighted clauses, encoded into quantum algorithm that treated transmitted states, not enduring calculation/measurement itself (cost of observation)

Language and Memory with ‘Patadata

Metastructures are measured using the engine of ‘Pataphysics:

```
Syzygy    (alignment of the power set: set of all subsets of a set)
Clinamen  (axiom of well-ordering)
Antimony  (axiom of choice)
Anomaly   ()
Absolute  (axiom of choice?)
‘Pataphor ()
```

Nondenumerable Metastructure

One as an operation on 4 categories of metadata:

```
social        (ghost in the machine)
aesthetical   (dadata)
political     (power set through puns)
biological    (singularities)
```

Epistemic Problems

- Semantic Information is like Analytic Knowledge
- `{Concepts,Ideas}.reduce(GettierProblem)`

Knowledge as JTB, Information as MFN

```
S is information iff
    [S is meaningful]
    [S is well-formed]
    [S is not null]

S knows p iff
    [S believes p]
    [S has evidence for p]
    [p is true]

S trusts that p iff
    [S authenticates p]
    [S authorizes p]
    [S amoritizes p]
```

Information as Communicative Texture

```
$ is information iff
    [S is well-formed]
    [S is not null]
```

Mathematical Theorey of Communications: NP

Information as Communicative Praxis

```
$ is information iff
    [S is meaningful]
    [S is not null]
```

Logarithmic Metastructure: BQP

Classical Information Model, CIM

```
S is information iff
    [S is purposeful]
    [S is well-formed]
    [S is not null]
```

Properties:

- Low Entropy
- Reliable Metastructure
- Small Data Deficit
- Infocologically Conservative
- Cantor's Paradise

Minimalistic Information Model, MIM

```
S is information iff
   [S is purposeful]
   [S is not null]
```

Properties:

- High Entropy
- Low Metastructure
- Large Data Deficit (Digital Dark Age?)
- Information Surplus
- Maxwell's Demon

Conceptual Sphere Mapping

```
Belief ---------------- Justification ------------- Truth
|                                                     |
Human-meaningful        Decentralized              Secure
|                                                     |
Identity -------------- Accessibility ------ Availability
```

Fault Tolerant Front Ends

- ft-html

Logical Layer Minimalistic Framework (not definition) of Information

```
Factivity Order        : False information is not stored. (Rollback)
Motive Order           : Only purposeful information is stored. (Recovery)
Byzantine Order        : Node having information, i, is a Good Actor. (???)
Incept Assertion Order : Transmission of information, i, implies one has run a checksum internally. (???)
Assertion Order      : If Node asserts p, then all machines can confirm that Node knows p. (Mask)
Closure Order       : Node stores all deductions of p assuming Node stores ancestry of p. (Confinement)
Anti-luck Order        : Information excludes stochastic luck. (Retry)
Achievement Order      : Information is a technological achievement. (???)
Ability Order       : If Node stores p, then the truth of Node's motive for p must have been ensured through t
```

Physical Layer Design Assumptions

```
Distributed        : Interconnected by a high-bandwidth, low-latency network
High Availability  : Most nodes up most of the time
High Accessibility : Uncorrelated client node failures
Optimal Sharding   : No files are both                                                          : read
Byzantine       : Small but significant fraction of users will maliciously attempt to destroy or corrupt fil
Secure            : Large fraction of users may independently attempt unauthorized accesses
Provenance      : Each node is  under the control of its immediate user  and  cannot be subverted by other peo
Immutable          : No user sensitive data persist after logout or system reboot
```

Benefits: Fault Tolerance Strategies

- Adaptive N-version programming
- Fuzzy Voting
- Reconfig/Rejuvenation
- Abstraction/Mask

- BQP iff BASE (byzantine fault tolerance abstraction specification encapsulation)
- Parallel Graph Reduction (PHT Prediction Modeling)

HTML can handle that, and still be lightweight.

Beyond 'the Cloud'

`programmable data` and `cloud developer`:

```
Inductive Metastructure of Code
On-demand Architecture
Distributed Resource-oriented Applications
```

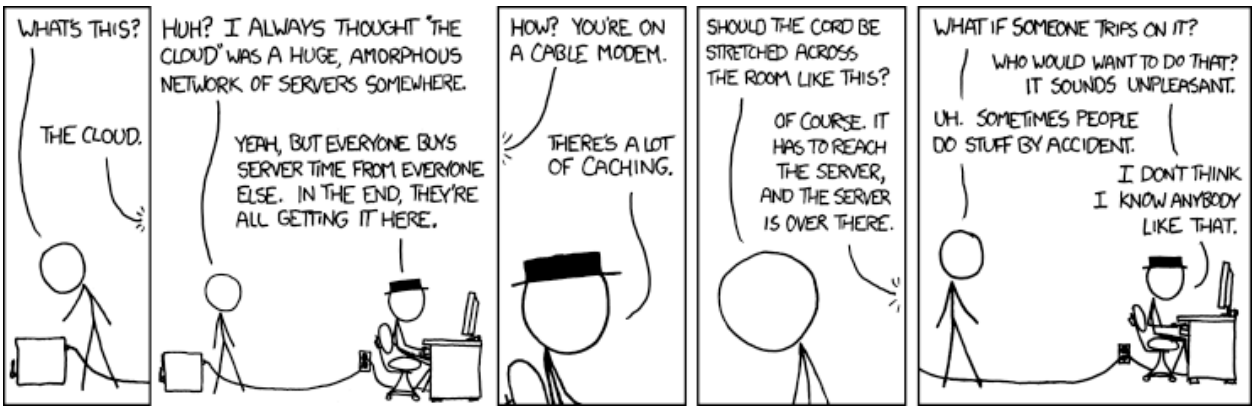

Figure 2: thecloud

```
Molecular Ads (Degradable Media Models)
Software-defined Machine Identity (Ma2Ma)
Software-defined Content Identity (Co2Co)
```

Servers be damned! `smart names` aren't spam!

Semiotic Alchemy

```
'That is: they deal with issues of significance. Moreover, what computer
science is, I believe-what history will recognise its 20th-century
instantiation to have been-is an experimental, synthetic precursor to the
emergence of this new theory: i.e., something I call semiotic alchemy. Think
of all those C++ and Java hackers, trying to turn web pages into gold! And
think, too, of the profusion of rag-tag, untheorised practices, conducted
in cottages, basements, and garages, that constitute "computing in the wild":
they embody a vast wealth of pragmatic and practical understanding-just not
as-yet very well understood. It all makes such good sense. And it is
important. Computers are laboratories of middling complexity, between the
frictionless pucks and inclined planes of mechanics, and the full-blooded
complexity of the human condition, in terms of which to experiment with,
and come to understand, the primordial intentional dialectic.'
- "[God, Approximately](http://www.ageofsignificance.org/people/bcsmith/papers/smith-godapprox4.html)".
- Brian Cantwell Smith.
```

Existing Trends

- They're already doing it, apparently.
- But maybe these problems are the result of Gettier, and solutions are obscured by obscurity (entropy).

Our Responses

- Positivist Strategies: P2P Government, Anonymous, Occupy, #feelthebern (hashtags), etc.

- Detached from Technology; Critical of Technology;
- Self-organizing, Entrenched in the Industrial Economies
- Negative Strategies: Tor, Bittorent and Bitcoin, Dark markets, DDoSing, Wikileaks, etc.

- Detached from Culture; Transhumanist in Nature
- Has anyone got an easy cross-platform setup for proxy switching? JavaScript? *shrug*

Information and Belief

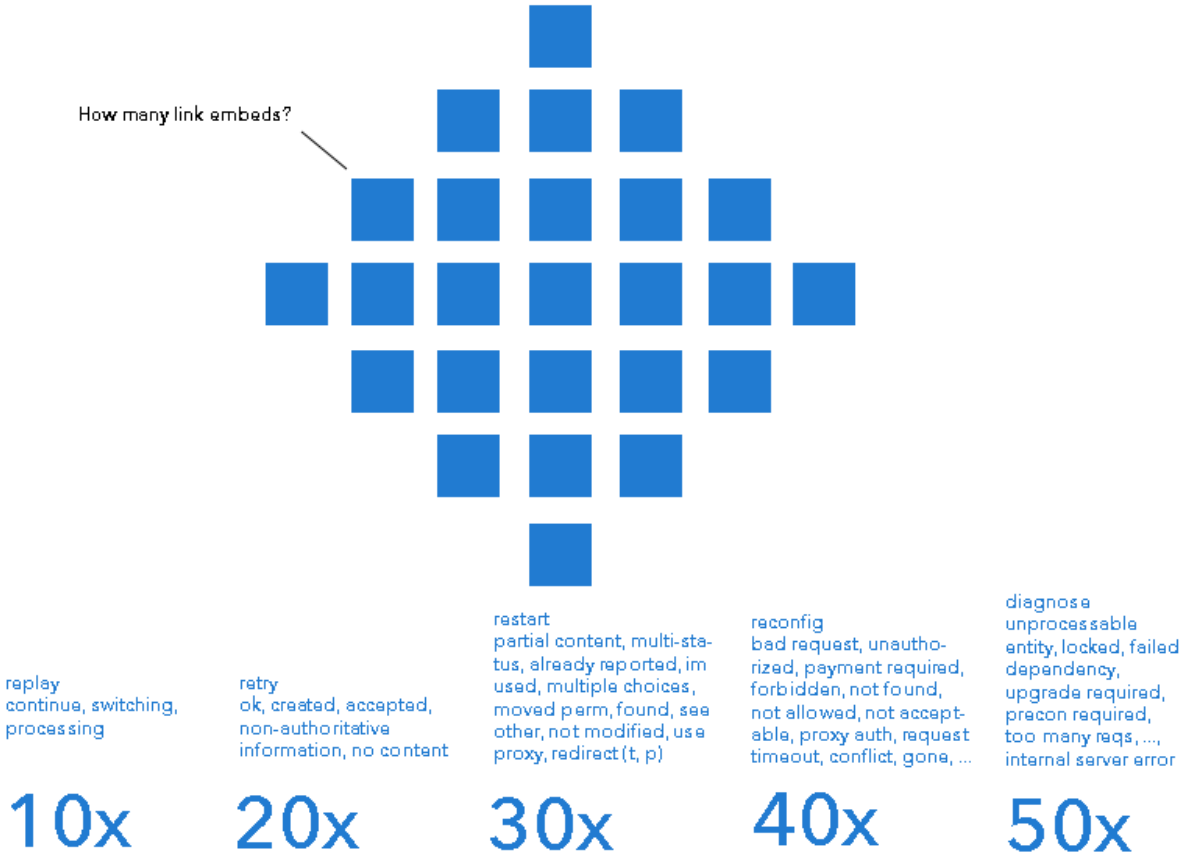

Figure 3: ptimath

- 100: Adaptive N-version programming (Semver all the APIs)
- 200: Fuzzy Voting
- 300: Reconfig and Rejuvenation
- 400: Abstraction (Byzantine Fault Tolerance with Abstract Specification Encapsulation)
- 500: Parallel Graph Reduction

Prospects

- MTC
- Gettier
- Logic Layer

Philosophical Problems

- Dual-aspect Zero Knowledge Systems
- NoDef Minimalistic Framework of Information

Models: Existing Ideas

1. Embodied Cognition
2. Cogito
3. "AI"

Models: New Hotness on "Blockchains"

- p > q (Gambler's Ruin Solution; Bitcoin solution)
- r > g (return of return to wealth versus economic growth rate)
- Any relation? (Pbbt.) What kind of statement is it?
- Conjecture, Prediction, Principle?
- Is Piketty's Tax justified? Is Satoshi's? For all Bad Actors?

Response: There's no proof that high debt causes low wealth. Response: Redistribution of wealth engenders dependency, predistribution empowers. Response: Piketty is stating that society has made `r > g` a *good prediction*. Response: Bitcoin is only a *mathematical statement of the problem, not a solution*.

Synthesis of Ideas: Dual-aspect Integration

Practical Infocology

Popper-Quine-Mill-Weisberg (Type-Q Materialism): "to be is to be a value of a bound variable"

Metamedia with Intent

Metamedia with Intent

Metamedia with Intent

- Degradable Media Models (ARIA codes, metacodes, isotype languages for all filetypes): http://lcamtuf.coredump.cx/squ
- Latent Accessibility of all Formats: https://en.wikipedia.org/wiki/List_of_file_formats
- Bu2Bu, Cu2Cu, Ma2Ma (machine-to-machine business), Co2Co (content-to-content business)

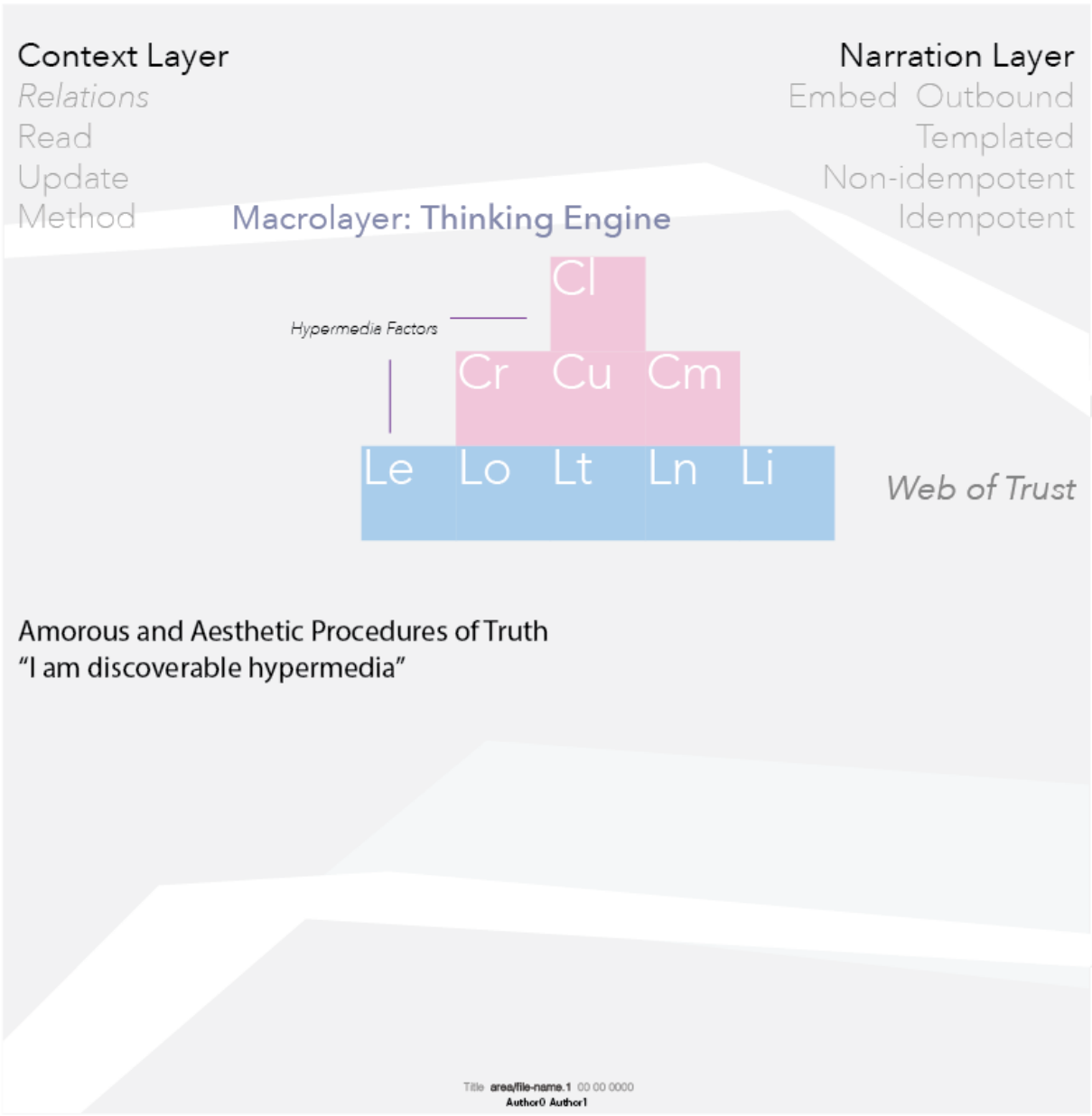

Figure 4: hfactor

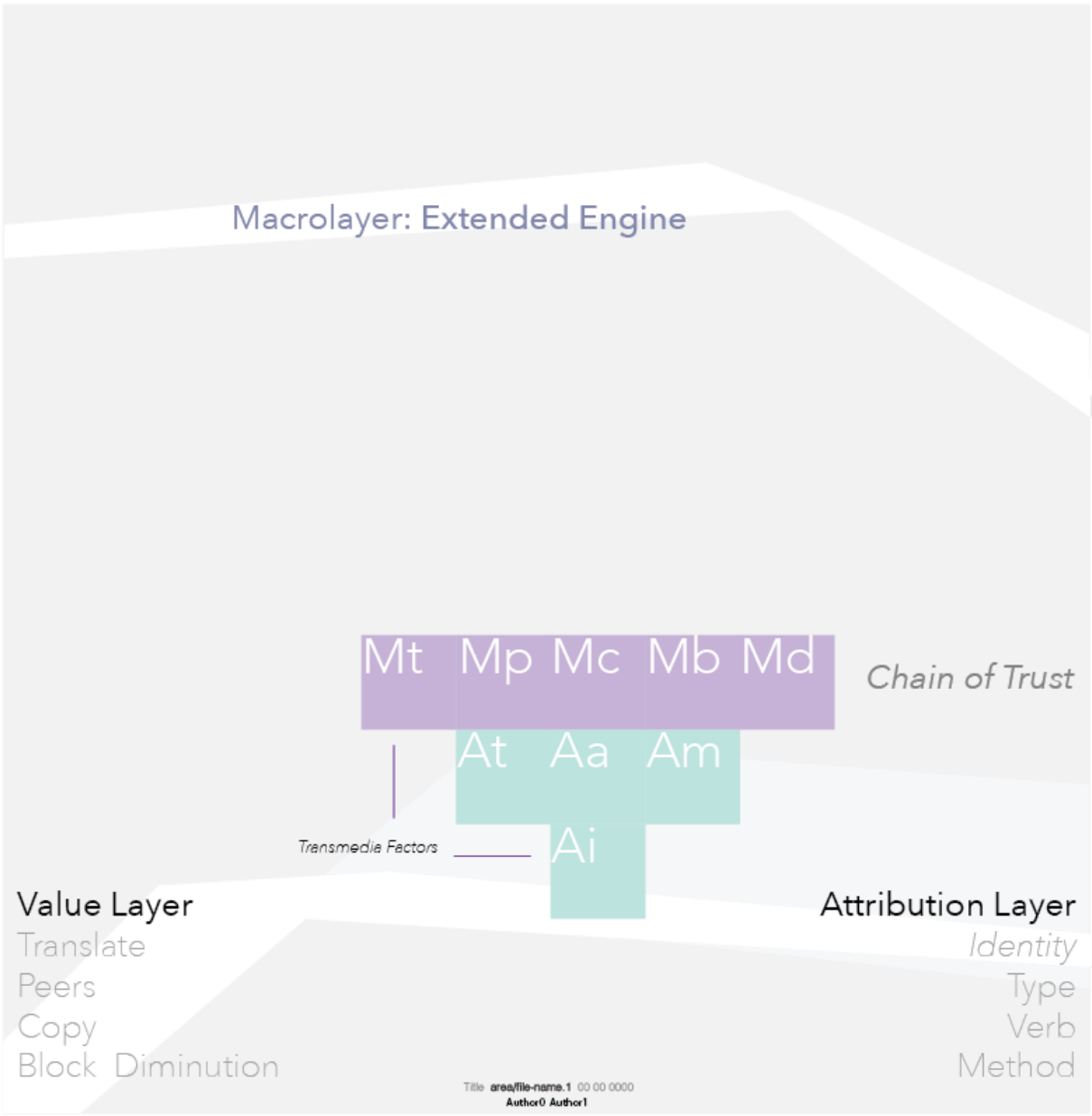

Figure 5: blockchain

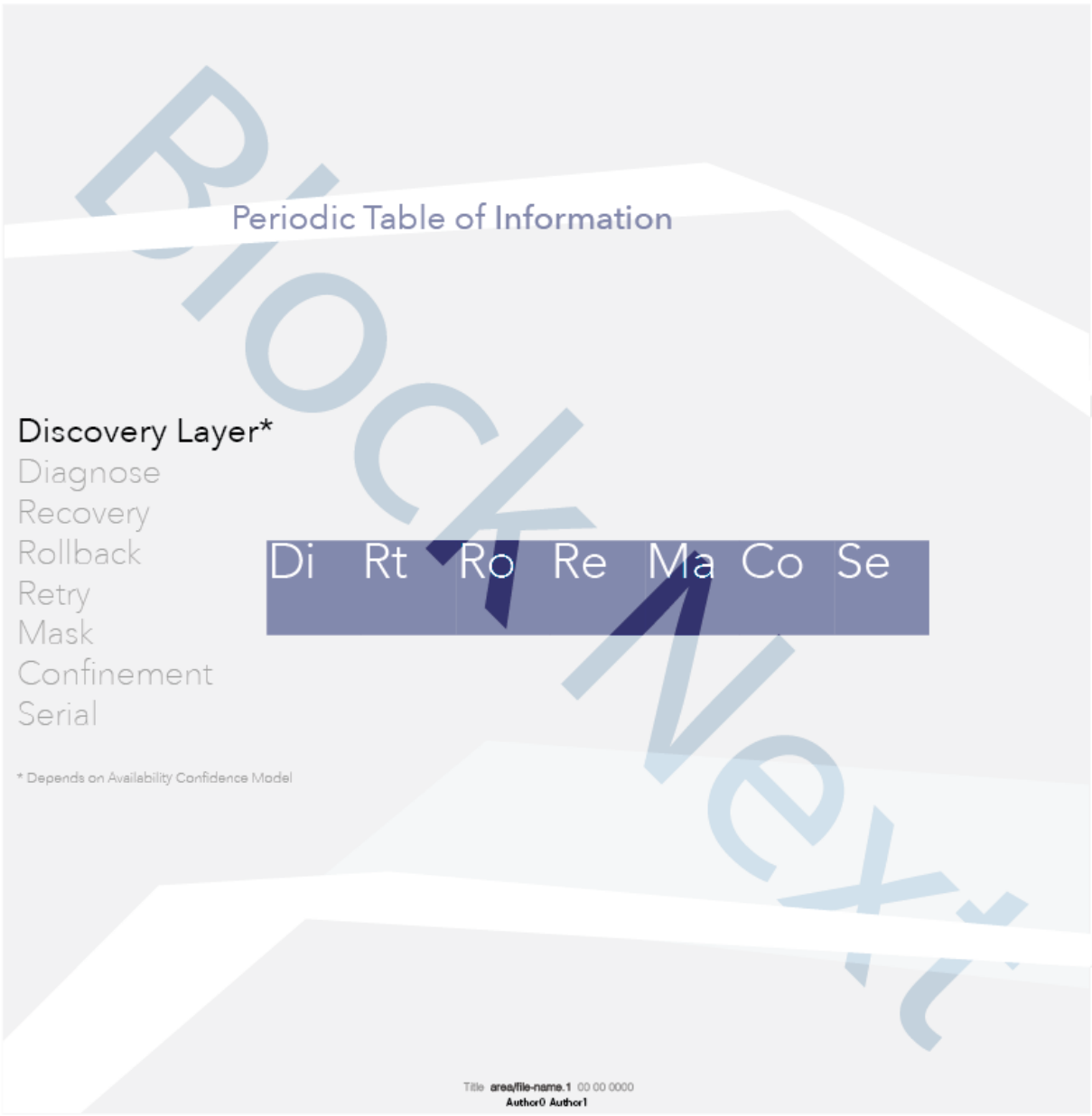
Periodic Table of Information
Discovery Layer*
Diagnose
Recovery
Rollback
Retry
Mask
Confinement
Serial
Di Rt Ro Re Ma Co Se
* Depends on Availability Confidence Model
Title area/file-name.1 00 00 0000
Author0 Author1

Figure 6: dto

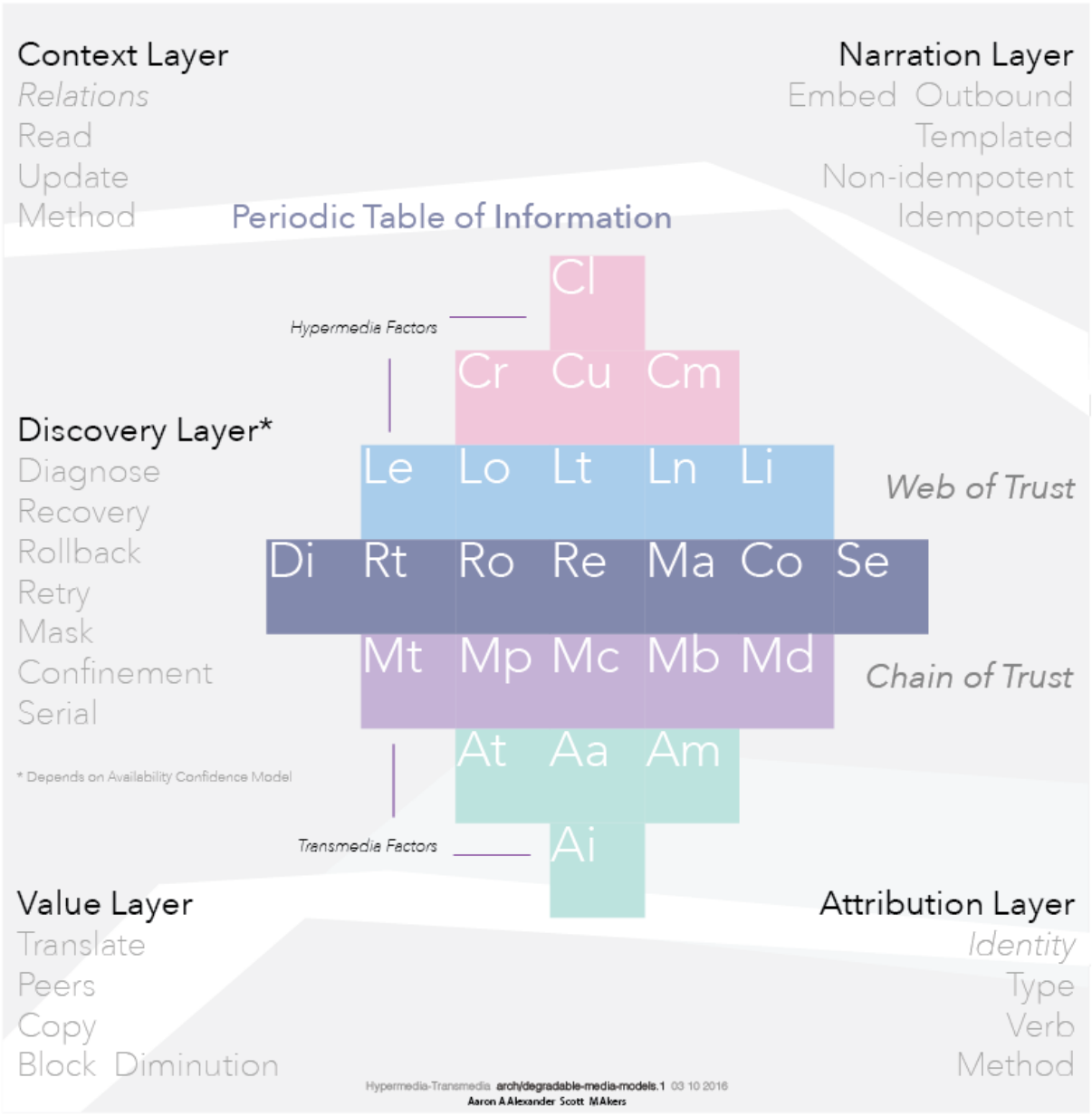
Context Layer
Relations
Read
Update
Method
Narration Layer
Embed Outbound
Templated
Non-idempotent
Idempotent
Periodic Table of Information
Hypermedia Factors
Cl
Cr Cu Cm
Discovery Layer*
Diagnose
Recovery
Rollback
Retry
Mask
Confinement
Serial
Le Lo Lt Ln Li
Web of Trust
Di Rt Ro Re Ma Co Se
Mt Mp Mc Mb Md
Chain of Trust
At Aa Am
* Depends on Availability Confidence Model
Transmedia Factors
Ai
Value Layer
Translate
Peers
Copy
Block Diminution
Attribution Layer
Identity
Type
Verb
Method
Hypermedia-Transmedia archi/degradable-media-models.1 03 10 2016
Aaron A Alexander Scott M Akers

Figure 7: pti

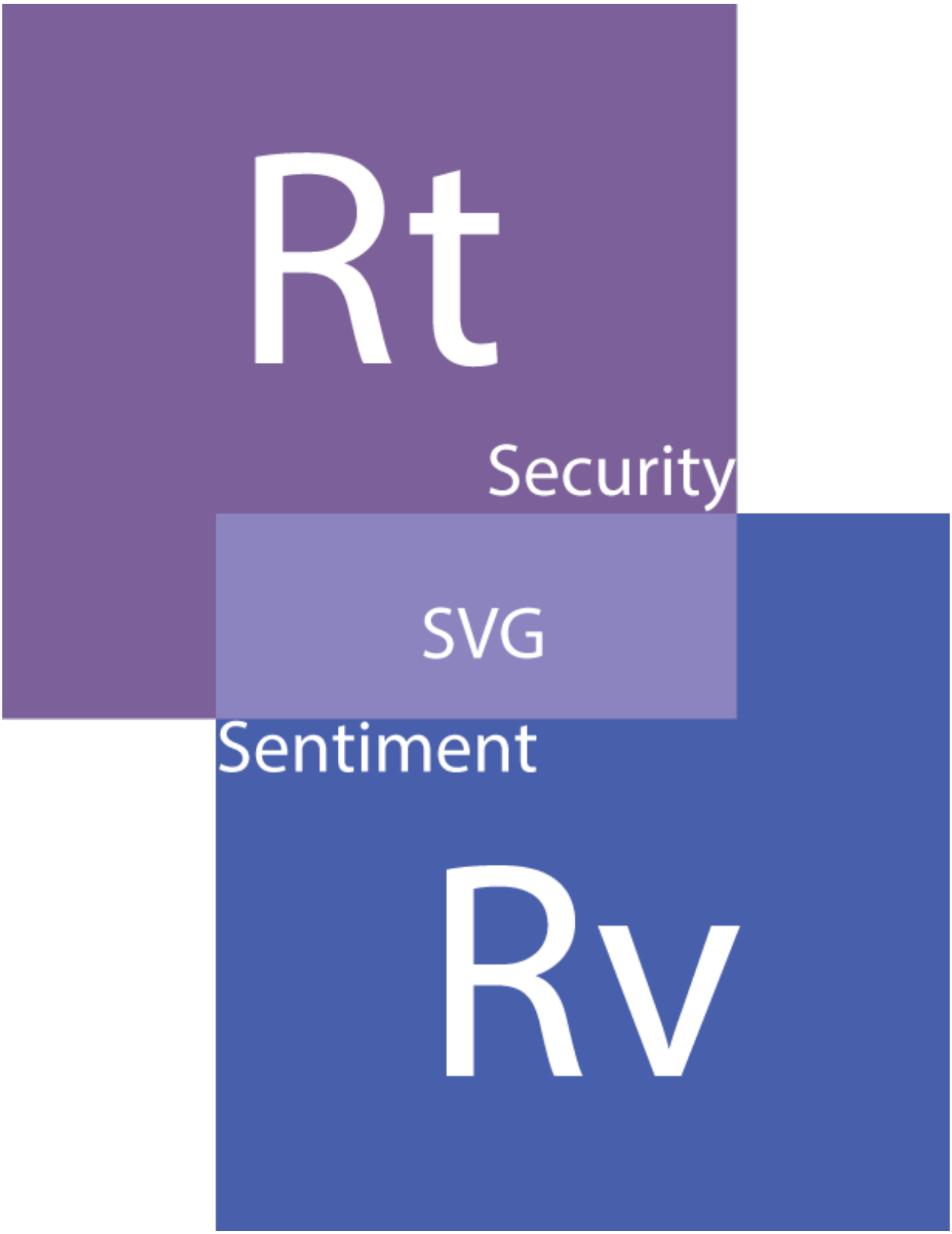

Figure 8: dmm

Methodological Strategies

- Datalogical/Architectural Mass: Periodic Table of Information; new component to Web Science: infocology, infosthetics,
- Syntactic Entropy Modeling: URA
- Pragmatics of Infosys: Organelles, Cells, Molecular Designs, etc.

A way to build apps (drapps) today: Distributed Resource-oriented Applications

- No Bytecode
- Metacodes expressed in posh.
- Quantizable State Machine
- Keyless (NoAPIKey) Identity