Humanism – Meta Frames - Language

Developing symbols to understand and model human issues. What symbols do I need and what information do I need to model?

The concepts of 0, Infinity and recursiveness have emerged in the model – this is a good sign and consistent with many frames by many people.

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Frame

Hypothesis: Language concepts can be represented as symbols and words which can help model human issues

Questions

1. Is there a cohesive high level structure for language?

2. What does certainty and knowledge mean?

3. Can simple symbols model complex human topics and help analysis?

Population: Individual Humans, Groups, Planet

Measure: Supporting model for – choosing variables, Observe, Manage Issues, Agree

Assumption: Extraction of information by using questions is the best method

Information Sources and Topics: Complexity, Limits, WWW - including those links provided.

Motivations: Develop a symbology to model complex human issues to look for patterns

Initial Conditions, Self reference: Exist

References

Epistemology, Semiotic Theory, Indexicality Silverstein, Michael (1976). "Shifters, Linguistic Categories and Cultural Description" (PDF) , Metaphysical Realists and Idealists (Real Universe – versus imagined universe), Clifford Geertz, Max Weber, Ronald Graham - Graham's Number, Donald Knuth, Willhelm Ackermann, Gregorio Ricci-Curbastro, Ricci-Flow, Richard S Hamilton

Correspondence theory of truth https://en.wikipedia.org/wiki/Correspondence_theory_of_truth

Alfred Tarski - Undefinability Theorem https://en.wikipedia.org/wiki/Tarski%27s_undefinability_theorem

Kurt Godel – Incompleteness Theorem, On Formally Undecidable Propositions of Principia Mathematica and Related Systems

https://en.wikipedia.org/wiki/On_Formally_Undecidable_Propositions_of_Principia_Mathematica_and_Related_Systems

Karl Popper – Critical Rationalism ,with David Miller - "A Proof of the Impossibility of Inductive Probability"
https://en.wikipedia.org/wiki/Karl_Popper

Frank P Ramsey - Ramsey theory https://en.wikipedia.org/wiki/Ramsey_theory

P versus NP problem, Hadwiger – Nelson problem
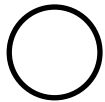
First there are things
then stuff happens.

Object – A thing, Actor, Noun
Change to Objects – What happened, Actions & Events, Verb
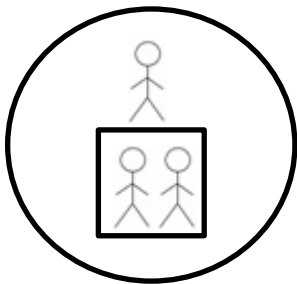
Who, What, Where, When, Why, How

Symbols – Basic Symbols

- Individual Human
- Group of Humans – Couple, Nation, Company - Constrained
- Planet Earth– every thing on and around including sun, satellites, meteorites, etc - excludes Humans

All actors exist in the same universe

Symbols – Language Framework

describing things converting language into symbols requires organizing key language concepts

| Observe	Manage Issue	Remember

Word		
Noun	Group	Description
Thing	**Exist?**	
Thing	What?	
Thing	Who?	
Event	How?	
Event	When?	Time
Thing	Where?	Universe
Thing	Why?	

What description features are required for these questions?

Description

is	named

Not	Different	Like

Missing

Hypothesis	Certain

| Number	Many

Sequence

And

Hierarchy

Level

If we observe, (manage issue) think and remember we can describe things and write them down. Sometimes these things are written in words but we can use symbols as a shorthand. This can help model patterns to help group, level and organize hierarchically complex issues. We can use templates of models as frameworks for future choice.

Symbols - Constraints

planet
nation
body
being
Jon

planet
nation
body
being

Jon

Gravity
law
principle

observe
Jon
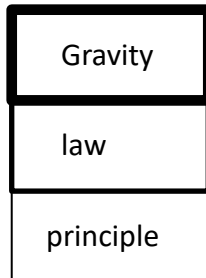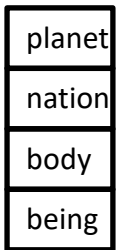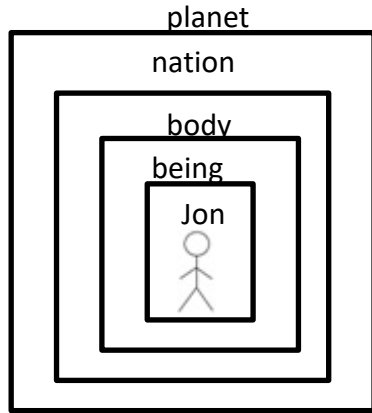
1. Constraints can be self imposed or not – no one is completely free of constraint
2. There are Hierarchies of Constraints – can be represented visually by encapsulation and Named – the path through the Hierarchy model is shown
3. If modeling the hierarchy of constraints becomes too complex it can be represented top to bottom.
4. Constraints can vary in strength (gravity, jail, building) or (idea, organization, group)
5. Width of line shows relative Certainty (helps the Known, Not Known discussion) of constraints
6. Not all constraints have to be modeled
7. Where all constraints are not modeled it can be considered a Pattern or Template
- E.g. Jon does some unconstrained observing to himself
- E.g. a human does something to themselves
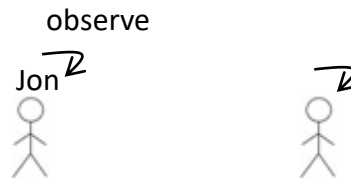
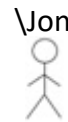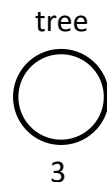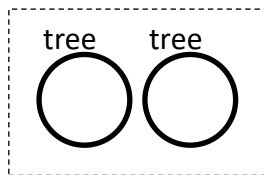# Questions – Structure
is and Named

1. Questions, Observations, Thoughts, Interrogatives, etc are used to collect information and describe it
2. One of the first great questions is: is? (does it exist? – short expression is - Exist?)
3. French Language specifically captures two simultaneous notions by the first question: "What is it that it is?"
4. The two parts capture recognition that something exists and what is it called AND what name is used to describe it?
5. In Spanish questions are surrounded by Question Marks "¿Did you do that to that thing?"
6. Proper name first initials are capitalized (i.e. well defined, highly granular, identified concepts - as specific as it gets)
7. Draw a symbol to say it exists and then Name it Or Not at appropriate level
- A Human exists
- A Thing (Non-Human) exists
- A Non-human thing called a tree exists

tree
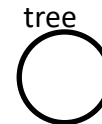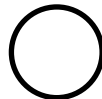
Questions – Structure
Different, Same, Like, Not

1. If something is Different it gets it own symbol
2. If something is Like then it can be grouped with a hypothesis box
3. If something is Not then it has a line drawn
   1. through it - if it's a symbol
   2. before it - if it is text

- Two Like Trees Exist
- 3 Same (Not Different) trees exist
- A Thing Not Human
- A Human Not Jon
- A Planet object Not a Tree
- A Human STRONGLY Certain Not Jon (he had an alibi)

Questions – Structure
Missing, Null, Certain and Hypothesis

1. These concepts deal with the questions of
   a) certainty, degree of confidence (How certain?)
   b) understanding (In conversation - do you understand? – do we share agreed concepts)
2. If Certain then symbols are named and shown
3. Relative Strengths of certainty can be show with width of line – thicker is more certain
4. If Not certain
   a) symbols are shown with gaps in the lines
   b) Text is shown as ?
5. If no understanding or shared concept then display the symbol ? (null)
6. Memories, Plans, Ideas, Imaginations, Stories, Theories are all examples of Hypothesis
7. Hypothesis is Not Certain, Certain is Not Hypothesis

- I have certain theory called: My theory: a human ate that apple
- New theory: a human did something (little doubt/absolutely certain) to that apple
- Latest theory: Something has done/will do/is doing/ something to Something (all time references combined)
- Jon certainly invited someone to think
- Null theory: I am not certain that nothing is/has/will happen – I have a Null Theory
- I'm strongly not certain that the human was\is Jon (avoid the recursive Not)


My theory | New theory | Latest theory | think | Null theory | Jon
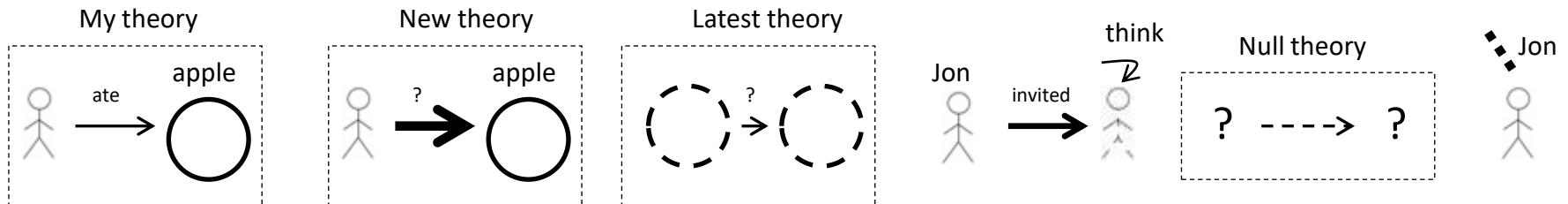
Questions – Structure
Like & Hypothesis

1. Like is a way of posing a thesis – "are these things the same thing?"

2. Like, therefore is a Not Known Thing

3. If we are Certain that a thing is Not Like then humans assign it as a Known Different Thing

4. If a Hypothesis becomes a Known thing then it stops being a Hypothesis and becomes a Certain thing and therefore Known.

This could become a really complex topic but given that its really about developing symbolic language to discuss human issues – I don't need to fully expound and explore all issues.
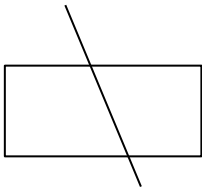
Not constrained = Known infinity

Questions – Structure Confusion Matrix

Provost, Fawcett & Kohavi (1998) The Case Against Accuracy Estimation for Comparing Induction Algorithms
https://lingpipe-blog.com/2009/02/24/provost-fawcett-kohavi-case-against-accuracy-roc/

????? This is getting a bit confusing lets see if the concepts are overlapping. NOTE: KNOWN **NOT NOT** DIFFERENT = DIFFERENT

	Not Different Same	Different Not Same
Known	Exists (symbol) Name (text) (*all Known things – except Not*) Human (H symbol) Constraints (box symbol) Certain (width of line relative, Bold Text)	(*nothing*) Different name (text) Not (Slash symbol or Zero) Planet (P symbol) (*infinity?*) Certain (width of line relative, Bold Text)
Not Known	Hypothesis (dashed Line and ?) Like (weak constraint)	Hypothesis (dashed Line and ?)

Certainty

Questions – Structure
Confusion Matrix - Analysis

This really interesting

1. The model has no Not Same expression for the Notion of Exists? Is there where ZERO emerges?
2. This means we can Never be certain that a thing ever, does or will Exist
3. We build in our own minds the concept of existence and everything which flows from it: Brain in a vat https://en.wikipedia.org/wiki/Brain_in_a_vat
4. Not applies to all Known things – if we Know a tree exists we can say it is Not a tree
5. We can have things Not Constrained but I don't Know what Not Same as Constrained is. I Hypothesize it is totally unlimited degrees of freedom which seems like infinity. This might be where we should put infinity.
6. Yes infinity is the answer to the question "what is not the same as constrained?"
7. I like that both Certainty (as applied to Known) and Hypothesis (as applied to Not Known) wonderfully differentiate (where we draw the line) between (Known and Not Known) and (Same and not Same) – explore the boundaries
8. If there is Certainty then it is Known - Certain that its Same or Not Same. If its Not certain then it is Not Known. If Not Certain whether Same or Different then it is Not Known.
9. If there is Hypothesis then Not Certain if Same or Not Same as any Known thing. Cannot answer Same or Not Same question. Hypothesis spans Same and Different.
10. Hypothesis is the Same thing for both Same and Not Same categories. People can get lost here.
11. Also nice is that Like (similar – grouping, sequencing, leveling) emerges in the Not known in attempt to make things the same. Its Like a working Hypothesis.
12. Not applies to all Known things. You cannot Not know a Not Known (tautology, circular - trap) "don't I know that I don't know?" – That knowledge becomes Known (I don't know – Same Known). Its either Known or not Known. E.g. I Know that I cannot explain why described thing happens.

Of all the 4 Quadrants most humans are most comfortable in the top left Quadrant. Same and Known. Cognitive biases help re-enforce this. Other humans explore all the others quadrants and the framework.
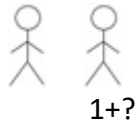
Questions – Structure
Number, And, Many, Sequence

1. All Numbers are positive Integers
2. 0 and nothing or null are special cases
3. Numbers are shown below the symbol
4. "And" symbols together by
   a) Showing in sequence (left to right)
   b) Showing in sequence - vertical dimension (top to bottom)
   c) group in a constrained Box if too many
5. + is the process to "And" Numbers (adding)
6. + with no upper limit tends to infinity
7. M is a special case Symbol which means large Integer but certainly not infinite
8. - is a special case Symbol which precedes Not certain Numbers (estimated number)
9. Numbers can have a Lower Limit and an Upper limit with a + symbol between them
10. Unknown numbers are ?
11. Sequence is left to right and top to bottom
• Human named Jon and at least 1 other Human
• At least 4 and Certainly Many other humans
• Not two Humans
• Not Jon And estimated 6 humans (alibi)
• They were human all right but I don't know how many there were but there was lots of them

1+ is a number statement of infinity
1+? is a statement of a Not Known upper limit

Jon

1+?

4+M

\2

\Jon

-6

?+M
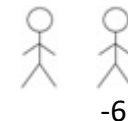
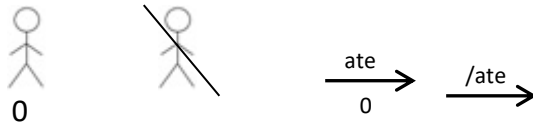# Questions – Structure
Zero, Not, Unknown

1. Zero Humans ate apple
2. 1 Human not ate apple
3. **Some** thing Unknown ate apple
4. **No** thing ate apple - a definite zero number of objects ate the apple
5. 1 Human did unknown to apple - (apple change definitely by human in unknown way)
6. 1 Unknown human, ate zero times, the apple

Is Zero the same as Not? It could be. Zero Humans, Zero Ate. Is Zero Human the Same as Not Human?
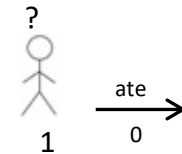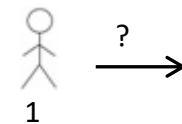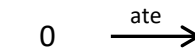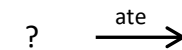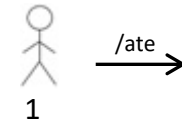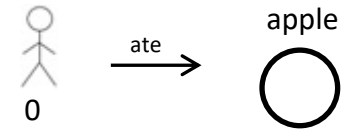
Questions – Structure
Zero, Not, Unknown, Infinity

If we use the simple language of maths with Equal = (same) and not equal /= (different) pairs I observe that we can make symbolic statements which make no sense. The first example states

1 (some thing) = (same as) *blank*

1 (some thing) /= (Not same as) *blank*

e.g. In 2. - 1 Apple is not equal to a zero number of every thing (~ infinity) known and unknown

1.	1=			1/=
2.	1=0			1/=0
3.	1=?			1/=?
4.	1=~			1/= ~

This highlights the Meta human statements which cause confusion where the certain known thing or object is Different (Not Same) as blank, 0 number of everything else, ? (unknown number of everything or some thing – (who knows?) and an infinite (~) number of one thing or everything

All second statements in the pairs (not equal) SEEM (we perceive) more "true" – certain and known - at the same time where as all first pair statements (equal) SEEM "false" – uncertain and unknown – at the same time

e.g. 1 Apple = Zero Orange – is a statement which describes the uncertain (Unknown) and Different (not Same) category

In reality - all 8 statements above are equally unknown and different to known and same categories.

They are Hypotheses which make no sense.

Questions – Structure
Hierarchy and Level

1. Hierarchy is represented by a Constraints Box – encapsulated or in Sequence
2. Level in Hierarchy is always relative, never absolute and can be named or numbered from 1+

- Some of the audience were listening to Jon when he was speaking in a play he was performing at the theatre. The other cast members were offstage.

Theatre

Audience

Offstage

Cast

Speaks

Jon

Listening

1+?

?+M

1+?
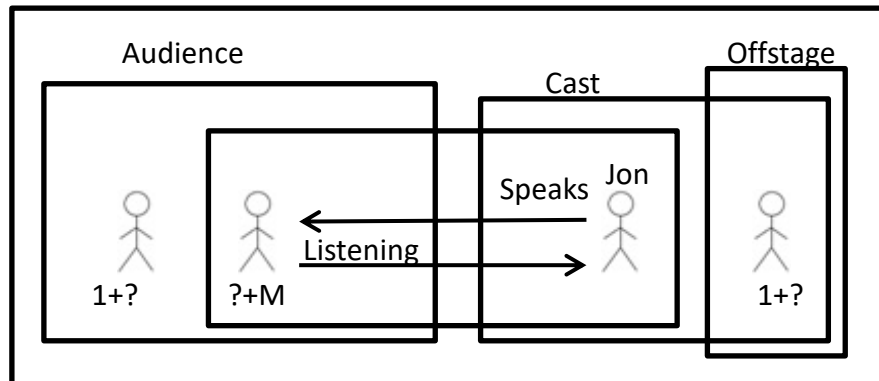
Questions – Structure Confusion Matrix update

	Not Different Same	Different Not Same
Known	Exists (symbol) Name (text) (*all Known things – Except Not*) Human (H symbol) Constraints (box symbol) (*all Same things*) Certain (width of line relative, Bold Text)	(*nothing*) Different name (text) Not (Slash symbol or Zero) Planet (P symbol) (*infinity?*) *Number (+, M, all unique positive integers)* Certain (width of line relative, Bold Text)
Not Known	Hypothesis (dashed Line and ?) *Number (preceding dash -) - like number (weak constraint)* Like (weak constraint)	Hypothesis (dashed Line and ?)

Questions – Structure
When, Where and Why?

1. Given that the objective is produce a high level Human Issues modeling Language I am not sure whether I need too much from the When Question or the Time dimension – future, past, references can be complicated.

2. Where may be less relevant unless its included as a named constraint and will be a high level name.

3. Why is irrelevant, only applies for Human Acts (thinks and gets motivated to do something - to Act)

4. The general principles are that only Humans can Choose to Act and it is What Act they chose not Why.

5. Any sense of Why can be explored by a Sequence of prior and connected acts

What & Who – Actor - types

Known or Unknown, Not
Existence or Hypothesis of Who, Known Number or estimated Number,
Named or Unnamed

One unnamed Human

? One unknown Human

A One Human named A

2 Two unnamed Humans

? Between 3 and 5 unknown
3+5 Humans

At least 1 and estimated 20
1+-20 unnamed Humans

A   B
Two named Humans A and B

A   B   \C
Two Humans name A and B,
One not named C

? Two or more unknown Humans
2+

One Hypothetical unnamed Human

Unknown Number of Hypothethical
? Humans

Certainly at least 43 and estimated
43+-M many more unnamed Humans

How & When - Actions & Events
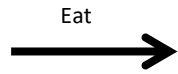
Act – Act named Eat happens, Action or Event, Change of state
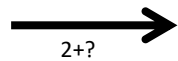
Repeat – Act happens again a lot

Pattern – Act happens enough times to describe as pattern
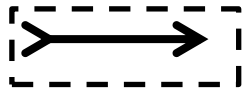
Tendency - Pattern happens with hypothetical conditions, constraints, laws, rules, etc

Prediction – Hypothetical Act will happen in the future with certain conditions, hypothesis, conjecture

Validated Pattern– Pattern happens many times with described constraints – enough to describe as validated

http://www.cs.brandeis.edu/~jamesp/classes/cs216-2009/readings2009/persistence-events.pdf
http://gl-tutorials.org/wp-content/uploads/2015/12/GL-QualiaStructure.pdf
http://conceptnet.io/
http://www.timeml.org/publications/timeMLdocs/annguide_1.2.pdf
https://chomsky.info/20140826/

Gravity
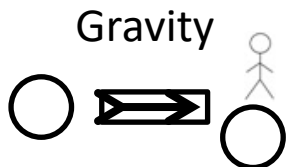
Questions – Structure
Confusion Matrix – Act & Event

Connects all objects and follows the same rules as Human and Planet

	Not Different / Same	Different / Not Same
Known	Exists (symbol) Name (text) (*all Known things – Except Not*) Act Pattern Validated Constraints (box symbol) (*all Same things*) Certain (width of line relative, Bold Text)	(*nothing*) Different name (text) Not (Slash symbol or zero) Act Pattern Validated (*infinity?*) Number (+,-,M, all unique positive integers) Certain (width of line relative, Bold Text)
Not Known	Hypothesis (dashed Line and ?) Like (weak constraint)	Hypothesis (dashed Line and ?)

Where - Who / Actor Interactions

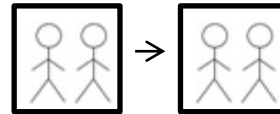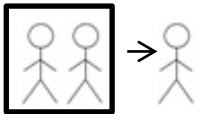Group at highest abstraction level

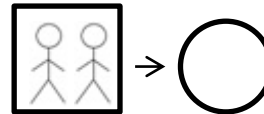1. Human to Self
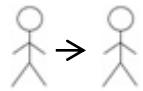
2. Human to Human
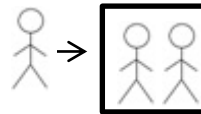
3. Human to Group
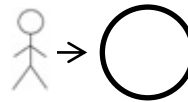
4. Human to Planet
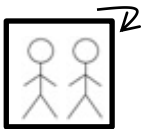
5. Group to Self

6. Group to Human
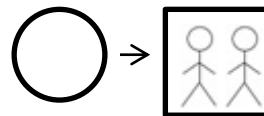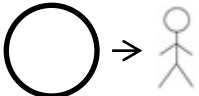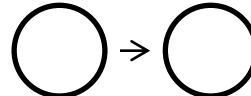
7. Group to Group

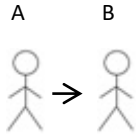8. Group to Planet

9. Planet to Self

10. Planet to Human

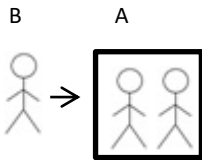11. Planet to Group

12. Planet to Planet

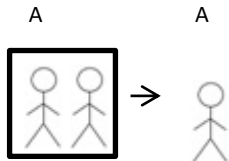# How - Who / Actor Interaction Sequence example

1. Human A Acted on Human B

2. Human B Thought and Decided to Act
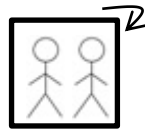
3. Human B Acted on Group A

4. Group A Acted on Human A

Why - Who / Actor motivation, drivers, reason

👤 1. Human to Self   👥 5. Group to Self   ⭕ 9. Planet to Self

Self aware human beings tend to have three main types of motivations for acting. Ideas like careless, inattentive, inadvertent, deliberate, lazy, ignorant, extreme, passive, reluctant and other general concepts surround this.
We all grow old, get sick or have an accident and die is type 2.

1. Unplanned and Not known
2. Unplanned and known
3. Considered, Pre-meditated, planned, deliberate

It's Not easy

I'm not the only person to struggle with this.
Many groups have been working on this for many years – including Mathematicians, Engineers, Scientists, Computer experts and standards organizations.

UML https://www.omg.org/spec/UML says this:
" 5.1 Key words for Requirement Statements
The words SHALL, SHALL NOT, SHOULD, SHOULD NOT, MAY, NEED NOT, CAN and CANNOT in this specification shall be interpreted according to Annex H of ISO/IEC Directives, Part 2, Rules for the structure and drafting of International Standards, Sixth Edition 2011."

Modelling languages have been developed over the years – but none really for human activity at the level I need – highest top down.

https://www.ieee.org/