Humanism – Information Classification Frame

A basic information classification technique to support analysis of human issues.

This is mainly used in the Observe Process in understanding human issues.

Humanism Processes Supported:
1. Observe
2. Communicate, 2.3 Design
3. Manage Issues, 3.2 Classify
6. Supporting Process, 6.2 Agreement Resolution, 6.3 Research & Development, 6.4 Cooperation

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Updated: 12/02/2019
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Frame

Hypothesis: Even the most simple structured way to organize information is complex

Questions

1. Humans Observe lots of information all the time – How are we to make sense of it?

2. What information should we Notice?

3. What information is incomplete or biased?

4. What information would be required for us to Act?

Population: Individual Humans, Nations

Measure: Supporting model for - Observe, Manage Issues, Agree

Assumption: 2 by 2 Matrix is a widely used analysis tool

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

Motivations: Build a series of cohesive Frames to model human issues.

Initial Conditions, Self reference: The ability to organize, group, abstract and manipulate information

1.2 Frame, 1.1 Collect, 1.3 Structure

These processes are usually done together iteratively.

Frame the issue - high level topics, keywords, ideas, information sources, intended actions and define as much as possible.

Collect information.

Structure information into

- Populations (group terms)
- Measurements (things you want to measure or have interest in)
- Variables (information categories which already exist or can be derived from other variables (e.g. today-birthdate = age, Mean)

When humans structure information they repeated simple processes involving known concepts (words),order (sort), choosing whether information is the same or different (categorize), grouping information using those words (definition, linking)

X (not y)

Y (not x)
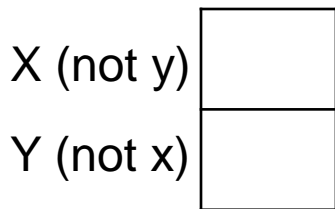
1.4 Analyse

This is one type of way of analyzing information. This technique has been used philosophers, scientists and mathematicians for centuries.

It involves organizing information which has been Framed and Structured into a two by two Table (2 dimensions) looking at information for 2 variables only. The information inside the table are numbers which represent something about the variables for the Population.

x

y

Many different combinations of variables can be used in a 2 dimensional table producing different analyses. Multivariate analysis is progressively built up from a series of 2 dimensional analysis upwards e.g. 2,3,4...

Data mining is the general term for discovery of information from multiple variables and usually involves a number of techniques - many to do with dealing with complexity and combinations.

The 2 dimensional table represents a single context for the structure data with the frame.

Each cell within the 2 dimensional Table represents a particular Perspective.

Information which has been Structured and Framed can be organized into a number of Contexts within Tables which can then be examined from every Perspective.

1.4 Analyse - Table example 1

What does it mean when there is only one number not equal to zero?

Can we hypothesise anything at all or do we need to know what the variables var1 and var2 mean?

We need the Frame and Context to understand the Perspective (cell).

Humans sometimes look at data:

- **without framework or structure Information**
- **limited context - Not including other contexts**
- **limited perspective**

Some humans do this deliberately, others simply don't know or did not intend to. This limits the ability to produce useful information.

There has been a lot of investigation into numbers by pure mathematicians which have been interesting. Fractals, [Chaos Theory](), Graph Theory – mostly around the ideas of zero, negative numbers, recursion, transformation, precision, accuracy and infinity. See Leonhard Euler, Pierre de Fermat, David Hilbert (Hilbert problems), Paul Erdős.

var1

x1,y1	x2,y1
x1,y2	X2,y2

var2

var1

100	0
0	0

var2

1.3 Structure -Table Usage

A dimensional representation of information can be called many things - Table, Crosstab, Contingency table, Confusion Matrix.

Before putting numbers in a table it's a GOOD IDEA to populate it with MEANING first – this highlights the context and its use in the Frame.

Consider a life or death choice example. Its not a good Frame to be in if that's the choice you are faced with.

The table starts to have more information added around it to provide frame and context information.

Basic 2 by 2 tables containing numbers have kept scientists busy. Ronald Fisher (his letters), Robert Charles Geary, George Alfred Barnard- large book on the topic - A Chronicle of Permutation Statistical Methods: 1920–2000, and Beyond

Outcome

Live   Die

Choice

Run away

Fight

	Live	Die
Run away	Run away and live	Run away and die
Fight	Fight and Live	Fight and die

Statisticians face the problems of understanding observed **INFORMATION** about population (distributions), variables (types), events, methods and :

1. whether a **MODEL** could accurately **COMMUNICATE** a human **ISSUE** and

2. **HYPOTHESISE** that particular **INFORMATION VARIABLES** were responsible for the **ISSUE** and

3. a defined **ACT** based on the **MODEL** could be a **SUCCESS**.

1.4 Analyse - Table Human Existence

We are descended from humans who made choices that did not result in death before reproducing. What is really clever about this technique is best summed up by Daniel Dennett's insight about "competence without comprehension".

The outcome is humans better adapted to survive.

Outcome

Live   Die

Choice

Option 1

Option 2

	Live	Die
Option 1	Option 1 and live	Option 1 and die
Option 2	Option 2 and live	Option 2 and die

Daniel C. Dennett, Tufts University
http://ase.tufts.edu/cogstud/dennett/ ,
https://ase.tufts.edu/cogstud/dennett/papers/chalmersdeb3dft.htm ,
Daniel Dennett: The Future of Life - Schrödinger at 75: The Future of Biology
 https://www.youtube.com/watch?v=iJ1YxR8qNpY
Richard Dawkins
https://centerforinquiry.org/,
https://www.richarddawkins.net/,
http://www.the-brights.net/
Burrhus Frederic Skinner, Karl Popper, Richard Gregory, James J Gibson

1.8 Test, 1.1 Collect

Outcome

Choice	Live	Die
Option 1	A. Option 1 and live	B. Option 1 and die
Option 2	C. Option 2 and live	D. Option 2 and die

Measure=Live?

Choice Option1?	Y	N
Y	TP A. Option 1 and live	FN B. Option 1 and die
N	FP C. Not Option 1 and live	TN D. Not Option 1 and die

We can observe the previous table in a general context. We can observe the outcome and record the Measure we choose (e.g. success, life, etc) from the Measures we think are important in this Frame. In this case Measure = Live. We are looking at one single value of Measure.

We change the idea to a **NULL HYPOTHESIS** Test. The choice is not option 1 and option 2 but option 1 and NOT option 1 . We are looking at one single value of the choice

The general model is 1 Measure value and 1 Variable value and whether a given Test was true or false.

This technique is used for Testing a Hypothesis which may have arisen from a series of Deductions based on a collection of Analysis from a particular Frame. A series of tests are done and the results recorded.

The terms TP= True Positive, FP=False Positive, FN=Negative, and FP=False positive arise. There are a number of analysis techniques adding and dividing the 4 numbers in many ways to produce other numbers usually between 0 and 1 which can be compared to other tests. (see Statistics - Bayes, Ronald Fisher, W J Youden, Karl Pearson)

The approach to testing a hypothesis is to control conditions and the environment as much as possible so there is as little change between tests, and limit the number of variables involved – usually 1 Variable and 1 Measure.

1.4 Analyse - Human Bias

Humans prefer to choose to do things which result in living.

The Human tribe observes the choice humans make.

TP,TN- each time we get this outcome it becomes more Certain.(positive/negative re-enforcement)

FP,FN- each time this happens we become more uncertain and start to question the choice and try other choices

We prefer TP because it confirms our thinking and it is a Good outcome.

This is our strongest bias.

Live?

	Y	N
Y	TP A. Option 1 and live	FN B. Option 1 and die
N	FP C. Not Option 1 and live	TN D. Not Option 1 and die

Choice Option1?

1.3 Structure - Human Tribe Bias

Tribe

	2	1
1	(TP) 1 event 2	(FN) 1 event 1
Tribe **2**	(FP) 2 event 2	(TN) 2 event 1

Now a different type of table which is still 2 dimensional but it has a different meaning.

Let us call it an Event table. It models an event – what happened, not an outcome or measure.4 possible events – who killed who?

Tribe 2 assumes that Tribe 1 kill them so they structure the table to reflect that Hypothesis by putting it so the TP result appears first in the top left corner.

The event is "which tribe kills which tribe" but it is modeled to make Tribe 2 assertion that Tribe1 kill Tribe 2 as the strongest bias = TP on the null hypothesis test.

This table is an event table and not the same as a human survival choice table (our strongest inbuilt model)

TP,FN,FP and TN do not apply in this table unless the event is turned into ONE CHOICE and ONE MEASURE i.e. a null hypothesis test of "Does Tribe 1 Kill Tribe 2?" Y/N and all other possible combinations are ignored.

Different tribe bias techniques are being deployed

1. Design the table Context to represent our strongest inbuilt bias

2. Eliminate other possibilities by turning it to a Null Hypothesis table – a single question test

1.2 Frame - Population

Statistics is a complex topic and there is a lot to learn but in general: https://en.wikipedia.org/wiki/Misuse_of_statistics

- Normal distributions are common https://www.statisticshowto.datasciencecentral.com/probability-and-statistics/hypothesis-testing/#WhatisHT

- Humans look for patterns in groups of individuals.

- Events are Random if there are equal outcomes from two choices

- Non Random results are interesting and might indicate Correlation of information

- Correlation is not Causation. https://en.wikipedia.org/wiki/Correlation_and_dependence#Common_misconceptions

1.3 Structure - Variables

Statistics is a complex topic and there is a lot to learn but in general try to choose Good variables

- Variables – independent, not correlated
- Useful for decisions – some use in choosing
- Clearly defined with high certainty

1.2 Frame - Measures

Tribe

	1	2
2	(TP) A. 2 kill 1	(FN) B. 2 kill 2
Tribe 1	(FP) C. 1 kill 1	(TN) D. 1 kill 2

<u>Tribal Choice</u>

Humans want to know when should tribe 1 kill all of tribe 2.

This might be framed as "if tribe 2 kill N humans in tribe 1 then all tribe 2 should be killed."

We arrange the context to our preferred bias , frame it as a null hypothesis and ask what the number A has to be. (ignoring B,C,D)

If A >= 1 then that's called a ZERO tolerance attitude (any number is enough to kill all tribe 2). This is also called "Extremism"

Lets continue with this very narrow Frame and biased Context but make it an Event table – not a Null Hypothesis table.

A broader question arises – what numbers in A,B,C,D justify a decision for either tribe 1 to kill all tribe 2 or all tribe 2 to kill tribe 1?

Let us examine all the combinations in a table.

1.2 Frame – Tribal Choice

This is a lot more complex to look at even with a very restricted Frame and Context. There is a lot more thinking about what the results might mean rather than examining chi-squared or other statistics. In many ways the reliance of derived statistics obscures the analysis of the information. The Prisoner's Dilemma https://en.wikipedia.org/wiki/Prisoner%27s_dilemma ,

Best choices are: **do nothing**, **investigate**, **cooperate**, **escalate**, **war**

Id	A(2 kill 1)	B(2 kill 2)	C(1 kill 1)	D(1 kill 2)	Description	Decision/Strategy	Result
1	0%	0%	0%	0%	No killing	Null	
2	1+				Zero Tolerence by Tribe 1	Kill Tribe 2	War
3		1+			Zero Tolerence by Tribe 2	Kill Tribe 1	War
4	1+		1+		Killing in both tribes	look at more context	
5		1+		1+	Killing in both tribes	look at more context	
6	1				Single (in A, B,C or D)	look at more context	
7	<5%				Low % (in A, B,C or D)	look at more context	
8	N%	N%	N%	N%	equal % killed in both tribes	Internal/external/Fighting/Troubles	escalation or cooperation
9	10%	10%	0	0	Tribe 2 are killers	Surivival	War or escape
10	0	0	10%	10%	Tribe 1 are killers	Surivival	War or escape
11	50%	50%	50%	50%	no tribes left	Null	Extinct
12	A>D			D<A	Unequal killing between tribes (any)	Tit for Tat, Revenge	escalation or cooperation
13		B>C	C>D		Unequal killing within tribes (any)	look at more context	
14	Large	Small	Large	Small	Tribe 2 being killed more by both Tribes	look at more context	
15	Small	Large	Small	Large	Tribe 1 being killed more by both Tribes	look at more context	
16	Large	Small	Small	Small	Tribe 2 kills Tribe 1 a lot	External Fighting	escalation or cooperation
17	Small	Small	Small	Large	Tribe 1 kills Tribe 2 a lot	External Fighting	escalation or cooperation
18	Small	Large	Small	Small	Tribe 2 kills Tribe 2 a lot	Internal Fighting	escalation or cooperation
19	Small	Small	Small	Large	Tribe 1 kills Tribe 1 a lot	Internal Fighting	escalation or cooperation

1.7 Hypothesize

	Tribe 1	Tribe 2
Tribe 2	(TP) A. 2 kill 1	(FN) B. 2 kill 2
Tribe 1	(FP) C. 1 kill 1	(TN) D. 1 kill 2

Reasoning

Humans tend to want to make a connection between information. This is called reasoning. (Deductive (strong), Inductive (probably), Aductive (guess))

https://www.fibonicci.com/logical-reasoning/

http://factmyth.com/the-different-types-of-reasoning-methods-explained-and-compared/

Organon – Aristotle https://archive.org/details/AristotleOrganon

New Organon – Francis Bacon http://www.gutenberg.org/ebooks/45988

Erwin Rudolf Josef Alexander Schrödinger - article in nature by Philip Ball https://www.nature.com/articles/d41586-018-06034-8

Reasoning produces an hypothesis.

Many Hypotheses could be produced from a set of information.

Mistakes can be made when reasoning.

Finding a useful hypothesis is not simple.

Hypotheses can be tested. The more tests and better outcomes strengthen the validity of the Hypothesis.

One negative test is usually enough to disprove a Hypothesis.

Notes

Statistics is a vast and growing area of study. No-one will ever be able to certainly predict the future. Its just a model.

Politics has become more about games, manipulation, tactics, power and getting the upper hand than working for humanity.

Research on Human Planet wide events is growing:

The Steps to War: Theory and Evidence ,Andrew P. Owsiak http://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-275 ,

Peter Turchin http://peterturchin.com/cliodynamica/strange-disappearance/