

COMPOSITION

Theory of Everything

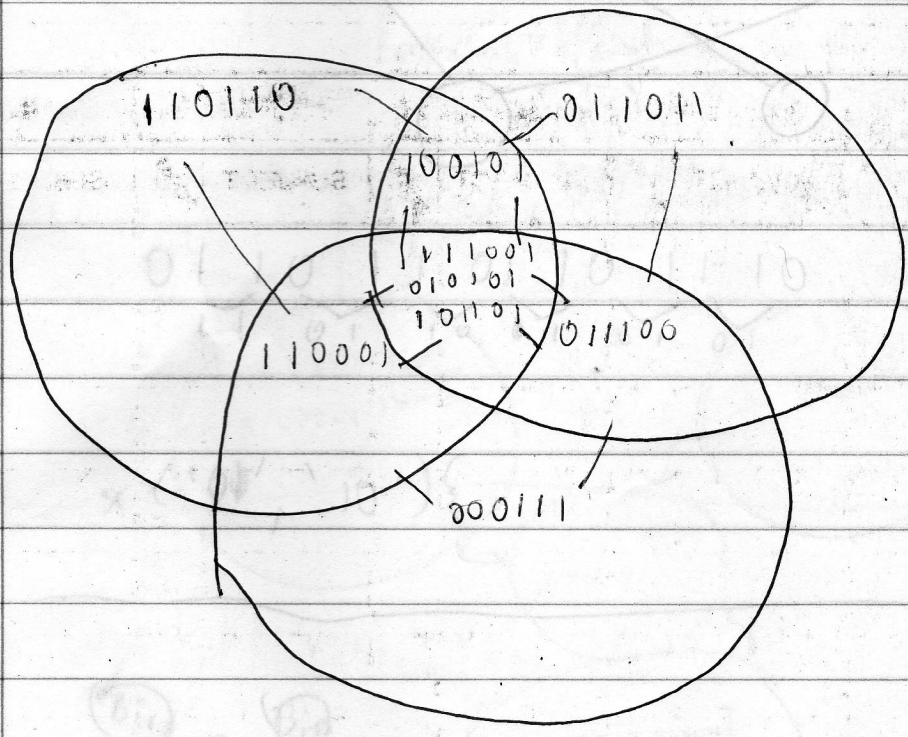
100 sheets / 200 pages

9 3/4 in x 7 1/2 in / 24.8 cm x 19.1 cm

Wide Ruled

00 01 10 11 - 4 possibilities

0111110100110
 100001010111

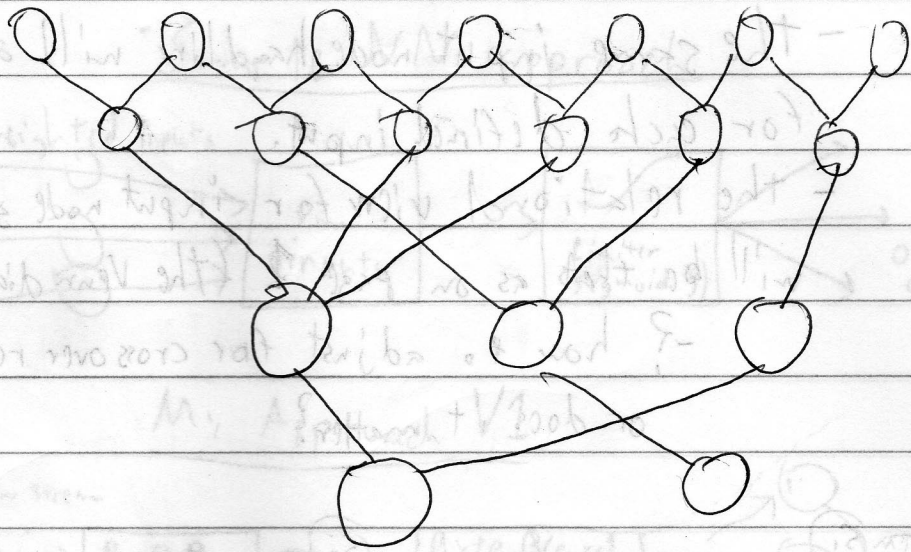


01 10 01 10 01 10 01 10

each input node
 is responsible for firing or not firing
 not excited. causing...
 ie: $B_1 = 00000001$; responsible for
 patterns after 000000

Approach needs to be to CHANGE STRUCTURE

3



0 | 1 0 | 1 1 | 0 1 | 1 0 | 1 1 | 1 0

x ('00', '10') {

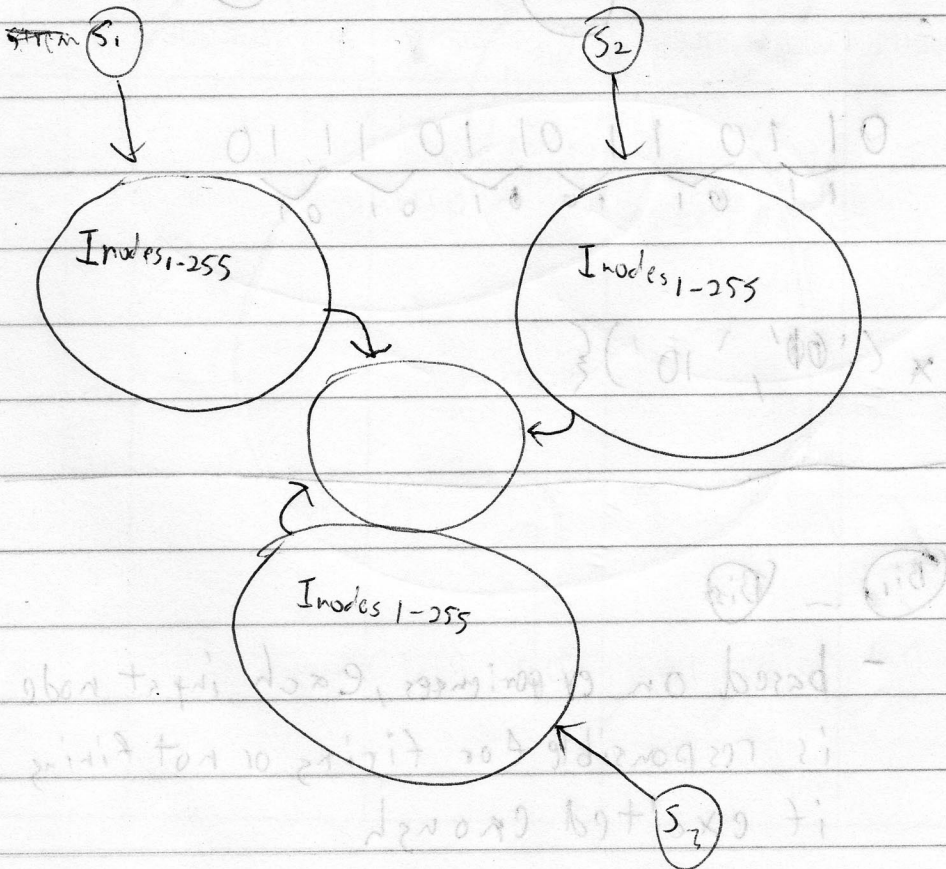
B_{i_1} ... B_{i_3}

- based on experiences, each input node is responsible for firing or not firing if excited enough

ie: $B_{i_1} = 00000001$; responsible for patterns after 00000001.

4

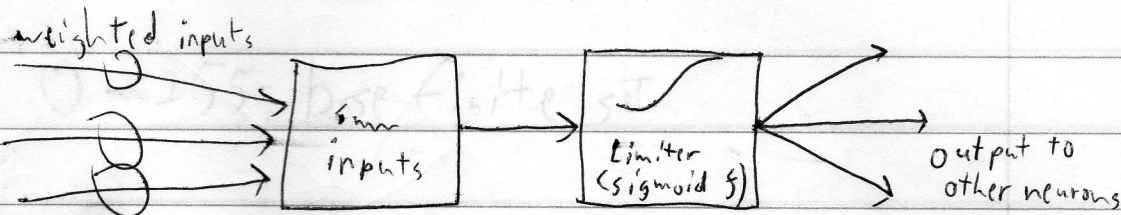
- the same input node handling will occur for each defined input.
- the relational view for input node groups will be that as on page 1 (the Venn diagram)
 - ? how to adjust for cross over relationships or does it matter?



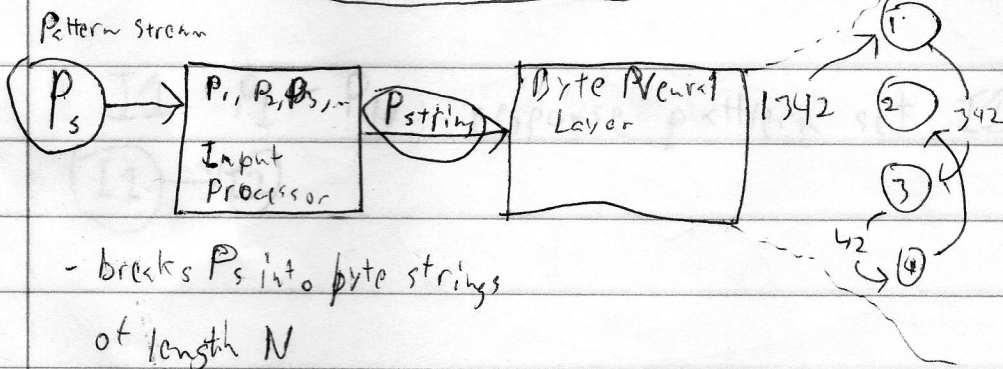
Approach needs to be to CHANGE STRUCTURE

5

Simple NN approach



M1 Approach V1



- breaks P_s into byte strings of length N

NN

- defined pattern set

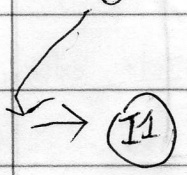
need to ...

- define / map a pattern set
- use ^{mapped} pattern set

EP, P_{in} = set of binary patterns 0-255

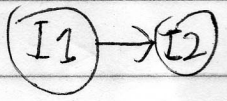
Entity & Relation

0-255; base finite set

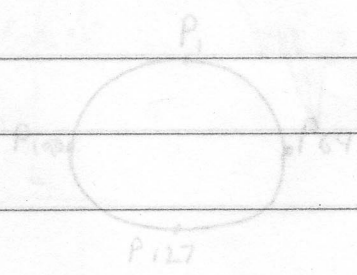


an input receiving binary input

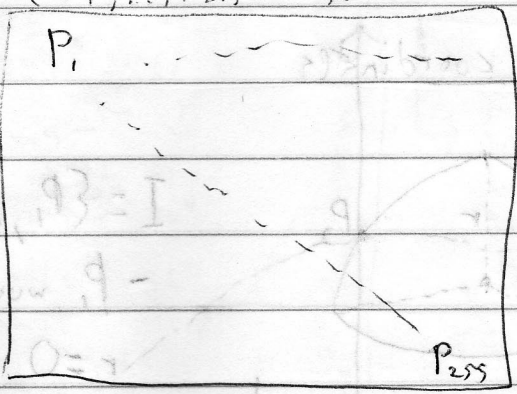
I1 P₁ - P_N; response pattern set I1 produces



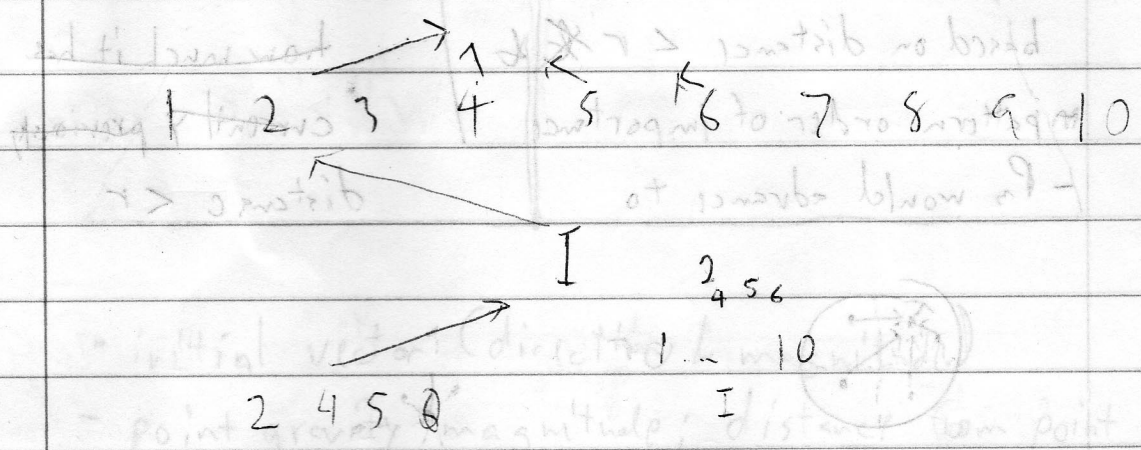
since we're working with a finite set & stream trying to define a pattern set, we could define positions based on following patterns. Essentially building/lessening excitability



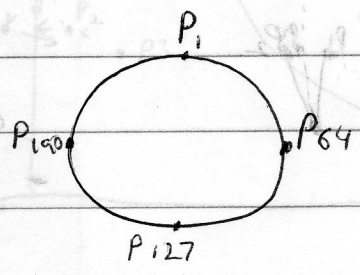
$\{P_1, \dots, P_{255}\}$ = set of binary patterns 0-255



- This approach will not work. Only will for pattern sets derived from base set



- since we're working with a linear set & stream trying to define a pattern set, we could define positioning based on following patterns. Essentially building/lessening



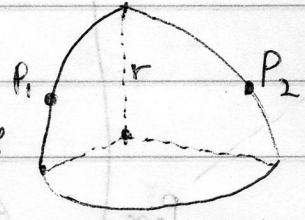
10

sphere coordinates

$$f(r, \theta, \phi)$$

$r = \text{radius}$, $\theta = \text{angle}$

$\phi = \text{elevation}$



$$I = \{P_1, P_2, P_3\}$$

- P_1 would advance to $r=0$ in amount

modified based on

~~how much it has~~

~~currently & previously~~

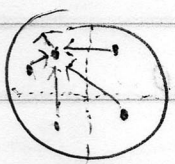
distance $< r$

- P_2 would advance to P_1 in amount

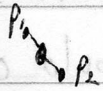
based on distance $< r$ & t

in pattern order of importance

- P_3 would advance to



or

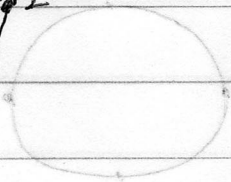


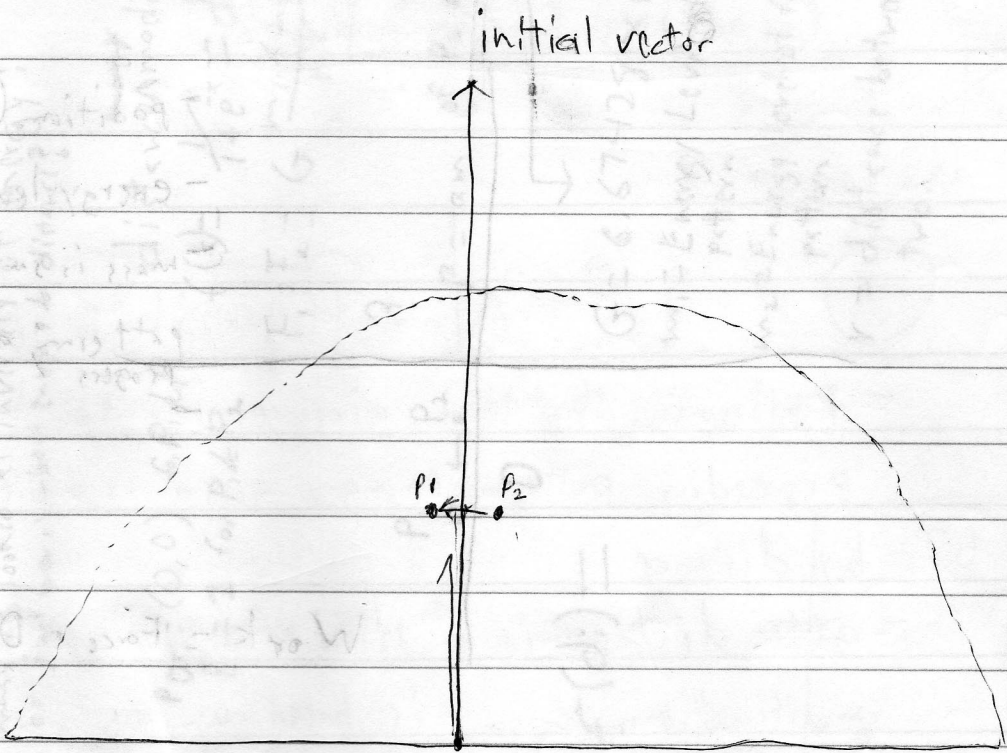
- how to define initial direction?

- pick an initial vector,

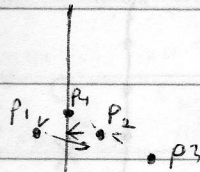
Cone shape

- gravity vector





- initial vector (direction & magnitude)
- point gravity = magnitude; distance from point
- p-p push magnitude



- pattern stream
 - weight/density
 = increases the more patterns relate to

(2)

initial

$\psi(r, \theta, \phi)$

varied θ & ϕ

ϕ & θ variation

- P_2 would advance to P_1 based on distance $< r$

in pattern order of importance

- P_2 would advance to

- position (distance)

- energy level

- mass is same for each

- P_1 pattern; adjusted as progress

- $r=0$ in front

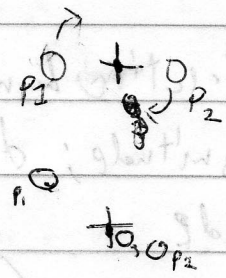
modified based on

how much it has

Work = Force * Distance

distance $< r$

$P_1, m = 1.5$
 $P_2, P_3, m = 1$



$m = 1$ affected by

$e = 1$ those around

$d = 1$

weight distribution -

direction?

pick an initial vector

same shape

gravity vector

how to define initial

direction?

pick an initial vector

same shape

gravity vector

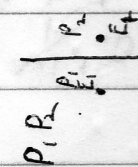
Goal? To adjust distances based on current energy levels & distances between patterns

Goal? To adjust distances based on current energy levels & distances between patterns

MAX ENERGY = $E_i \times P_i = E_i$
 - energy given to entity $= E_i$
 - amount of patterns in set $= P_i$

- if $P_1, P_2 \ll 10^7$, P_i would require most of P_i 's energy

* first try r & f at solver system approach $X, 0$



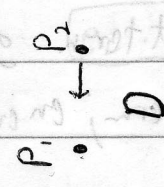
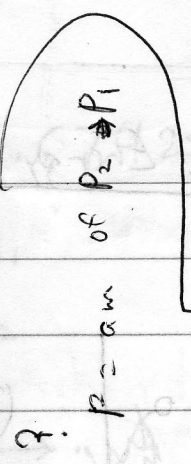
$E_i \times P_i = E_i$

- mass is looked at inversely of energy
 - or just worry about energy & distance?

distance modifier

$$f(x) = \frac{1}{1 + e^{-x}} = dm$$

$$F_1, F_2 = G \frac{m_1 \times m_2}{r^2}$$



$$f(d_i) =$$

$$G = 6.67428 \times 10^{-11} \text{ N m}^2/\text{kg}^2$$

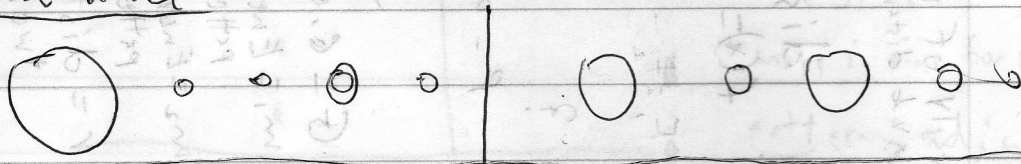
$m_1 =$ Energy Level of preceding pattern

$m_2 =$ Energy level of following pattern

$r =$ distance between the two.

Grouping & Energy Levels

balance



- Following pattern gives energy to the preceding pattern; energy given is modified by distance
- after distance is modified for both patterns; modification amount is based on energy levels of both

Requirements

- 1) - patterns have energy level & position
- 2) - need equation for energy transfer
- 3) - need equation for change in distance;
- 4) - need equation to calculate force between patterns

$$1/N = 1 \text{ kg m} / 52$$

(15)

$$G = 6.67428 \cdot 10^{-11}$$

1) P_1, e_1, x_1 sigmoid = $\frac{1}{1+e^{-t}}$

P_2, e_2, x_2

2) $e_2 \frac{1}{2} \left[\frac{1}{e^{(x_1-x_2)}} \right] \rightarrow \text{?} = E$
 $(e_L \cdot F) \text{?}$

$e_1 = 50, e_2 = 1$
 $a = \frac{m}{F}$

3) $\frac{e_L}{F} = 0 \mid e_L \cdot F \neq d$
 $\frac{1}{1+e^D}$

4) $F_1 = F_2 = G \frac{e_1 \cdot x_1 \cdot e_2}{(x_1^2 - x_2^2)^2} = F \checkmark$

0

(16)

Relational Set

- need to derive a pattern set based on incoming patterns; output
- based on patterns by distance via perspective?

• can derive EL & distance ratios similar to



... to how our solar system planets relate; should this be taken into consideration and constantly calculated?

- * should "area of influence" be determined by EL; those patterns which fall into it be the output?

- those far out of scheme without influence would be ignored (horizontal lines in text)

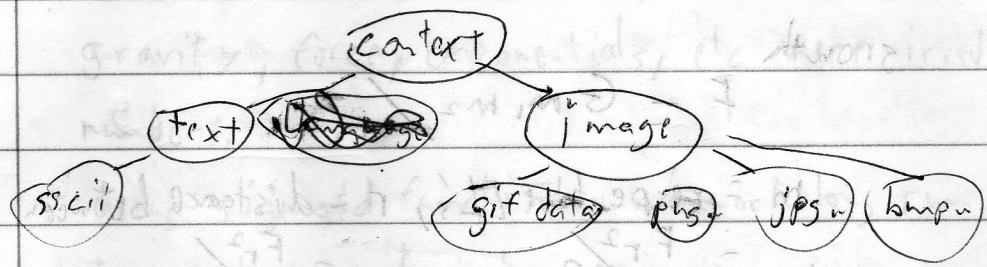
- patterns with more relational influence

- would output more

- * prioritization? Solely by distance or EL play a role? First come, first serve, EL & distance both play a role in establishing relations,

Layers

much like oop, layers will/can be the same



can really play with this, but I see this as the general direction.

first starting out; perhaps first appearance by pattern if first follower

still need an exchange of energy/mass; to date able the ability to extrapolate a relation set

perhaps do pattern "splits", then process into "have a starting mass"

$$F = G \frac{m_1 \cdot m_2}{R_{m_1}^2} \quad \left| \quad G \cdot \frac{m}{r^2} = g \cdot m/s^2 \right.$$

gravity is inversely related to distance
growth

$$F = G m_1 m_2 / r^2$$

m = respective EL's, r = distance between

$$m_1 = \frac{F \cdot r^2}{G m_2}, \quad m_2 = \frac{F \cdot r^2}{G m_1}$$

$$r = \sqrt{\frac{G m_1 m_2}{F}}$$

should this be taken into consideration and constantly calculated?

should "cross of influence" be determined by EL; those patterns which fall into it be the output?

those far out of scheme without influence would be ignored (circles in text)

patterns without relational influence would output more

priority? Solely by distance or EL play a role? First come, first serve, EL & distance both play a role in establishing relations.

Groupings & Layers P2

- Part 1 on page 14 - 15
- problem I ran in using calculations for gravity, force, exponentials, etc were irrelevant numbers.
- using sigmoid functions won't work long run, due to constant unchanging expansion.

why
 RL
 didn't
 work;
 need to
 adjust

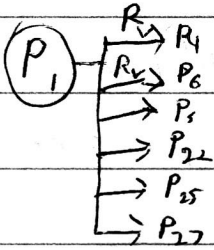
- need a start point / rest point for patterns first starting out; perhaps first appearance by pattern it first followed or \emptyset .
- still need an exchange of energy / mass; to ~~be~~ able the ability to extrapolate a relation set.
- perhaps a pattern "splits", then process have a starting "mass"

Sapling to Aged Oak

what I'm not seeing in my pattern sets is a representative of a young pattern set growing into a structured and rigid pattern set. I am currently using mass & distance as the modifiers. As patterns follow others, they "give" part of each other and act on each other. ~~This isn't working because~~

A seed contains all the instructions it requires, its starting pattern set, which responds accordingly to what it knows how to respond to. I do not have a seed, merely a blank slate which is fed arbitrary patterns from a specific source with which to derive a seed.

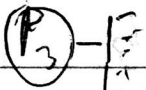
Counter to what I state in paragraph I, I must revisit the roots of my entities & relations theory. Every pattern must be thought of as an entity & relations being quantified measurements of an entity following (relating) another or it self.



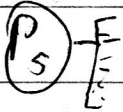
- Should every level push n+1 to the next?

$$L_0 \rightarrow P_1, P_2 \rightarrow L_2 \rightarrow P_1, P_2, P_3 \rightarrow L_3$$

- should the entities be complex patterns as level increases? 8-16-32 bit

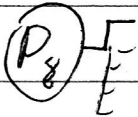


- add inhibitors based on using a



sigmoid function

01, 11, 10 fires \rightarrow 00 (inhibits), 10 fires \rightarrow 11 fires to next level



or perhaps a simple ratio of fire/don't fire (4/5 for example since human brain has 80% ^{excitatory} / 20% ^{inhibitory} neurons); perhaps the ratio ^{should} could flex.

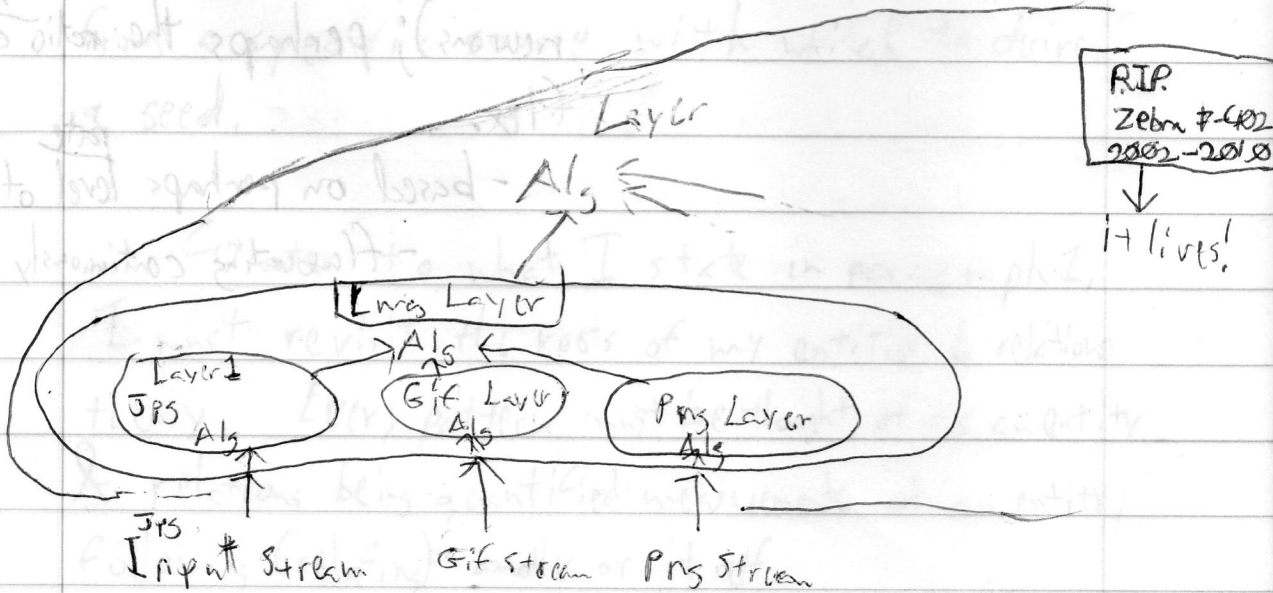
- based on perhaps ^{rate} level of input?

- fluctuating continuously

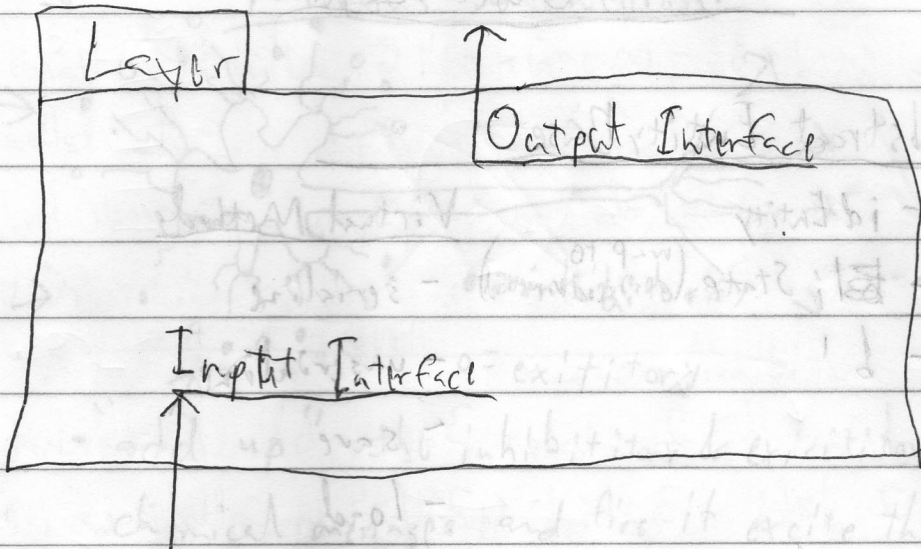
(22)

Layers

- we have the core algorithm (ps. 21)
- all layers need to handle an input stream & output stream
- input stream gets filtered through the alg
- output stream is the results of the alg
- a layer can contain ~~layers~~, essentially, a/c/p/s simply receives data and only needs to know where to
- a layer contains the destinations the output; other layers/device/program interfaces.



Layer \rightarrow Entity



- Both I/O Interfaces have a data queue.
 - An interface can have one input data queue
 - An interface can have multiple output data queues
 - * Objects data Queue & (base) interface
 - a Layer can request a data queue from another Layer and obviously vice versa.
 - * be a key in save/restores
 - need a base abstract method for saving (serializing/unserializing); need a killis of sorts to pause all activity, (at HLE level)
- (cont...)

Entity Object Layers

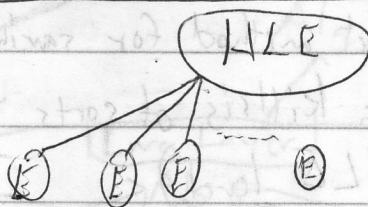
Abstract Entity Base

- | | |
|---|---|
| <ul style="list-style-type: none"> - id Entity - E; State (wrap to describe v. method) - b' | <h3><u>Virtual Methods</u></h3> <ul style="list-style-type: none"> - serialize - unserialize - save - load - start - stop |
|---|---|

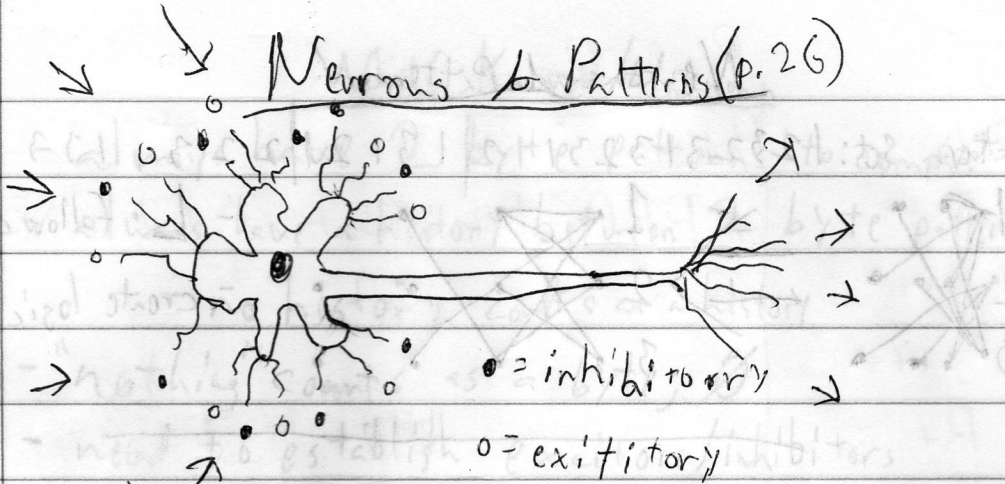
Methods

- EntityThread
- based on iState
- run v. method
- ~~run~~

ids - as growth occurs to can keep adding higher level ids



$HLE_id + E_id$



- "add up" the inhibitory & excitatory (InE) chemical messages and fire if excite threshold is met

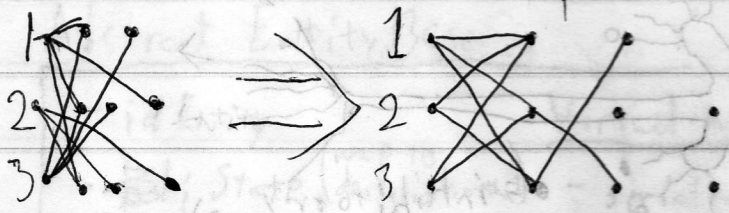
- a constant flow of EnI
- can be more or less sensitive to fire
 - standard ANN adds all input weights & uses a sigmoid function to consider if it fires or not

- pyramidal neurons on average 30k E: 1.7kI
- function like logic gates
 - how to develop/grow logic network (not) established?

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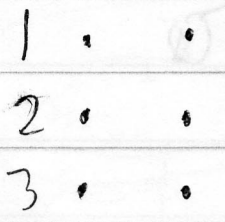
Neurons & Patterns

Pattern set: 123231323112 | 13121 | 2231133



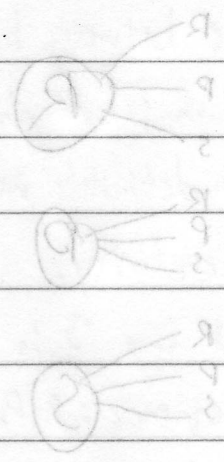
- L. follow count relation
- create logic network

	<u>1</u>	<u>2</u>	<u>3</u>	$\Lambda = \text{inhibit}$
2	1:3	3 1:1	2 1:4	$U = \text{excite}$
3	2:4	3 2:1	1 2:2	
1	3:3	3 3:4	2 3:1	
2		1	1	
3		2	1	
2		3	1	
1			3	
2				
1				
3				



What's Known/Unknown

- always have 2 byte patterns to compare
- always have a history between 2 byte patterns
 - no history counts as a history
- "nothing" counts as a byte; \emptyset
- need to establish exciters/inhibitors
- established pattern relations; excite/inhibit based on if ~~fired~~ followed or not. $1 \rightarrow 2$, 1 would inhibit 2,



Rock, Paper, Scissors

Rel:

RR++

RP++

RS+++

PR+

PP

PS+

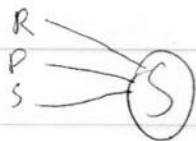
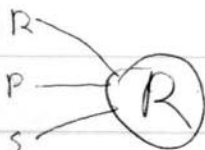
SR+++

SP

SS+

Pattern

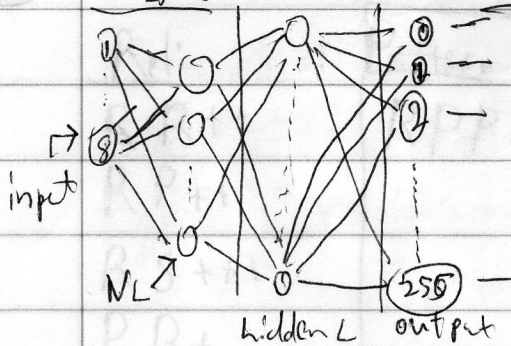
RPPRSARRSSS PSRPRSRR



30

1-byte

ANN Approach



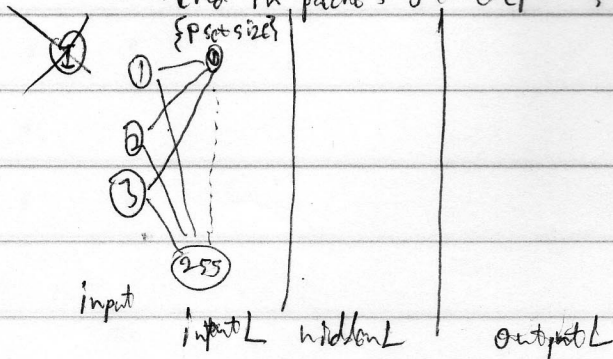
- pointless, not looking at data to extrapolate another meaning
- would have to feed it data like a 4; each section an on/off input fed entirely to ANN with 10 outputs 0-9.

pretty much the same; skewed based on multiple inputs

- output for the UPP are relations; not trying to guess/calc
- output can also be a response to relations
- bridge between both types need a "growth", similar to autism? mechanism; branching out to support more relations
 ↳ definitely need a growing/shrinking layer based on activity.

- would say 3 is the minimum depth to watch patterns
 ↳ sequence: $P_1 P_2 P_3$; always assume 0 if nothing precedes

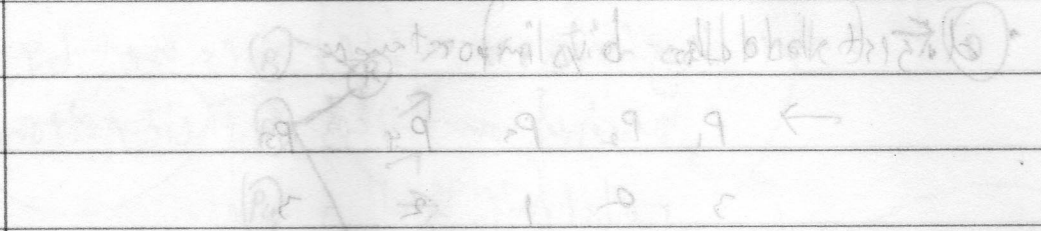
↳ send in packets of depth size? depth size being # of inputs



Depth Numbers

Set size = 256; {0..255}

① have blocks of state of size 2^k



• patterns within range create relations
• adds a callback to related pattern

• patterns & relations have a register based function
• patterns & relations have a growth function

Decor occurs based on lack of use
• note last reference, next reference decor
based on difference

Growth occurs based on use

12

Cascade Correlation ANN (with a twist)

- have a finite pattern set; input
- have blocks of data of size X
- digest blocks by importance

→ P_1 P_2 P_3 P_4 P_5
3 2 1 2 3

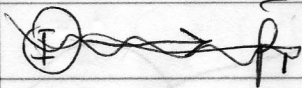
- patterns within range create relations
 - adds a callback to related pattern
- patterns & relations have a regular decay function
- patterns & relations have a growth function

Decay occurs based on lack of use

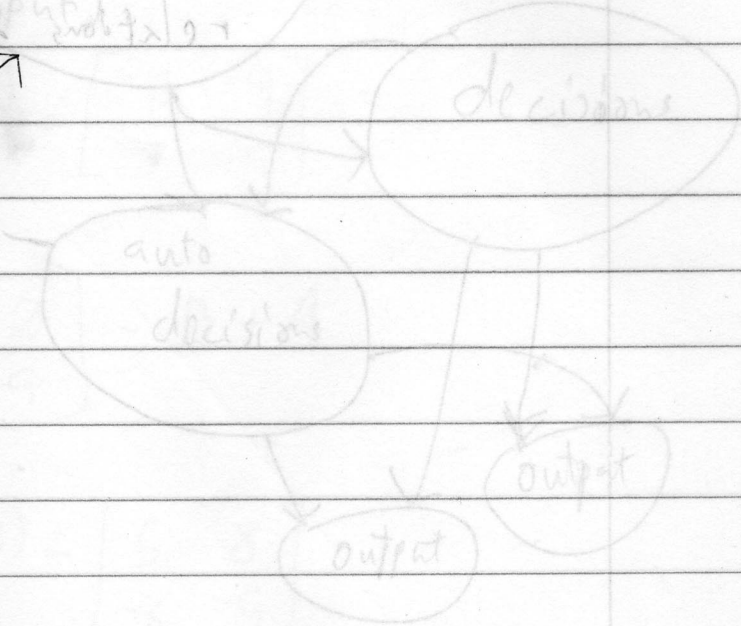
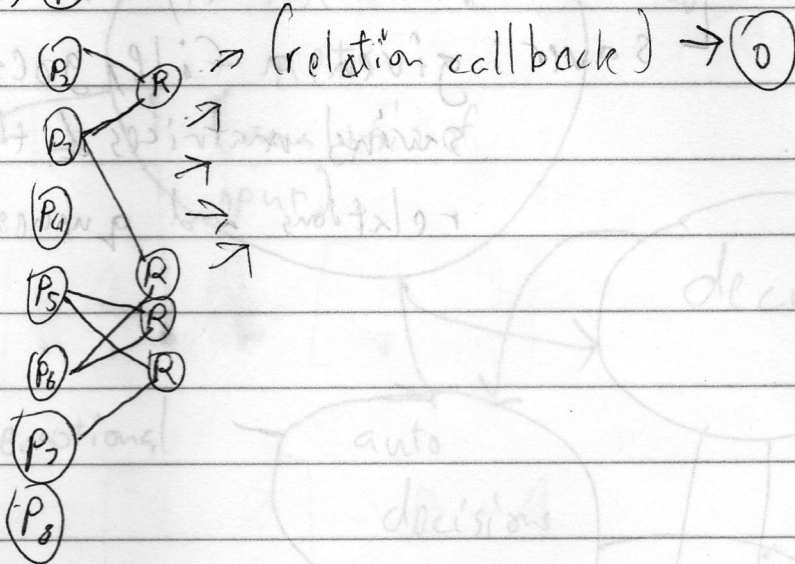
- note last reference, ~~next~~ next reference decay based on difference

Growth occurs based on use

Diagrams from p. 32



seq = {2, 3, 6, 5, 7}



(24)

The Hive

• hive

↳ loader: parses ini files, instantiates nets, loads data

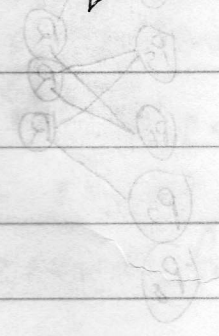
↳ saver: given a file, goes net by net
→ P. saving matrices & their pattern relations and queries.

• patterns within range

• adds a callback to

• patterns & relations have a

• patterns & relations have an

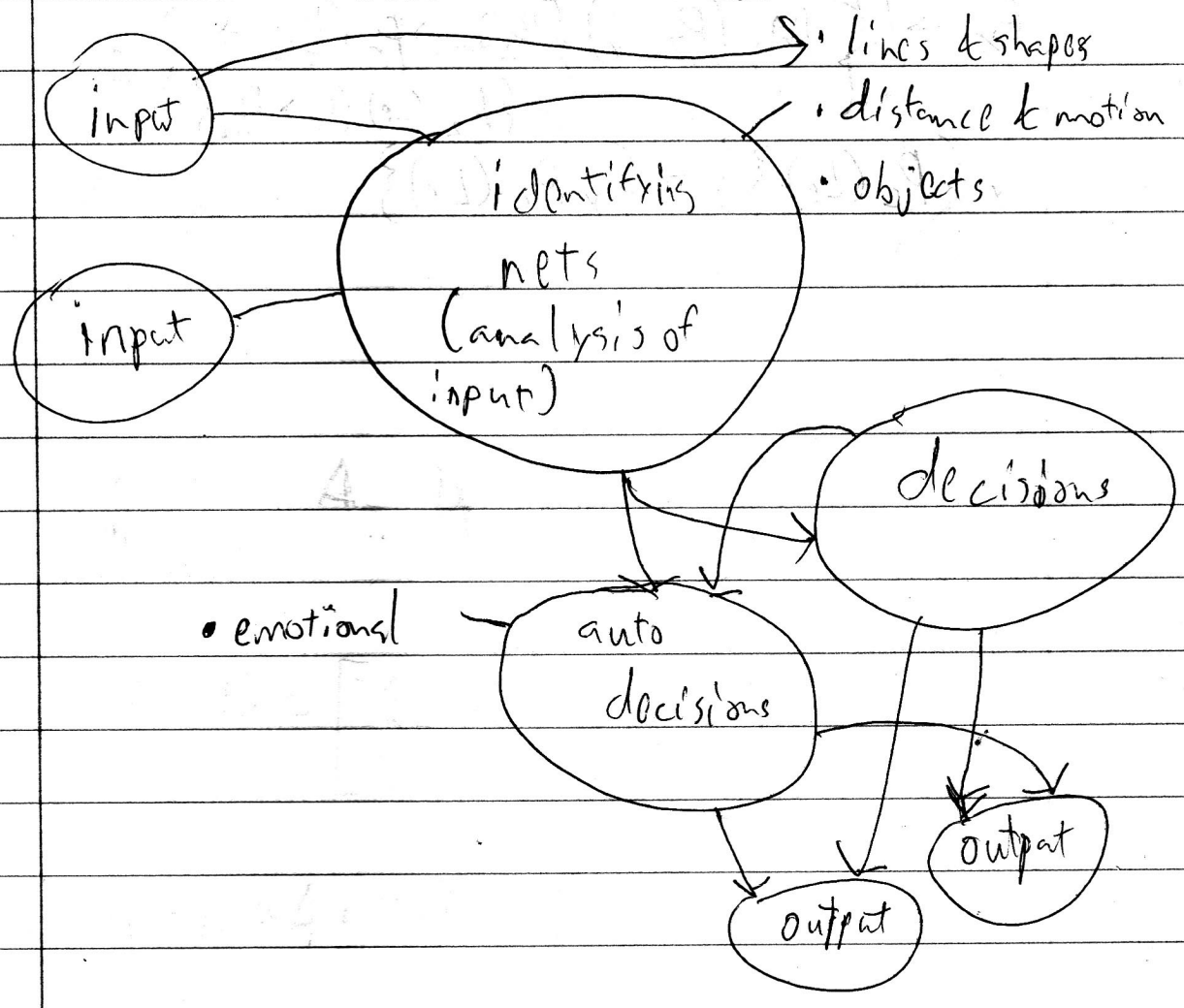


Decay occurs based on

- note last reference, ...
- based on difference

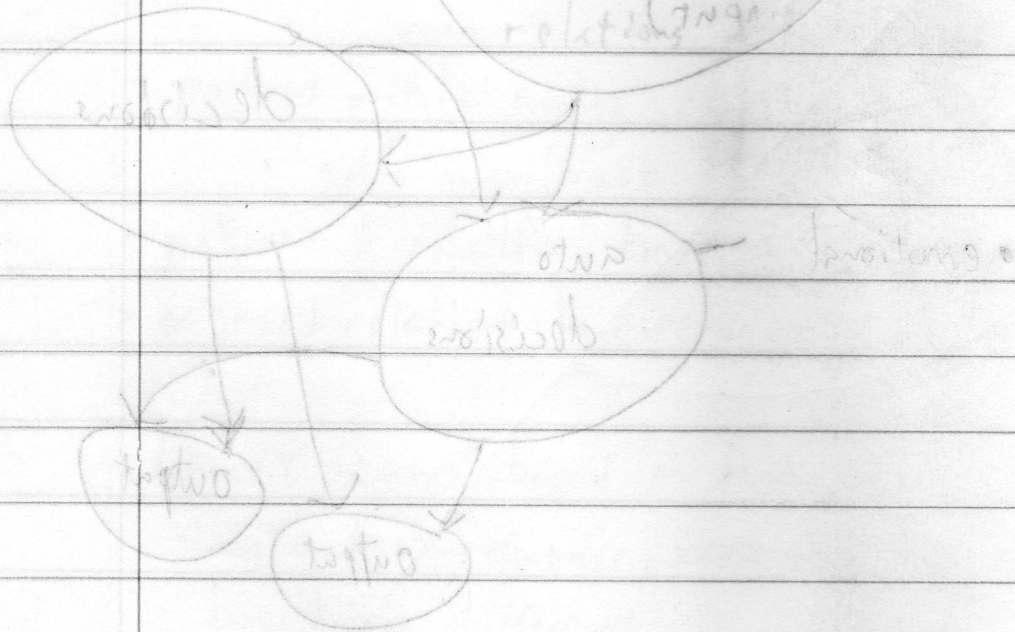
Growth occurs based on

The Net Structure



(50)

$$P_x \rightarrow \bigvee_y M_y (P_{z+y}) \left\{ \begin{array}{l} P_{z+y} \rightarrow P_r (L_e) \rightarrow \\ \{ R_2 (L_e) (P_r \rightarrow P_{R_2}) \} \end{array} \right\} \rightarrow$$
$$y \{ P_c (L_e) \} = \{ \bigvee_y P_c (L_e) \}$$



(3.7)

$$\begin{array}{c}
 1 \times 4 \\
 A \cdot I \\
 1 \times 4 \quad 4 \times 4
 \end{array}
 \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}
 =
 \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 2 & 0 & 0 \\ 0 & 0 & 3 & 0 \\ 0 & 0 & 0 & 4 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 4 \\ 1 & 8 \end{bmatrix} = A \quad B = \begin{bmatrix} -3 & -4 \\ 7 & 9 \end{bmatrix}$$

$$A + B = \begin{bmatrix} -1 & 0 \\ 8 & 9 \end{bmatrix} = B + A$$

$$A - B = A + -1(B) = \begin{bmatrix} 5 & 8 \\ -6 & -9 \end{bmatrix}$$

$$\begin{array}{c}
 2 \times 3 \\
 A = \begin{bmatrix} 3 & 1 & 2 \\ -2 & 0 & 5 \end{bmatrix}
 \end{array}
 \quad
 \begin{array}{c}
 3 \times 2 \\
 B = \begin{bmatrix} -1 & 3 \\ 0 & 5 \\ 2 & 5 \end{bmatrix}
 \end{array}$$

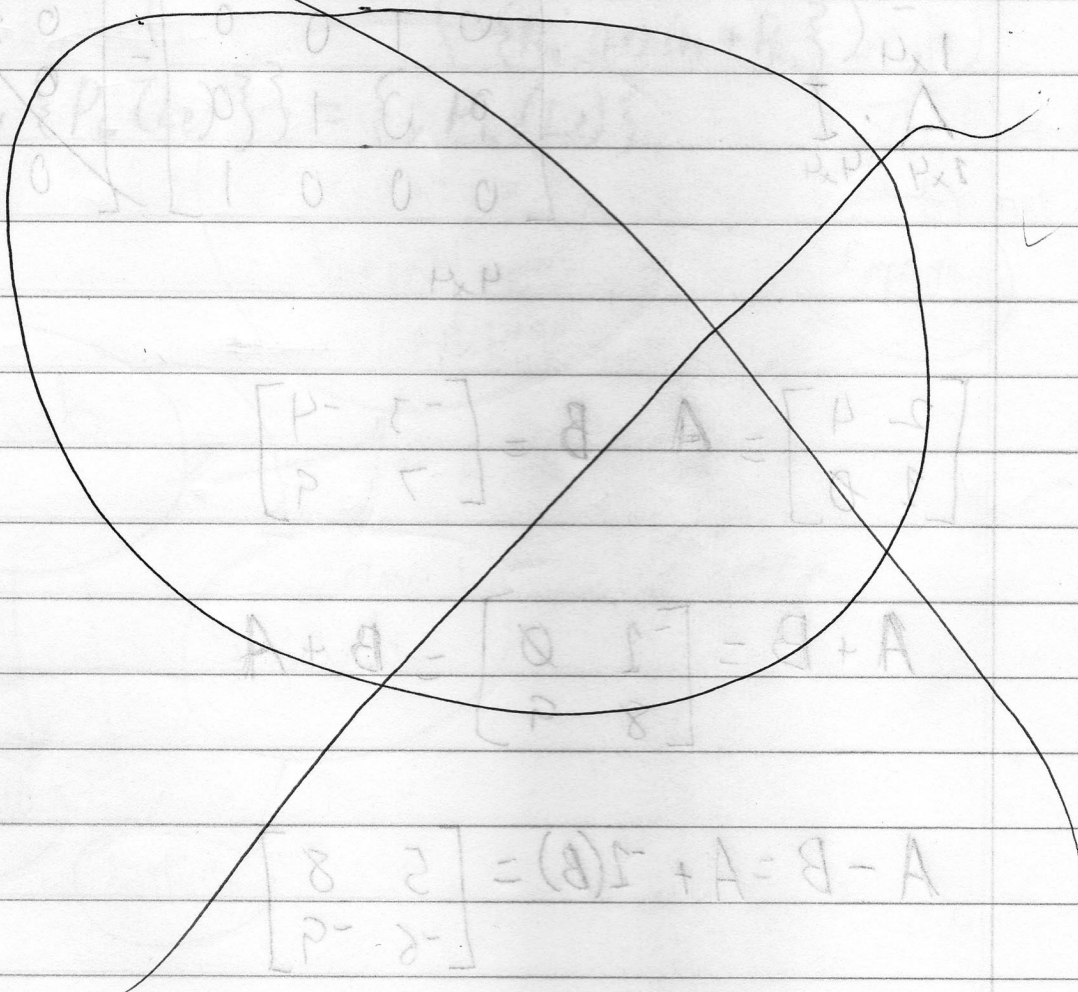
$$A \times B = \begin{bmatrix} 1 & 24 \\ 12 & 19 \end{bmatrix}$$

2014.05.26

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~~BPV~~

$P = P_2$ Horn Set



$$\begin{bmatrix} 1 & -1 \\ 1 & 1 \end{bmatrix} = B \quad A = \begin{bmatrix} 1 & -1 \\ 1 & 1 \end{bmatrix}$$

$$A + B = \begin{bmatrix} 2 & 0 \\ 2 & 2 \end{bmatrix} = B + A$$

$$A - B = A + (-1)B = \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$$

$$A = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix} \quad B = \begin{bmatrix} 1 & -1 \\ 1 & 1 \end{bmatrix}$$

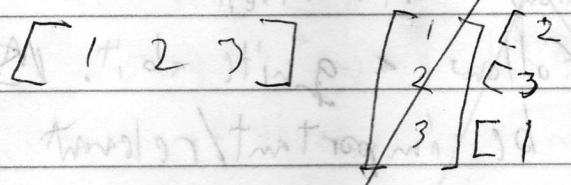
$$A \times B = \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$$

2014.07.12

$I_1(P_{s_1})$ - Input can only be consist of Patterns within set

$I_2(P_{s_2}) \Rightarrow SI$

- relations made based on I_2 are relevant to patterns in P_{s_2} SI



40

2019.07.18

- ~~Initial~~ input must be relevant to pattern set

$I_p \rightarrow PS$

$\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \rightarrow \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$

- within ~~itself~~, a pattern set, its patterns can form relation with itself

- b to follow a quite a bit. ~~MA~~
b must be important/relevant

(42)

2015, 11, 29

- what are we trying to solve?

- ~~create~~ - create a universal pattern processor; trying Zipf's Law approach. (Zipf-law model)

- ~~per~~ have a data set.

- need a way of storing frequency / "importance" of

- each pattern in set

- each pattern to pattern relation

- map wise, net to net wise, perhaps even have intermediate net listings

- need to create a test

- learn about power-laws

• we have a set S , which can have any number of elements

$$S \in \{p_1, p_2, p_3, \dots, p_x\}$$

• each ~~pattern~~ element in set S is a set R of up to the same size as S . Each element in R represents a relationship between 2 elements in set S ; including itself.

$$p_i = R_i \in \{p_1 \Leftrightarrow p_1, p_2 \Leftrightarrow p_2, p_1 \Leftrightarrow p_2, \dots, p_1 \Leftrightarrow p_x\}$$

would be able to test

20.10.2025

~~$S \in \{1, 2, 3\}$; \sum_x
 $B = 1, 0, 0 = 1, 0, 0$
 $1, 1, 0 \quad 0.5, 0.5, 0$
 $2, 1, 0 \quad 0.66, 0.33, 0$
 $2, 1, 1 \quad 0.5, 0.25, 0.25$~~

~~Equilibrium, idiosyncratic shocks / other idiosyncratic shocks
 Equilibrium of labor market, fixed goods market -
 interest rate, relative price, real wage, the price of
 capital, the price of labor, the price of land
 - substitution, the price of capital, the price of labor
 S, the price of capital, the price of labor, the price of land
 - what is the output of each?
 - if the relative price is excited enough
 - what is the relative price of labor -
 excited enough~~

(44)

2016.01.29

- time is not relevant; each input tick represents a change & will change the set.

- no input, no change.

- what is a set?

- Set is any ~~finite~~ sized set of patterns

$$S = \{p_1, p_2, p_3, \dots, p_n\}$$

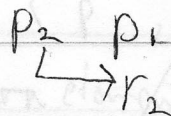
~~what is~~

- how is change kept track of per input?

- relations between input patterns; organized as pattern sets

- what is a ^{consecutive} relation?

- any two input patterns



- what is the output of a set?

- if the relation is excited enough

- what ~~is~~ decides if a relation is excited enough?

2016.07.07

$$X = |S| \quad S \in \{P_1, \dots, P_n\}$$

- what is my input?

- what is a relation?

- the cause to effect

- 1 idea/entity excites 1 other idea/entity

$$S = \{P_1, \dots, P_n\}$$

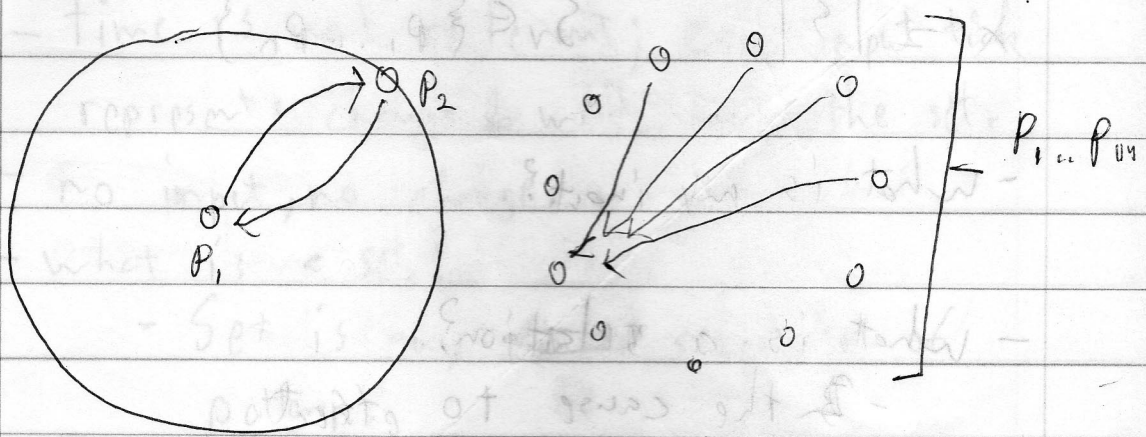
- as input is received, the preceding pattern "excites"

- output ~~is~~ needs context of relation

$$S \rightarrow \{P_1, P_2\}$$

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2016.02.12



strength = $\frac{1}{d^2}$

- every pattern has a distance from every other pattern
- distance
- strength is determined by pattern count
- strength

- what is the output of ...

- if the relation is excited enough

- what ~~kind~~ decides if a relation is excited enough?

2016.05.29

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- drop relations ~~as~~ like algo 2

1) - weight/mass

2) - distance

3) - min/max \leftarrow chainable relations at level

4) - how to ~~mod~~ recalibrate when referencing self?

3) canonical pattern is 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

$$\{0, 1\} = S_2 \quad |S_2| = 2 \Rightarrow \text{size } \theta$$

- any pattern frequency of any set

- in a pattern set, it is possible only a single

element will ever be expressed (ie: 1, 1, 1, ..., 1)

- given this, the max is $|S|$ & min is \emptyset

$M = \text{mass}$

$s = \text{set size}$

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2008.09.15

also 4

- pure sets; $Net = \{ \{ \dots, \dots, \dots \} \}$

- \Rightarrow set composition is irrelevant from one level to another

except to its immediate parents

? What is the principle I'm trying to prove?

Given the only known variable is the

event source / origin, I can ~~not~~ reasonably

identify any pattern set.

(1, 1, 1, 1, 1) given 2 we can assume any pattern set

can represent a pattern in another

structure; it ~~has an effect~~ it represents a

~~letter~~ a cog in a higher level chain of meaning