Pure Hyperanticipation for 2000 Risky Neighbourhoods.

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Abstract

Distinctions are visualizable in three and more dimensions with *Mathematica* functions. The concept for rendering multiple dimensions is explained by comparing the board used for playing chess on one side and on the other side Yijing a traditional divination from China. The proposed re-ordering of coordinates and sets of data can support individual and participative evaluations of choices with or without net infrastructure. Planar representation of superimposed dimensions generate neighbourhoods which can be turned into meeting points for fast feedback. Conflicts may thus be managed by dividing or re-unting original alliances about sublevel issues. Non-observation of causes or effects is conceptually included as well as some fuel-reduction for dogmatic conflicts. A simple reinterpretation of the dial on an analog watch may help to explain this.

⌚	⌚	1	2
⌚			3
9			4
8	7	6	5

Fig. 1 : Dial neighbourhood of a four dimensional bit mix

Keywords: Invariant, Participation, Space, Yijing, Zero

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1. Introduction

Interesting situations – like the "y2k" issue of needing three or better more digit representation of date stamps after 99 – call for evaluations of potentially deadlocking (Knapp, 1987; Singhal, 1989) private and public records (Miura; Sasaki, 1965).

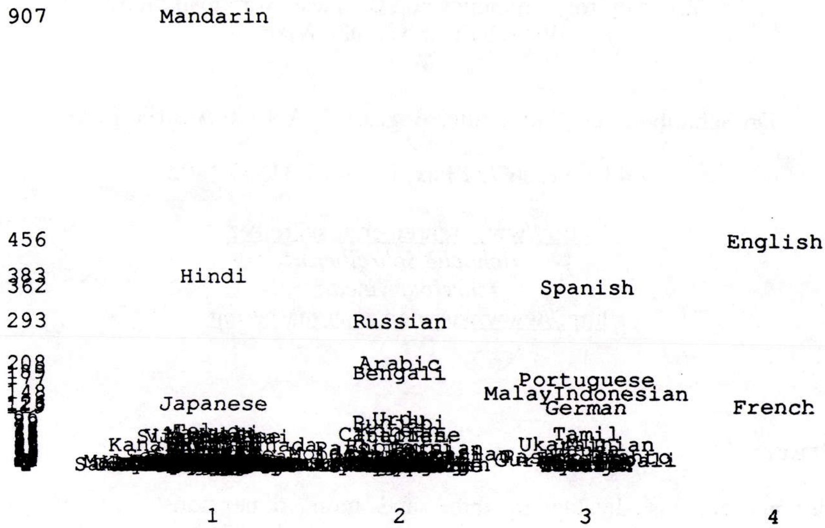


Fig. 2: Number of speakers and primary locales of languages

Webster´s New Encyclopedic Dictionary (1994,1417ff) does not include estimates for operating systems, programming or customizable applications.

We introduce a purely formal fractal (Mandelbrot 1977; or Crilly et. al. 1991) neighbourhood of superimposed distinctions which maps all possible coincidences of multiple – like segmentation or market model (Lilien et. al, 1992) – distinctions for participative decision procedures via internet interfaces or via landart (Werkner, 1992).

2. Purpose

Aware of individual limitations I envision a chartered group creating universal tools able to map interactions of multiple distinctions as neighbourhood indexed planes for participatory groups with different technologies, languages and cultural backgrounds.

3. "Michael, you have to learn to agree to disagree." (Gordon Pask)

Changes are sometimes mapped in a "phase-space" indexed by the dimensions observed and passed by trajectories of objects measured along these dimensions.

"It was von Neumann (1966) who first observed that any discretization of a system of differential equations for computation is a replacement of the system by an automaton, and he advocated studying the statistics generated by 'artificial automa' in order to gain insight into the workings of real or model systems that are too complex for ordinary analysis (he had specifically in mind models that can reproduce themselves), He also noticed that the chaotic map $x \rightarrow 4x\ (1-x)$ could be used as a pseudo-random generator on a computer, were it not for the fact that after a few iterations you see only the effects of roundoff/truncation. Good pseudo-random generators are, in practice, chosen to operate only on the integers. They are, from the start, formulated as automata." (J. L. McCauley, 1995, p.286f.)

3.1 Maps and Self

Collet & Eckmann (1980), Dubois (1992) and Dubois & Resconi (1992) or more specifically Spencer Brown (1957, 1969) versus Glanville (selected papers between 1976-1995) or Frank & Cull (1979) offer various ramifications of the issues reconstructed from a more recreational perspective here.

3.2 Loop

You can disagree.

You can hardly disagree with this. It would be a confirmation. You can experience oscillating values of truth just say: "This is false". This is true if it is false and false if it is true and if it is true and false than either of these loops should not be there. Isn´t it neither true nor false? http://www.schreiber.at/schreiber/game

3.3 Roots

We break some old China by re reading the oracle Yijing on a board for chess and hope that the functions we animate offer more help for potential adopters than quotes or reconstructions of verbal explanations (Saussure 1915 ed. Bally; Sechehaye).

3.3.1 Chess

Some of you will know that chess is made simple on 64 fields (Hanauer,1957) which can be identified by two coordinate indices running from 1 to 8 and a to h. Chinese types of chess on 81 fields or other games using similar spaces are not important here. We just demonstrate, that we can recreate an abstract characterization of such a traditional form, by sticking to the rules of *Mathematica* like below.

```
Show[Graphics3D[{Table[{
  Text[FromCharacterCode[
    48 + y], {0, y, 0}]}, {y, 1, 8}],
  Table[{Text[FromCharacterCode[96 + x],
    {x, 0, 0}]}, {x, 1, 8}],
  Table[{GrayLevel[0.5 -
    0.15 * (-1)^Mod[x, 2] * (-1)^y],
  Text[FromCharacterCode[96 + x] *
    FromCharacterCode[48 + y], {x, y, 0}]
}, {x, 1, 8}, {y, 1, 8}]}], Boxed -> False]
```

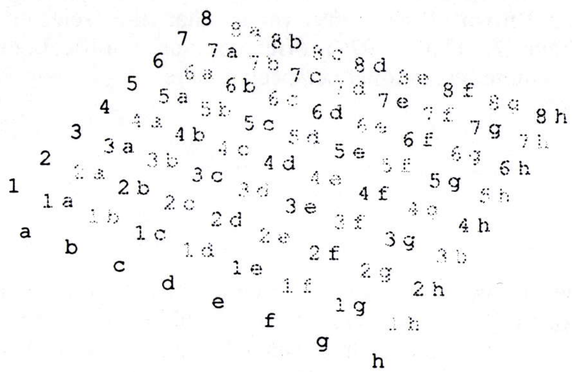
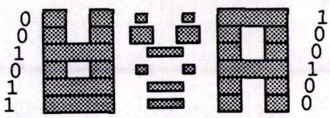


Fig. 3 : Chess Indices

3.3.2 Yijing

A six dimensional way to read 64 locations is implemented by the ancient oracle Yijing. It answers by stacking six pseudo random distinctions between Yin and Yang – Webster´s Dictionary attributes this distiction to the 2800 bc emperor of China Fu Shi (p. 1451).

```
rany := Array[Random[Integer]&, {6, 2}];
mixmiyi[rany_] := Table[{Text[rany[[n]][[1]], {+1 + (n - 1) / 5, n, 0}],
   nu[1, n, rany[[n]][[1]]], nu[2, n,
    -rany[[n]][[1]] + 2 rany[[n]][[2]]], nu[3, n, rany[[n]][[2]]],
   Text[rany[[n]][[2]], {18 + (n - 1) / 5, n, 0}]}, {n, 1, 6}];
nu[x_, y_, -1] := yiji[5 x, y, 1, 1 / 4]; nu[x_, y_, 0] :=
 List[{yiji[5 x - 4 / 3, y, 2 / 3, 1 / 2], yiji[5 x + 4 / 3, y, 2 / 3, 1 / 2]}];
nu[x_, y_, 1] := yiji[5 x, y, 2, 1 / 2]; nu[x_, y_, 2] :=
 List[{yiji[5 x - 4 / 3, y, 1 / 3, 1 / 4], yiji[5 x + 4 / 3, y, 1 / 3, 1 / 4]}];
yiji[x_, y_, a_, b_] :=
 Polygon[{{x - a, y + b, 0}, {x + a, y + b, 0}, {x + a, y - b, 0},
 {x - a, y - b, 0}, {x - a, y + b, 0}}]; Show[Graphics3D[{
mixmiyi[rany]}], ViewPoint -> {0, 0, 1}, Boxed -> False, Axes -> False]
```



- Graphics3D -

Fig. 4 : Random answer of Yijing with five of six levels reversing.

Different contemporary and traditional arrangements (Leyi, 1993 p.1; Hertzer, 1996) of the eight tri-grams or "bagua" produce lists or tables of "zhong bagua" or double-tri-grams. Asian readers are therefore invited to explore patterns made by neighbourhoodly lists of signed bagua .

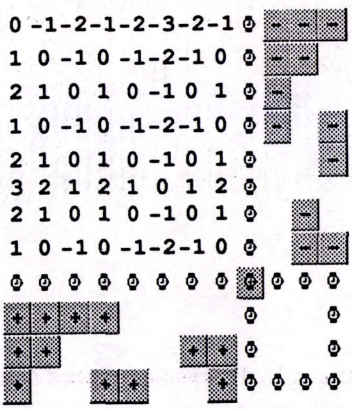
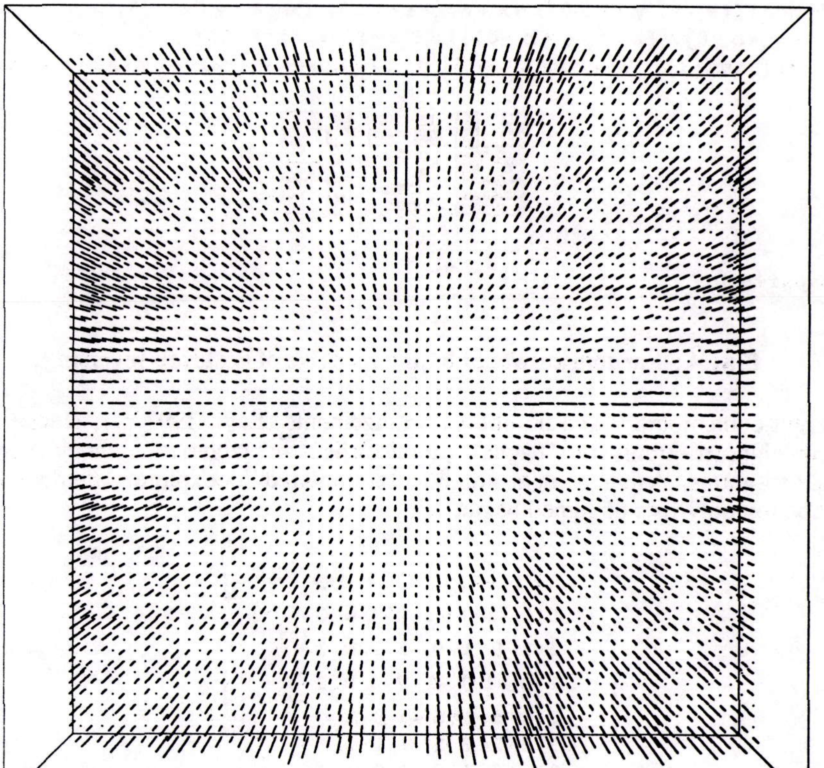


Fig. 5 : Stable answers of the Neighbourhood Yijing

The numeric order in this (Fig. 5) neighbourhood between neighbourhood indices will be defined below after a look (Fig. 6) on patterns of changes between signs in Yijing.

```
yiji := comGrayCode[{1, 1, 1, 1, 1, 1}]; yijing := Length[yiji];
Show[Graphics3D[Table[Line[{{x, y, 0}, {x, y,
      Outer[Plus, Table[Length[yiji[[n]]], {n, 1, yijing}], Table[
          -Length[yiji[[n]]], {n, 1, Length[yiji]}]][[x]][[y]]}}],
   {x, 1, yijing}, {y, 1, yijing}]],
 ViewPoint -> {0, 0, 1}]
```



- Graphics3D -

Fig. 6 : Yijing changes in 16 dimensional signed neighbourhood of 64 by 64

3.3.3 Related Traditions

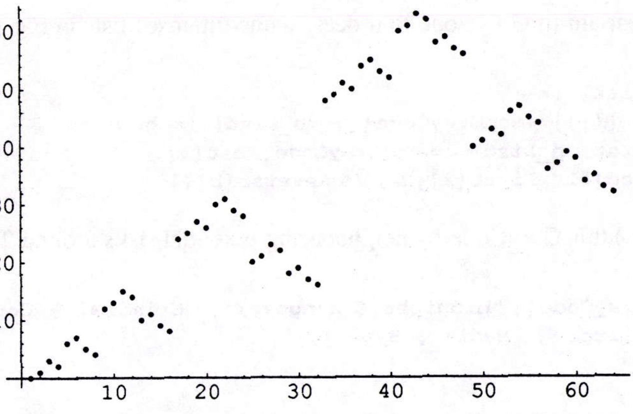
African tribes share some idea about reading four different bones or tokens in a circle with four marks. At least one report lists cases almost like modulo 4 (O'Neill, 1994). China found various similar forms. An astronomer's cube-readable calender based on 81 by 81 fields with a total of almost as many slots as there are days within two year (Walters, 1983).

4. GreyCode

The easiest way to get binary neighbourhoods is to call GreyCode in *Mathematica* 3.0 and give some strings or numbers to be mixed.

4.1 Classic GreyCode

```
claGrayCode[m_] := Nest[Join[#, Length[#] + Reverse[#]]&, {0}, m];
ListPlot[claGrayCode[6]]
```




```
- Graphics -
```

Fig. 7 : GreyCode Length

We query the interface for explanations of the function objects called in Fig. 7.

```
? Nest Join # Length Reverse & ListPlot
"Nest[f, expr, n]
    gives an expression with f applied n times to expr."
"Join[list1, list2, ... ] concatenates lists together. Join can be
    used on any set of expressions that have the same head."
"# represents the first argument supplied
    to a pure function. #n represents the nth argument."
"Length[expr] gives the number of elements in expr."
"Reverse[expr] reverses the order of the elements in expr."
"Function[body] or body& is a pure function. The formal parameters
    are # (or #1), #2, etc. Function[x, body] is a pure function
    with a single formal parameter x. Function[{x1, x2, ... },
    body] is a pure function with a list of formal parameters."
"ListPlot[{y1, y2, ... }] plots a list of values. The x
    coordinates for each point are taken to be 1, 2, ... .
    ListPlot[{{x1, y1}, {x2, y2}, ... }] plots a list of
    values with specified x and y coordinates."
```

4.2 Common GreyCode for 2000

We adopt another variant of GreyCode to process named itemsof lists in Fig. 8.

```
comGrayCode[a_List] :=
 comGrayCode[a, {{}}]; comGrayCode[{}, b_List] := b;
comGrayCode[a_List, b_List] := comGrayCode[Rest[a],
  Join[b, (Append[#1, First[a]] & ) /@ Reverse[b]]];
```

We illustrate (Fig. 8) this GreyCode by neighbouring potential risks around 2000.

```
MatrixForm[comGrayCode[{ "Midnight ☺ Hangover", "Criminal § Coup" ,
   "Deadlock ¬ Error" , "Media ☼ Hype"}]]
```

$$\left(\begin{array}{c}
\{\} \\
\{\text{Midnight 😱 Hangover}\} \\
\{\text{Midnight 😱 Hangover, Criminal § Coup}\} \\
\{\text{Criminal § Coup}\} \\
\{\text{Criminal § Coup, Deadlock} \neg \text{Error}\} \\
\{\text{Midnight 😱 Hangover, Criminal § Coup, Deadlock} \neg \text{Error}\} \\
\{\text{Midnight 😱 Hangover, Deadlock} \neg \text{Error}\} \\
\{\text{Deadlock} \neg \text{Error}\} \\
\{\text{Deadlock} \neg \text{Error, Media ⌽ Hype}\} \\
\{\text{Midnight 😱 Hangover, Deadlock} \neg \text{Error, Media ⌽ Hype}\} \\
\{\text{Midnight 😱 Hangover, Criminal § Coup, Deadlock} \neg \text{Error, Media ⌽ Hype}\} \\
\{\text{Criminal § Coup, Deadlock} \neg \text{Error, Media ⌽ Hype}\} \\
\{\text{Criminal § Coup, Media ⌽ Hype}\} \\
\{\text{Midnight 😱 Hangover, Criminal § Coup, Media ⌽ Hype}\} \\
\{\text{Midnight 😱 Hangover, Media ⌽ Hype}\} \\
\{\text{Media ⌽ Hype}\}
\end{array}\right)$$

Fig. 8: Risk 2000 Neighbourhood

The function uses these objects:

```
?Rest Join Append First Map MatrixForm
"Rest[expr] gives expr with the first element removed."
"Join[list1, list2, ... ] concatenates lists together. Join can be
    used on any set of expressions that have the same head."
"Append[expr, elem] gives expr with elem appended."
"First[expr] gives the first element in expr."
"Map[f, expr] or f /@ expr applies f to each element
    on the first level in expr. Map[f, expr, levelspec]
    applies f to parts of expr specified by levelspec."
"MatrixForm[list] prints with the elements of list arranged
    in a regular array."
```

Let us enfold neighbourlists (Fig. 8) as planar neighbourhood (Fig. 9).

```
TableForm[
 Outer["@", comGrayCode[{"😱", "¬"}], comGrayCode[{"§", "⌽"}], 1],
 TableHeadings -> {comGrayCode[{"😱", "¬"}], comGrayCode[{"§", "⌽"}]},
 TableSpacing -> 0]
```

	{}	{§}	{§, ⌚}	{⌚}
{}	@[{}, {}]	@[{}, {§}]	@[{}, {§, ⌚}]	@[{}, {⌚}]
{😱}	@[{😱}, {}]	@[{😱}, {§}]	@[{😱}, {§, ⌚}]	@[{😱}, {⌚}]
{😱, ¬}	@[{😱, ¬}, {}]	@[{😱, ¬}, {§}]	@[{😱, ¬}, {§, ⌚}]	@[{😱, ¬}, {⌚}]
{¬}	@[{¬}, {}]	@[{¬}, {§}]	@[{¬}, {§, ⌚}]	@[{¬}, {⌚}]

Fig. 9 : Neighbourhood plane between four dimensions of variable risk

4.3 GreyCode Hierarchy

The evolution of structure beyond three dimensions of index order can be animated with TreePlot.We jump from four (Fig. 10a) to six dimensions (Fig. 10.b).

```
<< DiscreteMath`Combinatorica`
<< DiscreteMath`Tree`
<< Graphics`Animation`
treetree[start_, stop_, steps_] :=
 Animate[{Graphics[Text[teil, {0, -1.5}]],
   TreePlot[MakeTree[GrayCode[Table[eins, {eins, 1, teil}]]]]},
  {teil, start, stop, steps}]
treetree[4, 6, 2]
```

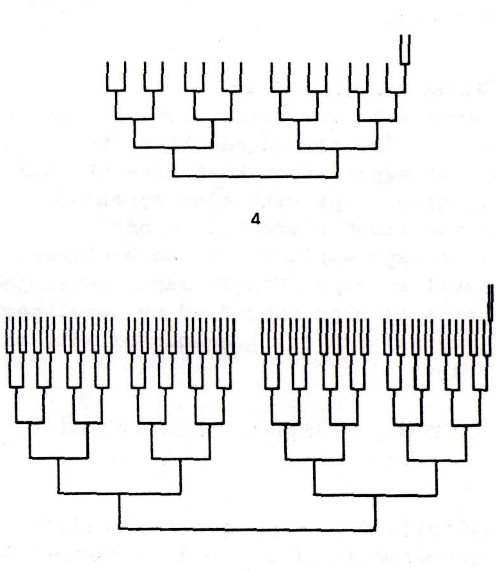


Fig. 10 ab : GrayCode of headings of columns for a table

4.4 GreyCode Zero Coast

Binary ramifications articulate patterns of zeros when subtracted from similar ramifications. Selected non binary ramifications are currently prototyped by the author.

```
<< DiscreteMath`Combinatorica`
TableForm[Outer[Plus, +Table[Length[GrayCode[{1, 1, 1}][[n]]],
     {n, 1, Length[GrayCode[{1, 1, 1}]]}],
   -Table[Length[GrayCode[{1, 1, 1}][[n]]],
     {n, 1, Length[GrayCode[{1, 1, 1}]]}]],
  TableHeadings ->
   { GrayCode[{"-", "-", "-"}], GrayCode[{"+", "+", "+"}]}]
```

	{}	{+}	{+, +}	{+}	{+, +}	{+, +, +}	{+, +}	{+}
{}	0	−1	−2	−1	−2	−3	−2	−1
{−}	1	0	−1	0	−1	−2	−1	0
{−, −}	2	1	0	1	0	−1	0	1
{−}	1	0	−1	0	−1	−2	−1	0
{−, −}	2	1	0	1	0	−1	0	1
{−, −, −}	3	2	1	2	1	0	1	2
{−, −}	2	1	0	1	0	−1	0	1
{−}	1	0	−1	0	−1	−2	−1	0

Fig. 11 : Please observe the neighbouring zeros

5 Experimental Evolution of Neighbourhood

Induction of neighbouring zero nets can be observed through computable generations.

```
<< DiscreteMath`Combinatorica`
<< Graphics`Animation`
len[n_] := Table[Length[GrayCode[Table[1^m, {m, 1, n}]][[o]]],
   {o, 1, Length[GrayCode[Table[1^m, {m, 1, n}]]]}];
gnout[n_] := Outer[Plus, len[n], -len[n]];
ep[hu_] := Table[{Text[gnout[hu][[x]][[y]],
    {x, y, 0}
    ]}, {x, 1, 2^hu}, {y, 1, 2^hu}];
click[mark_] := Animate[Graphics3D[
    Evaluate[ep[go]]],
   {go, 1, mark, 1}, Boxed -> False, ViewPoint -> {0, 0, 1}];
click[3]
```

```
-1 0
0  1
```

```
-1  0  1  0
-2 -1  0 -1
-1  0  1  0
 0  1  2  1
```

```
-1  0  1  0  1  2  1  0
-2 -1  0 -1  0  1  0 -1
-3 -2 -1 -2 -1  0 -1 -2
-2 -1  0 -1  0  1  0 -1
-1  0  1  0  1  2  1  0
-2 -1  0 -1  0  1  0 -1
-1  0  1  0  1  2  1  0
 0  1  2  1  2  3  2  1
```

Fig. 12 abc : Enfolding coastlines of zeros between positive and negative sums

6. Non Observation Σκολη School

The invariant evolution of zerocoasts in neighbourhoods might inspire more qualified readers to replace conventional hitlists of search engines with neighbourhood maps of available resources (Schreiber, 1996, pp. 899-904).

Others might want to implement landart neighbourhoods for cluster (Hasenauer et. al., 1994) participation in urban or rural locations (Schreiber, 1994, pp. 637-644; 1995 pp. 295-303).

6.1 Non Observation Dial

We know nothing about the effects of participative hypergrids yet. While it would be rather easy to prepare a hypergrid about Y2K or other combinations of issues it might be rather difficult to stage actual feedback about the names of the labels of fields.

Should this or that distinction be kept or altered? A quick way to explain the principle starts with an icon for a four fold watch.

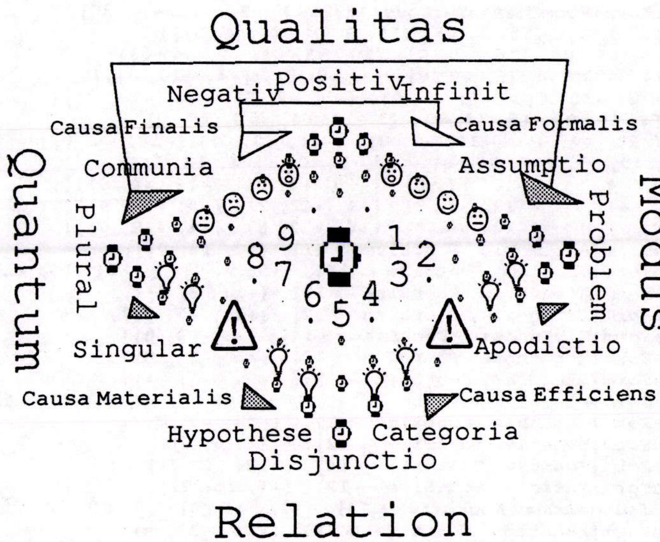


Fig. 13 : Landscape for workshop on non observation

```
spinShow[Graphics3D[{
Table[Text[StyleForm[FromCharacterCode[{63316}], FontSize -> 1 + Abs[x y]],
    {2 x, 2 y, 0}], {x, -4, 4, 1}, {y, -4, 4, 1}],
  Text[StyleForm[1, FontSize -> 18], {1, 3, 0}],
  Text[StyleForm[2, FontSize -> 18], {3, 3, 0}],
  Text[StyleForm[3, FontSize -> 18], {3, 1, 0}],
  Text[StyleForm[4, FontSize -> 18], {3, -1, 0}],
  Text[StyleForm[5, FontSize -> 18], {3, -3, 0}],
  Text[StyleForm[6, FontSize -> 18], {1, -3, 0}],
  Text[StyleForm[7, FontSize -> 18], {-1, -3, 0}],
  Text[StyleForm[8, FontSize -> 18], {-3, -3, 0}],
  Text[StyleForm[9, FontSize -> 18], {-3, -1, 0}],
  Text[StyleForm[FromCharacterCode[{9786}], FontSize -> 18], {-1, 7, 0}],
  Text[StyleForm[FromCharacterCode[{63266}], FontSize -> 18], {3, 7, 0}],
  Text[StyleForm[FromCharacterCode[{9785}], FontSize -> 18], {-7, 1, 0}],
  Text[StyleForm[FromCharacterCode[{63265}], FontSize -> 18], {-7, 3, 0}],
  Text[StyleForm[FromCharacterCode[{9786}], FontSize -> 18], {1, 7, 0}],
  Text[StyleForm[FromCharacterCode[{63266}], FontSize -> 18], {-7, -3, 0}],
  Text[StyleForm[FromCharacterCode[{9785}], FontSize -> 18], {-7, -1, 0}],
  Text[StyleForm[FromCharacterCode[{63265}], FontSize -> 18], {-3, 7, 0}],
  Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {7, 5, 0}],
  Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {7, 3, 0}],
```

```
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {7, -3, 0}],
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {7, -5, 0}],
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {5, -7, 0}],
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {3, -7, 0}],
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {-3, -7, 0}],
    Text[StyleForm[FromCharacterCode[{63267}], FontSize -> 18], {-5, -7, 0}],
    Text[StyleForm[FromCharacterCode[{63316}], FontSize -> 36], {0, 0, 0}],
    Text[StyleForm[FromCharacterCode[{63269}], FontSize -> 36], {0, -7, 0}],
    Text[StyleForm[FromCharacterCode[{63269}], FontSize -> 36], {+7, 0, 0}],
    Polygon[{{9, 4, 0}, {10, 5, 0}, {10, 3, 0}, {9, 4, 0}}],
    Polygon[{{9, -4, 0}, {10, -5, 0}, {10, -3, 0}, {9, -4, 0}}],
    Polygon[{{4, -10, 0}, {5, -9, 0}, {3, -9, 0}, {+4, -10, 0}}],
    Polygon[{{-4, -10, 0}, {-5, -9, 0}, {-3, -9, 0}, {-4, -10, 0}}],
    Polygon[{{4, 10, 0}, {6, 12, 0}, {2, 12, 0}, {+4, 10, 0}}],
    Polygon[{{-12, -4, 0}, {-10, -6, 0}, {-10, -2, 0}, {-12, -4, 0}}],
    Line[{{-4, 10, 0}, {-6, 12, 0}, {-2, 12, 0}, {-4, 10, 0}}],
    Line[{{-12, +4, 0}, {-10, +6, 0}, {-10, +2, 0}, {-12, +4, 0}}],
    Line[{{-12, +4, 0}, {-12, +4, 2}, {-4, +12, 2}, {-4, +12, 0}}],
    Line[{{-12, -4, 0}, {-12, -4, 8}, {+4, +12, 8}, {+4, +12, 0}}],
    Text[StyleForm[Assumptio, FontSize -> 12], {+2, 13, 0}],
    Text[StyleForm[Problem, FontSize -> 14], {+9, 9, 0}, {0, 0}, {0, -1}],
    Text[StyleForm[Apodictio, FontSize -> 12], {+11, 2, 0}],
    Text[StyleForm[Categoria, FontSize -> 12], {+11, -5, 0}],
    Text[StyleForm[Disjunctio, FontSize -> 14], {+9, -9, 0}],
    Text[StyleForm[Hypothese, FontSize -> 12], {+5, -11, 0}],
    Text[StyleForm[Singular, FontSize -> 12], {-2, -11, 0}],
    Text[StyleForm[Plural, FontSize -> 14], {-9, -9, 0}, {0, 0}, {0, -1}],
    Text[StyleForm[Communia, FontSize -> 12], {-13, -2, 0}],
    Text[StyleForm[Negativ, FontSize -> 12], {-16, 6, 0}],
    Text[StyleForm[Positiv, FontSize -> 14], {-12, 12, 0}],
    Text[StyleForm[Infinit, FontSize -> 12], {-6, 16, 0}],
     Text[StyleForm[Modus, FontSize -> 24], {+11, 11, 0}, {0, 0}, {0, -1}],
    Text[StyleForm[Relation, FontSize -> 24], {+11, -11, 0}],
    Text[StyleForm[Quantum, FontSize -> 24], {-11, -11, 0}, {0, 0}, {0, -1}],
    Text[StyleForm[Qualitas, FontSize -> 24], {-17, 17, 0}],
    Text[StyleForm[ Causa Formalis, FontSize -> 10], {0, 17, 0}],
    Text[StyleForm[Causa Efficiens, FontSize -> 10], {+13, 0, 0}],
    Text[StyleForm[ Causa Materialis, FontSize -> 10], {-0, -13, 0}],
    Text[StyleForm[ Causa Finalis, FontSize -> 10], {-17, 0, 0}]
}], Boxed -> False, ViewPoint -> {1, -1, 1}]
```

6.2 Terminologic Interfaces

Would there be anyone interested in statements like: "Nothing can have neither start nor end. This indivisible core gets the four zones meeting where the big and small hands turn. The other twelve names of hours absorb Kantian (1877) transcendentals of spatio-temporal inquiry – first quarter modus: assuming, possible, contradictory? second quarter relation: word, class, test? third quarter quantity: one, many, none? fourth quarter quality: non, is, infint? – and give the remainder needed to mark sixteen fields of fourfold binary distinction.The four types of causes – formally free, enery driven, material attracted and finally fitted – according to Aristotele (Riedl, 1985, pp.88ff.) might be positioned at the dividing lines between genetically possible observation and affected (Kernberg, 1963, 1976) non-observation. Freudian (1912) phratrie distinctions might be related to the two ways of interaction between what is never and what is always observable, one is erotic modus the other is able to de-identify."

6.2 Watch Explanation

All historic names are avoided for short explanations. Two of the four dimensions are used already by our distinctions about spatio-temporal links to past and future. The second pair of labels might distinguish between observation or non-observation of such links. – But you are likely to relate such concepts to your own terminology. The formal schema might still help you to crystallize your set of operational distinctions.

6.3 Custom Names

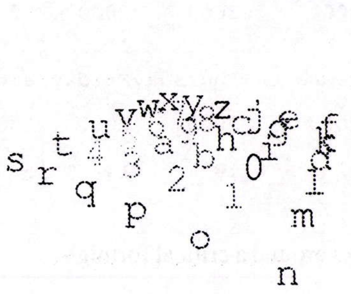
Just run this with your starting order of zero to 35 and get a custom version of an indexed dial of partial self observation.

```
<< Graphics`Animation`

                16 21 14 22 23 24
                15 17 19  1  2 25
                20 13 18 12  3 26
way = Flatten[   0  9 10 11  4 27 ];
                35  8  7  6  5 28
                34 33 32 31 30 29

steep[go_] := Table[
  {Hue[1 / (1 + Mod[(way[[((6 * (5 - y)) + x + 1)]] + (36 - go)), 36])], Text[
    StyleForm[StringTake[ToString[
       BaseForm[Mod[(way[[((6 * (5 - y)) + x + 1)]] + (36 - go)), 36]
         , 36]], 1],
      FontSlant -> "Italic", FontSize -> 18, FontWeight -> "Bold"],
    {x, y, 0}]}, {x, 0, 5}, {y, 0, 5}];
clip[cut_] := Animate[Graphics3D[steep[go]], {go, 1, cut, 1},
  Boxed -> False, ViewPoint -> {Sin[go * Pi / cut], Cos[go * Pi / cut],
    (Cos[go * Pi / cut] * Sin[go * Pi / cut])}];

clip[3]
```



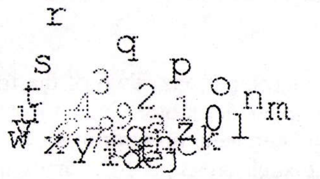


Fig. 14 ab : Function and animtion sequence for short names base 36.

7. Conclusion

```
<< Miscellaneous`Calendar`

fortnight´n´weeks[a_, b_] := TableForm[Partition[
   Partition[Flatten[Table[{DayOfWeek[DaysPlus[{1999, 12, 31}, n]],
       StringDrop[ToString[DaysPlus[{1999, 12, 31}, n][[1]]], 2],
       DaysPlus[{1999, 12, 31}, n]}, {n, -5 - 7 a, 8 + 7 b}]], 5],
   7],
  TableSpacing -> 0]
fortnight´n´weeks[1, 1]
```

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
99	99	99	99	99	99	99
1999	1999	1999	1999	1999	1999	1999
12	12	12	12	12	12	12
19	20	21	22	23	24	25
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
99	99	99	99	99	99	00
1999	1999	1999	1999	1999	1999	2000
12	12	12	12	12	12	1
26	27	28	29	30	31	1
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
00	00	00	00	00	00	00
2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1
2	3	4	5	6	7	8
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
00	00	00	00	00	00	00
2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1
9	10	11	12	13	14	15

Fig. 15 : Weeks around a critical fortnight.

I hope we will soon see that current evaluations of assets can be sustained around a historic weekend window of opportunity for adverse speculation and obstruction.

```
MatrixForm[Table[{"1 at rate =", i 100, "% = 2^64 in",
  NSolve[{(1 + i)^n == 2^64}, {n}], "years"},
 {i, 1/100, 1/2, 1/25}]]
```

1 at rate =	1	% =	2^{64}	in	{{n → 4458.29}}	years
1 at rate =	5	% =	2^{64}	in	{{n → 909.229}}	years
1 at rate =	9	% =	2^{64}	in	{{n → 514.767}}	years
1 at rate =	13	% =	2^{64}	in	{{n → 362.971}}	years
1 at rate =	17	% =	2^{64}	in	{{n → 282.55}}	years
1 at rate =	21	% =	2^{64}	in	{{n → 232.721}}	years
1 at rate =	25	% =	2^{64}	in	{{n → 198.802}}	years
1 at rate =	29	% =	2^{64}	in	{{n → 174.211}}	years
1 at rate =	33	% =	2^{64}	in	{{n → 155.556}}	years
1 at rate =	37	% =	2^{64}	in	{{n → 140.915}}	years
1 at rate =	41	% =	2^{64}	in	{{n → 129.112}}	years
1 at rate =	45	% =	2^{64}	in	{{n → 119.391}}	years
1 at rate =	49	% =	2^{64}	in	{{n → 111.244}}	years

Fig. 16: Sustainable interest (2^64 = 18446744073709551616)

Some might hedge their derivative or immovable portfolios and organize participative hypergrids to excavate zones which are partially observed by relaunchable prototypes of Aristotele´s leisure including 'politica' ideal of school as 'skole' or "Σχολη".

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