Nesting Graycodes of Binary and Primary Ramification Maps for Eurasian and African Mediators

Michael F. Schreiber
Wirtschaftsuniversität WU
Marketing
Augasse 2, Vienna,
A-1090 Austria, EU
Fax: +43–1–31336–732
Email: Michael@Schreiber.at
www.wu-wien.ac.at/marketing

Abstract

An introduction to an old system of distinction prepares for a Marketing minded discussion of low tech environments for participation. The goal is to define a common ground for alienated groups of actors who believe for instance in incompatible oracles. Productions of oracles from China and Africa are reconstructed as positions on gray maps. We propose to market large scale installations of this tool as landart for participation. We do not assume local availability of hard- or software.

Keywords: Landart, Marketing, Oracle, Participation, Tradition

1 Introduction

Participation and oracles are topics which might provoke speculative reactions. Please let me try to avoid fundamental misunderstanding by proposing sceptical attitudes towards gray forms for direct participation and traditional oracles.

Grays just map distinctions which may represent something important or not. Landart (Werkner) grays have not been tested yet; Gray "Walk-Ins" or "Drive-Ins" might be able to support selforganization of participation among peaceful ladies and gentlemen or not. But even if this should be demonstrable in some cases such gray maps would still be nothing more than tools. Gray forms for participative interaction are no substi-

tutes for democratic institutions. Grays do not provide representative legitimation for decisions.

This critical attitude towards gray forms of direct participation is matched by a pragmatic posture concerning the traditions quoted. Gray reconstruction of traditional oracles hopes to accelerate diffusion of gray maps in some regions; but productions of such oracles are not interpreted as true anticipations of future events. The text does not want to present a dogmatic unification of traditions but wants to share a flexible point of view.

2 Problem of Low Tech Mediation For Peaceful but Alienated Groups

The goal of this presentation is to make the formal idea behind gray maps more accessible to those who are not familiar with computing in general and graycoding in particular. It will be shown that it is possible to relate productions of some traditional oracles to powersets and graycoding. We shall not discuss this coincidence but will use it to imagine an environment for participation of large groups of actors who disagree with the critical attitude of mediators and do believe in productions of incompatible oracles. This means that we shall not discuss mediation during negotiations of representatives; we want to support the individual members of the alienated groups and we want to give them the power to customize this generic environment.

3 Positional Counting and Graycoding

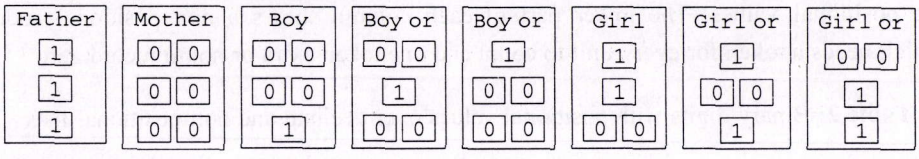
This section offers a chance to learn how gray lists of distinctions. Some groups might have explicit lists of statements which they expect their members to believe. In other cases we will have to define appropriate statements. The idea is – step one – to gray the original groups into subgroups which believe in all, some or none of the listed ideas and then – step two – to reunite these groups across the original frontline. The third step might be to select common names for some levels of row or column headings.

3.1 Family Values of Distinction

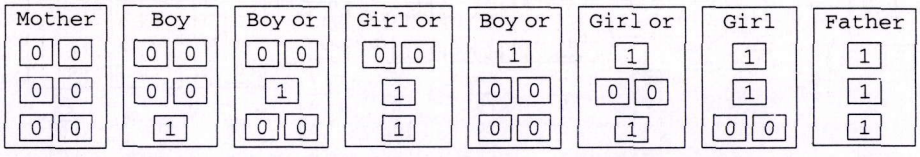
The basic distinction between Yin and Yang is attributed to Fu Shi who ruled China about 4800 years ago (Webster´s p.1451). The Yijing oracle produces two original and two changed coordinates each consisting of three such distinctions. The coordinates lead to poetic recommendations; but we will not discuss a special tradition of ethical positions here. We just look at the basic pattern within the axes of this ancient coordination. Columns and rows are remembered as families. Each family consists of eight persons: father, mother, three sons and daughters. We do not know which of the traditional orderings is the oldest (Hertzer). The translated tradition (Wilhelm, 254ff.) prefers to group for maximum differences between neighbouring members of the family. We support a simple mathematical order here which tries the opposite general approach of sequencing. Graycoding orders for single differences between nested neighbourhoods of relationship like in the lowest row of Table 1.

Table 1: Traditional, binary count and gray order of the family (or refers to older order)

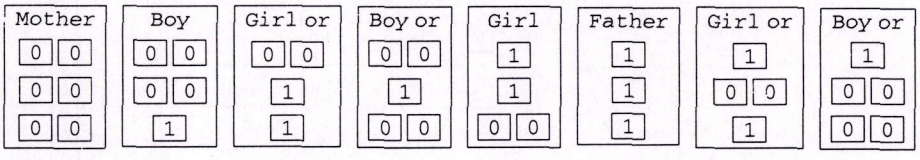
A Traditional Yijing Family



Binary Counting



Binary Graycoding



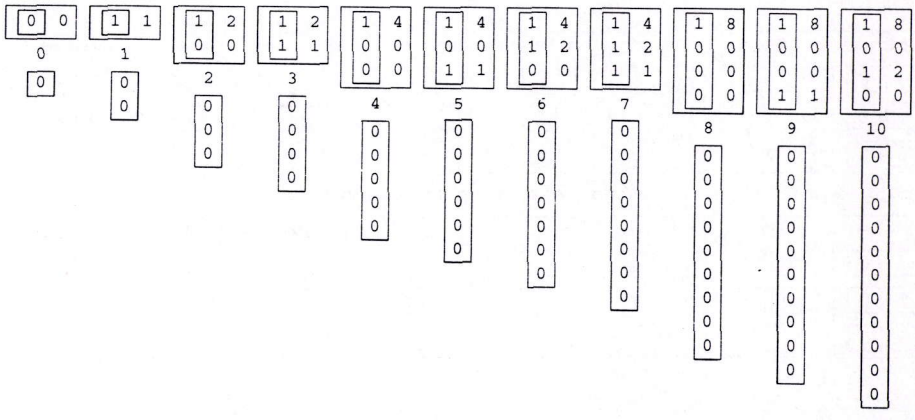
3.2 Numeric Profiles for Alienated but Peaceful Actors

We shall use lists of numbers to define profiles of actors but we will interpret them as keys to seperate levels of distinctions identified by the position of the number in the profile. Each position in the list {0,1,0} can represent a different belief which might be shared {1} or not {0} by an actor. Zero represents no identification. Numbers bigger than one might be used to represent degrees of differences if we know how to use graycodes of appropriate bases. Graycoding such numbers leads to a particular arrangement of profiles which might be useful in managing the spatial distribution of actors according to their differences in opinion.

3.2.1 Based Counting and Necessary Degrees of Ramification for De-Alienation

Positional counting reads positions as powers of the base which are multiplied with the value of the digit like in the binary case which is presented in Table 2. The upper part shows boxes containing other boxes of binary digits. Right next to the binary digits there are the positional values of these binary ones. Under every box there is the sum of the positional values. The lower part of each column shows a non positional code which needs a token for every unit to count and one token extra or not to record zero.

Table 2: Binary digits with positional values over decimal and non-positional lists



We may use this relation – or the based logarithm – to estimate the minimum length of the list of separations needed to dispatch groups of different sizes into subgroups of similar magnitude. Four binary distinctions might pair a group of 32, but three might be

enough for a group of sixteen. Some distinctions will interact thus leaving clouds of actors which are united and not seperated by characteristic profiles of internalized identifications.

3.2.2 Graying Based Distinctions

Bigger groups need more variations of distinctions which are thus harder to order in an intuitive way. Such an intuitive and practical order might be provided by graycoding all the variations of some of the identifications expected in our alienated groups.

Table 3: Binary above decimal counting with binary gray given below

```
0000000000000000000000000000000011111111111111111111111111111111
0000000000000000111111111111111100000000000000001111111111111111
0000000011111111000000001111111100000000111111110000000011111111
0000111100001111000011110000111100001111000011110000111100001111
0011001100110011001100110011001100110011001100110011001100110011
0101010101010101010101010101010101010101010101010101010101010101

0000000000011111111112222222222333333333344444444445555555555666
0123456789012345678901234567890123456789012345678901234567890123

0000000000000000000000000000000011111111111111111111111111111111
0000000000000000111111111111111111111111111111111100000000000000
0000000011111111111111110000000000000000111111111111111100000000
0000111111110000000011111111000000001111111100000000111111110000
0011110000111100001111000011110000111100001111000011110000111100
0110011001100110011001100110011001100110011001100110011001100110
```

Please compare the top parts of Tables 3 and 4. The upper part of Table 3 shows how to list all possible variations of features while counting to a sequence consisting only of ones. Table 4 shows another socalled powerset while counting to a form consisting only of twos. The lower parts of Tables 3 and 4 show graycode orders by giving gray-code values of the above decimal and based numbers. Neighbouring numbers are recorded by changing one digit only. This condition characterizes every graycode by definition (Hamming).

Table 4: Ternary above decimal counting with ternary gray given below

```
000000000000000000000000001111111111111111111111111122222222222222222222222222
000000000111111111222222220000000001111111112222222220000000001111111122222222
000111222000111222000111222000111222000111222000111222000111222000111222000111
012012012012012012012012012012012012012012012012012012012012012012012012012012

000000000011111111112222222222333333333344444444445555555556666666666777777778
012345678901234567890123456789012345678901234567890123456789012345678901234567890

000000000000000000000000001111111111111111111111111122222222222222222222222222
000000000111111111222222222222222221111111110000000000000000001111111122222222
000111222222111000000111222222111000000111222222111000000111222222111000000111222
012210012210012210012210012210012210012210012210012210012210012210012210012210012
```

3.2.3 Simple Gray Maps for Africa, India or China

You may have recognized the longer runs of similar numbers which appeared in the ruler like forms shown in Tables 3 and 4. You can use this typical feature to draw outlines of your graycode rulers by hand quickly.

We now use pairs of rulers to define tabulations of profiles. In India we might use binary rulers in order to get a background courting their chess as shown in Table 5a.

Table 5ab: Columns and rows ruled by binary (a) and ternary gray (b)

0 0	1 0	11 0	10 0	110 0	111 0	101 0	100 0
0 1	1 1	11 1	10 1	110 1	111 1	101 1	100 1
0 11	1 11	11 11	10 11	110 11	111 11	101 11	100 11
0 10	1 10	11 10	10 10	110 10	111 10	101 10	100 10
0 110	1 110	11 110	10 110	110 110	111 110	101 110	100 110
0 111	1 111	11 111	10 111	110 111	111 111	101 111	100 111
0 101	1 101	11 101	10 101	110 101	111 101	101 101	100 101
0 100	1 100	11 100	10 100	110 100	111 100	101 100	100 100

0 0	1 0	2 0	12 0	11 0	10 0	20 0	21 0	22 0
0 1	1 1	2 1	12 1	11 1	10 1	20 1	21 1	22 1
0 2	1 2	2 2	12 2	11 2	10 2	20 2	21 2	22 2
0 12	1 12	2 12	12 12	11 12	10 12	20 12	21 12	22 12
0 11	1 11	2 11	12 11	11 11	10 11	20 11	21 11	22 11
0 10	1 10	2 10	12 10	11 10	10 10	20 10	21 10	22 10
0 20	1 20	2 20	12 20	11 20	10 20	20 20	21 20	22 20
0 21	1 21	2 21	12 21	11 21	10 21	20 21	21 21	22 21
0 22	1 22	2 22	12 22	11 22	10 22	20 22	21 22	22 22

In China we might use the same schema – as this fits with the productions of the ancient Yijing oracle – or we could gray by base three as in Table 5b to fit the background of chess used in China and another oracle known for 2000 years (Walters).

In the south of Africa the ternary version might fit the throwing of four bones, into a trisected map. This oracle is called Bula (O'Neill) and it produces sequences in a ternary base. We need no extra table to gray it too (Table 5b).

3.3 Keystone Grays for Africa, India and China

A keystone is the wedge which crowns a portal by depending on stones associated to opposite sides of a passage. A keystone gray unites two gray rulers in the same way.

Table 6 grays three binary and two ternary features – which might be of interest to the participants or not – thus leading them to different points on the map or not. This

means that only the columns correspond to a gray reordering of a typical Yijing production (Table 5a), but the rows match a tabulation of a typical Bula production (Table 5b).

Table 6: Columns headed by binary gray and rows ruled by ternary gray

0 0	1 0	11 0	10 0	110 0	111 0	101 0	100 0
0 1	1 1	11 1	10 1	110 1	111 1	101 1	100 1
0 2	1 2	11 2	10 2	110 2	111 2	101 2	100 2
0 12	1 12	11 12	10 12	110 12	111 12	101 12	100 12
0 11	1 11	11 11	10 11	110 11	111 11	101 11	100 11
0 10	1 10	11 10	10 10	110 10	111 10	101 10	100 10
0 20	1 20	11 20	10 20	110 20	111 20	101 20	100 20
0 21	1 21	11 21	10 21	110 21	111 21	101 21	100 21
0 22	1 22	11 22	10 22	110 22	111 22	101 22	100 22

A complete keygray for binary and ternary oracles lets the lower ruler of Table 3 rule the 64 binary columns and lets the lower ruler of Table 4 rule the 81 ternary rows of a common gray map

The legend recalls "the" lost "great" oracle "Ta Pu", our reconstruction might want to feature changes of changes too and thus would need 4096 binary columns and 6561 ternary rows.

4 Marketing Gray Landart for Participation

A convenient fallback position for failing experiments in participation is to reclaim any gray coordination of natural space as part of a system of custumized landart installations (Werkner). The actual symbols, colours, conventions are not defined – artistic mediation can enact avantgarde or tradition or try a mix. This section just offers some additional conceptual background for practical efforts to produce not only landart.

Just replace the numbers with a mix of popular issues. Do you think you might eventually be able to rent this landart playground to others? Who would want to gray proper terminology or propaganda names to mediate alienation in public or privacy?

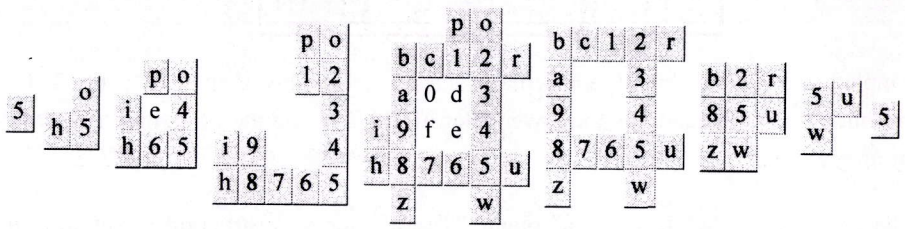
4.1 Customization

Point zero of a gray map is where you want it. You may invite other persons by telling your guests how you expect the positions to be read. Depending on your background and audience you might offer basic orientation to support traditional systems or not. Design and operation are likely to cost more if you want flexible rulers and information in every cell of the grid.

4.2 Watching Names

A gray installation could accomodate almost all types of issues, not only conventions of various oracles but also entirely different types of positional ramification. Just replace numbers by names of distinctions.

Table 7: Fourfold dial around nothing between unknown abc and natural interfaces



We propose to classify arbitrary names of columns and rows with the fourfold dial from Table 7. Some references are then interpreted as critical {w, u, r, z} effects – with natural input {r, u} and/or natural output {w, z} – in Table 7 the hours {1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c} are critical whereas the center {0, d, e, f} is not critical. Other references might be considered as consciously speculative {h, i, p, o} effects – with observed prejudice operation {p, o} and/or hypothetical identification {h, i} – in Table 7 three quarters of the hours {1, 2, 3, 4, 5, 6, 7, 8, 9} and of the center {d, e, f} are consciously speculative whereas zero {0} and the rest of the hours {a, b, c} are not accessible to conscious speculation without an outside point of view; defined for example by our dial.

Some names might refer to actions which do not happen in critical time {0, d, e, f}; others might be used without being aware of their potential identification with other more or less alienating distinctions {0, a, b, c} (Freud, Kernberg).

5 Limited Comprehension, Interference, Stretching

How many distinctions can be installed? You may calculate the length of a column or row coordinate axis by choosing a base and then taking it´s power with the exponent given as the desired number of based distinctions. Eight distinctions base three need 3^8=6561 intervals on the axis. But you could map ten items base two with a shorter axis. 2^10=1024. The success of a gray might not depend on the level of resolution, we might find that nontraditional mixing of bases is better or not. In the end the actual fit between the distinctions mapped on the one side and the audiences invited on the other side is likely to be the most important success factor besides the location of the grid.

Signed perception of grays may distort attractions of columns and rows thus creating percolating zones of increased or decreased attraction and emotionality like in Fig. 1abc which presents differences of grays defined by different bases and sizes .

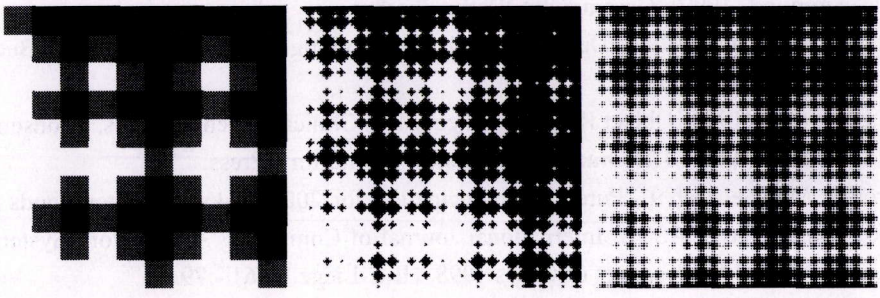


Fig.1abc: Three grays (a: 10 * 10 base 2; b: 100 * 100 base 3; c: 1 000 * 1 000 base 5)

More complex installations could mix bases within column coordinates like in Fig.2 or do the same with row and height coordinates to get strange spaces, which do not fit within the non computing environment assumed here.

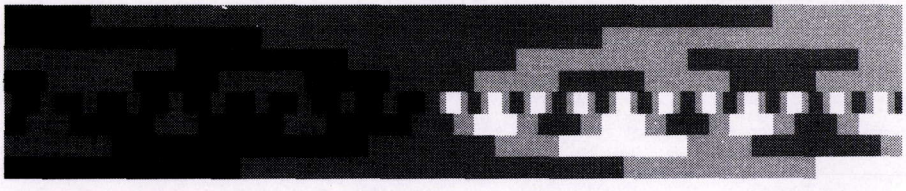


Fig. 2: Signed shades of column coordinates nesting 2 and 3 based columns

6 Conclusion

People without computers and without access to the web require other forms of mediation. On our left side we wanted to support the persons themselves even if our grays might support negotiations of representatives as well; but on our right side grays have not been designed to compete with democratic procedures of legitimation. A natural space structured with sceptical interpretations of old oracles was presented as a candidate for a marketable environment offering immediate intermediate mediation of participation by definition. Landart would be the minimum result if we made a gray. Grays have not been tested yet and might provoke unintended effects by supporting selforganization of participants.

References

Freud, Sigmund (1999). Gesammelte Werke. Fischer.

Hertzer, Dominique (1996), Das alte und das neue Yijing. Die Wandlungen des Buchs der Wandlungen. Diederichs.

Kernberg, Otto (1976) Object Relations Theory and Clinical Psychoanalysis. Aronson.

O´Neill Claire (1994), The Oracle of the Bones. St. Martin´s Press.

Schreiber Michael (1999), Pure Hyperanticipation for 2000 Risky Neighbourhoods. in Dubois Daniel (ed) CASYS, International Journal of Computing Anticipatory Systems, Volume 4, Partial Proceedings of Casys 1998, HEC-Liége, p. 61 - 79.

Walters Derek (1983), The Alternative I Ching. Aquarian Press.

Webster´s Encyclopedic Dictionary (1994). Könemann.

Werkner, Patrick (1992) Landart USA. Prestel.