There is a further derivation. If synenergy basically consists of a flow of infocap, its dimensional structure can be represented as that of infocap divided by time. In other words, if we can find units for infocap, a value for synenergy will be given in number of infocap units moving in unit time.

A useful comparison is with electricity, where everyone is familiar with the term kilowatt. A kilowatt is a measure of power, which has the dimensions of energy per unit time, so that a kilowatt is equivalent to one kilojoule per second. Of course a kilojoule is a measure of energy, we may find a food described as having '200 kilojoules per 100 gram portion'.

So synenergy is to infocap, as power is to energy. We may as well mark this with a formal proposition:

Proposition 106B*. Synenergy has the units of infocap flow per unit time

The dimensional structure also implies that types of infocap are interconvertible, just as for synenergy:

Proposition 106C. All forms of infocap are theoretically capable of interconversion***

There is nothing particularly controversial in all this. All forms of energy have the same dimensions, and we are very familiar with the conversion of one form of energy into another, such as rotational energy turning into heat in an electric drill bit, or chemical energy turning into electrical energy in a car battery.

Conservation and Other Properties

There is another dimensional property we are familiar with. Entities with the same dimensional structure normally have the same general properties. One such property is called conservation.

In this sense, conservation means whether the entity can be created and destroyed or not. In the familiar world, energy is conserved. One form of energy may be converted into another, but can't be created from nothing, nor can it be destroyed. Sometimes it is hard to work out where the energy went to, but proper measurements will always reveal its destination and the fact that the total energy is unchanged.

Mass is another entity which we usually regard as conserved. In fact the famous Einstein equation describes how mass may be converted into energy, and vice versa, so this is not strictly true. Even so, in the atomic reactions where the equation applies, the total of mass plus energy *is* conserved.

Other scientific entities are not conserved. One such is 'entropy', essentially a measure of the randomness, or perhaps the degree of structuring of a body. The entropy of the Universe as a whole is supposed to be continually increasing as it 'runs down'.

As it happens, entropy has the same dimensions as information, in the scientific sense. And in Matrix Thinking, information is just one form of infocap. This leads naturally to the next proposition:

Proposition 106D**. Neither infocap nor synenergy are conserved

This is a simple and obvious feature of the real world, for which readers will be able to supply many examples from their own experience. Nevertheless, its generality is not generally appreciated. We will often see the implications of this proposition appearing later in this book.

Love Makes the World Go Round

Any satisfactory theory of how human society operates will need to address the question of motivation, the question of What Makes Things Happen. It seems to me reasonable that if all these motivational forces can be lumped together under one heading, that heading can be called synenergy.

Proposition 106E. Synenergy flow is the major need and desire of all human-based systons***

Think about it. The need for money and the desire for love, attention, and interaction with others are acknowledged as fundamental forces in human life. All these things have been classed together here under the heading of synenergy. I have suggested that synenergy is more or less the 'life force' of systons, and that its essence is the transfer of infocap.

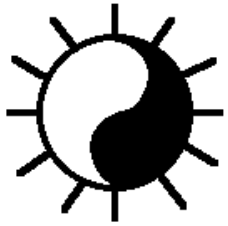
But don't think about it too much. Instead, treat it as a true working proposition, and see how well the implications of this proposition lead to a valid model of society, as we move on to develop this model in the rest of this work. The proposition doesn't actually need to have an established logical justification, it only needs to give a good basis for analyzing the world — or at least a better one than anything else around so far.

Time to Relax

It's only the sixth chapter, and already we have got through all the basic theoretical stuff in this book, everything is downhill from now on. But watch out for a few crevasses on the way down.

So we can move on now, to look at how the different parts of a syston fit together and work together — and how it can break down if this doesn't happen.

Chapter 107



JACK SPRAT COULD EAT NO FAT — Systel Allocation

Jack Sprat could eat no Fat
His Wife could eat no Lean
And so between the two of them
They licked the platter clean

— Old Nursery Rhyme

A Woman's Place is in the Home

There can be few phrases more likely to annoy 'the modern woman' than that just quoted, and perhaps with reason. But before just dismissing it as a shining example of male chauvinism, let us look at the situation, and others like it, from the viewpoint of Matrix Thinking. At the same time we can try to work towards one of the general goals of this book, to develop more of the Unified Theory which can be applied to all systons.

In the present case, the syston involved is clearly that of the Family. The archetypical family syston is made up of a Mother and a Father, often contracted together in an arrangement called Marriage, and a number of Children. Of course there are often others involved, with aunts, grandparents, and perhaps in-laws, but these are part of a wider syston called the Extended Family. For the moment we are only concerned with a very simple unit, the basic Family.

Working Together

In the nursery rhyme quoted at the head of this chapter, we have an example of successful Systel Allocation — the division of activities going on within a syston between the components or elements of that syston, the systels.

That may be a fancy explanation for an obvious fact, but it it really so obvious? Do we really take into account the real situation in a smooth-running syston, or do we tend to apply

one of two extreme models to all systons? I suggest that the latter applies.

One extreme model is that of the 'Management Tree'. At the head of the Tree is the Boss. Under the Boss work a number of subordinate or deputy bosses, and under them are people occupying progressively more and more lowly positions until finally the lowest level of people is reached, those who have no-one working under them.

This model is, even now, often still applied to the Family. On the Australian Census forms, until recently there was a space to write in the name of the 'Head of Family' (now it says 'Person 1'). And, of course, in bigger and more complex systons, the Management Tree model is the norm — and there it is a quite reasonable model.

The other extreme is the 'Everybody's Equal' model. This is the model which is most often applied to such things as electoral systems — One Vote, One Value — and there, again, it is quite a reasonable model.

These are the extremes. In Matrix Thinking, it can perhaps be said that there are no extremes, instead everything is a composite, a smear, across a spectrum where 'extremes' are only arbitrary points towards the ends of the spectrums. We can take this reasoning further to derive a useful result which cannot follow from any linear or highly-polarized view.

That result is the suggestion that any grouping in human society operates better, to produce more 'well-being' among its members, if they work in a complementary fashion, with division of tasks among them as well as between them.

Proposition 107A**. A syston improves its well-being when its components act cooperatively and in complementary fashion rather than when all tasks are equally shared

This is perhaps not a very profound suggestion. But it is a fundamental one in what follows.

The Battle of the Sexes

The Battle of the Sexes has been perhaps the longest-running and most bloody of all the battles in which human societies have engaged. This battle has been in a particularly active condition for most of the Twentieth Century, with the early campaigns for Votes for Women, the rise of Women's Lib in the 50's and 60's, and the subsequent adoption of Equal Pay for women.

Nowadays I suspect most people would accept that the majority of these campaigns have been won, by women, and we are left with tidying up the finer aspects of such things as Equal Opportunity and Sexual Harassment legislation. Of course there will still be some women who will cry "Not So!", and who will point to the "massive change in social attitudes which is still needed before true equality can be gained".

Then, at a deeper level, there will be those who ponder whether it was all worth while, whether the Victories Gained were Pyrrhic ones which really have not left women better off in the long run. Whether the campaign to develop the New Male, sensitive, caring, and communicative, sharing equally in everything that goes on, is really the ultimate battle. Whether when this ultimate battle is won, women everywhere will henceforth be happy, relaxed, and contented with the world.

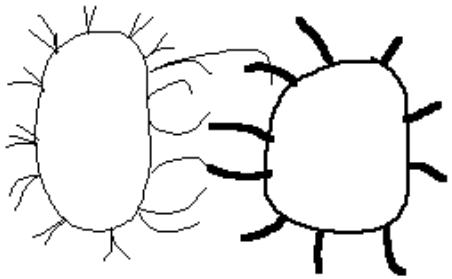


Fig. 107.1. The Battle of the Sexes

It seems to me that there are two distinct aspects to the matter. One is the aspect of Equality of Opportunity; the other is that of Division of Labour. Let us now go into this a little more deeply.

Equality of Opportunity

Here is an area where Matrix Thinking will not lead to a view which diverges very much at all from that commonly accepted. On a broad view, any artificial restriction on the actions of particular people or systels (triggered solely by one of their characteristics) will reduce infocap flow and hence synenergy. Thus if the aim is to maximize synenergy in their wider syston, such restrictions are undesirable.

If the characteristic involved in itself places a limitation on the action, then that's life, and the restriction involved is not artificial. There is a basic physical characteristic which hinders men from giving birth, so they are not being denied anything in this. If women are denied the opportunity to enlist for active service in an army, where they may be put in a situation of needing to kill other soldiers, then that is artificial, and on a preliminary view, at least, such a restriction is undesirable.

Then there is the topic of restrictions which go the other way — Affirmative Action, quotas for different ethnic groups in employment, special laws for aborigines and the like. The MT approach just says the same thing: if the broad aim is to improve the wider syston, these restrictions too must be undesirable.

Division of Labour

This heading is used here to include much more than its application in industry. It is broadened to include the activity of systels in any segment of the Matrix. We can look, for example, at the situations under which plants grow.

In his book *The Botanic Man*, David Bellamy [1978] looks at how different plant ecologies have developed in different areas, according to the local average temperatures and rainfalls (or more strictly, precipitation, including snow). He presents a picture along the lines of Figure 107.2.

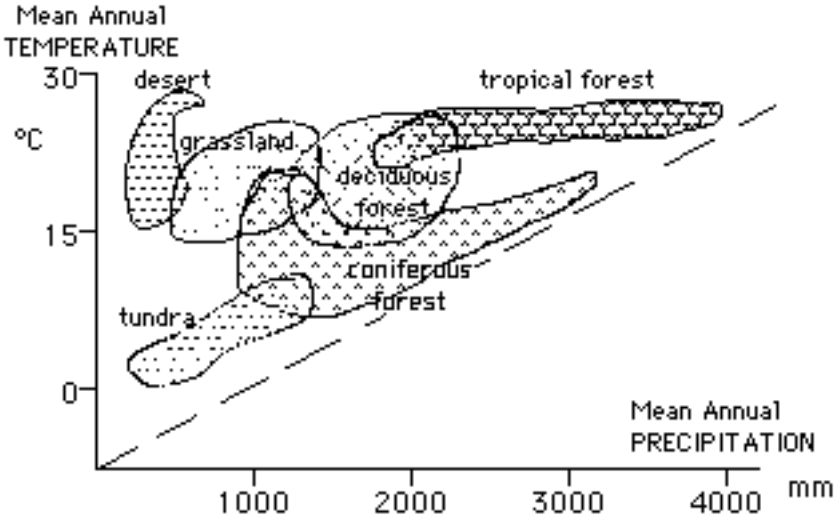


Figure 107.2. Vegetation and climates

Of course a picture like this is useful for working out what types of vegetation can be expected under given temperature and rainfall conditions. But it has been included here for another purpose.

The picture itself can be regarded as one particular cross-section across one segment of the World Matrix. In Chapter 108 we will be developing the idea of the Matrix Cocoon and sections across it, but for the moment we can just regard the picture as a slice of the real world.

The illustrative value of this picture lies in the fact that it demonstrates very graphically how systons can evolve to fill as much as possible of the 'Matrix Space' available. Only the area above the dashed line represents conditions found in practice — there are no very cold regions with 3 metres or more of precipitation, for example.

Of course each of the vegetation types shown in Figure 107.2 is itself a generalization over a large range of separate ecologies. Pictures similar to the above can be built up for sub-ecologies within one of the above types, such as that within a tropical forest.

In such a section across tropical forest 'Matrix Space', the axes of the picture might be such things as height above ground and light incidence needed. For example, some groups of plants are both tiny and require relatively little light. These can survive on the ground beneath a continous tree canopy. Others are light-demanders and strive to grow into big trees; these must either wait, scarcely growing, until a break in the canopy occurs through an ancient tree crashing to the ground, or must possess a seeding mechanism which is rapidly triggered by the occurrence of such a break.

Tropical forest ecologies are notable for their complexity and diversity. Their constituents have evolved to fill every scrap of the available ecological space. For this reason it is

completely understandable that their productivity is the highest of all ecological classes, 20 or 50 times that of semiarid savannahs or grasslands. The productivity is a reflection of the diversity, as would be expected in MT terms.

Stability Through Diversity

There is also another, perhaps generally unappreciated, advantage to complexity. More complex systems (those with higher infocap content) are found, in practice, to be more stable than simpler ones. They can withstand changes and unexpected extremes of external conditions far better than their simpler analogues. This is also true of human-based systons.

Proposition 107B**. Complex systons have greater stability than simpler ones

At first sight this might seem to be an unlikely rule — it might be thought that the more complex a system is, the more likely it is to go wrong. But in practice, examples can be found at every level — from computer programs through tribal conflicts and on to large modern nations — which bear out the validity of this Proposition.

In MT terms, what we are saying is that infocap and synenergy are what glues the parts of a syston together, so that up to a point, the more glue, the better it will hold together. Of course this concept breaks down when there is more glue than parts to glue together — perhaps an expression of "more money than sense", or "ruined by a lottery win"?

Yin and Yang

The general MT conclusion so far is that the greater the number of elements in a system, and the more they work together, the better for the whole — synenergy advantages systons. But there is an observation on real systons which does not affect this conclusion, but adds another consideration to it.

So far we have not looked at the mix of individual systels within a syston to any extent, other than to note that their diversity is an advantage. Another aspect is their 'pecking order', whether some of them come to dominate others, and in turn be dominated by others still. Every human organization has some sort of dominance structure of this type, whether defined or unwritten, every real syston has some element of the 'Management Tree' structure mentioned at the beginning of this chapter.

The interesting thing is, when you look at it closely, that the majority of successful systons seem to have two systels, not one, at the top. Typically, one of these dominators is effectively 'in charge' for many syston functions, while the other can step in and make a go of it when the first is absent. And the other dominator is in charge for other functions, backed up by the first when necessary.

The most obvious example is the Family. Typically, it consist of the Mother, the Father, and a number of children. Again, typically the Mother is the dominator in home matters, the Father dominates in extracting infocap from outside the syston. There is nothing necessarily so in this, and of course role reversal is quite possible, but that is the common situation.

In politics, the general situation in a democracy of any nature is to have two major political

parties, two dominators, and an unspecified number of minor parties. Occasionally one of the minor players may rise in dominance and displace one of the two leaders, but the situation soon settles down to the typical two dominators again. A problem with some electoral systems is that they can fragment representation so much that it is difficult for the two dominators to 'coalesce' out of the Matrix swirl.

In business and social organizations, it is typical to have a Head and a Deputy. In active systons, the role of the Deputy may actually be formally defined to include oversight of particular functions in the normal run, with the switch-role of standing in for the Head where necessary.

In physiological functions, most creatures have function operators in pairs. We have two hands, left and right, of which one usually dominates. We have two ears, and two eyes. Some spiders have eight eyes, and the primitive New Zealand reptile the Tuatara has the vestiges of a third eye. Why have we settled on two?

Two Heads are Better than One

And, in effect, we have two brains, the left and the right hemispheres. We now know that most human brain processes are allocated between these two, we know the sites of imagination, of logical reasoning, of speech, of hearing, of motor functions. And we know from experience with brain-damaged stroke victims that if one of these sites is damaged, others will attempt to stand in and compensate.

We have already looked at the Battle of the Sexes, and pointed out some situations where the naturally evolved order is for one sex to dominate in some areas, the second in others. Of course there are many primitive organisms which do not have differentiated sexes, but instead reproduce by budding. The history of evolution of higher plants and animals is the history of increasing diversity and complexity in sexual matters.

Thus in the most evolved plants, the angiosperms like the oaks and the grasses which are all around us, each female 'egg' cell in the flower requires fertilization by two male cells derived from pollen. In the more primitive plants, the gymnosperms like the pines and cycads, only one male cell is needed. The first group has its egg cells within a special structure, the ovary, which the gymnosperms lack — the name gymnosperm actually means 'naked seed'.

To sum up, the theme of the present chapter is to bring out the ideas that diversity benefits a syston, that allocation of complementary roles within a syston rather than multiplying standard roles also benefits a syston, and finally that for particular functions of the syston it works out best if two systels come to dominate that function, with one backing up the other.

Proposition 107C*. The optimum number of dominant systels in a syston is two

To give some perspective to these ideas, it should be noted that they are not theoretically derived. Instead, they are the result of analyzing actual situations, and noting aspects which have generally ended up on top in the Survival of the Fittest.

We can move on now to look at another aspect of systons — how all their components interact together, and what rules they follow in these interactions.

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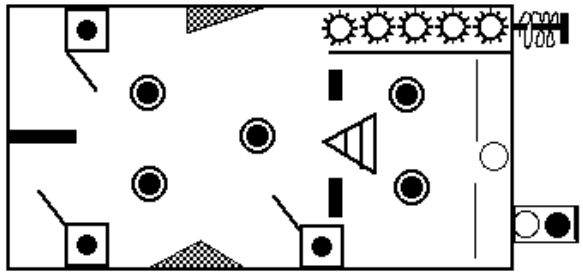
Chapter 108



GOING BY THE RULES — Living in the Syston Mix

"Conscience is the guardian in the individual of the rules which the community has evolved for its own preservation"
— W Somerset Maugham, *The Moon and Sixpence*, 1919

The Conflicts of Life

Life, it might be said, is a series of progressions from one conflict to another. Let us now look at some particular aspects of Life in Society from the point of view of Matrix Thinking. We have already, this early on in the book, developed all the theory we need — all we need to do now is develop some of the concepts a bit.

First we look at the topic of conflicts. They are always with us. But can we apply a bit of analysis to the situation, and at least classify them a bit, to get a better handle to think about them?

Billy Black and Wendy White

A little story. Billy Black falls in love with Wendy White, and she with him. The World looks on, smiles, and applauds. They marry and live happily ever after.

Another little story. Peter Pink falls in love with Gail Green, and she with him. The World looks on, frowns, and mutters. It is only after a long struggle that they marry, and they are forever dogged with difficulties even then.

What's the difference between these two situations? Well, the fact is, Peter Pink was already married to Betty Pink when he fell in love with Gail, and there were already two little Pinks on the scene at the time. Maintenance, custody, division of goods, visiting rights — the

Full Catastrophe, as Zorba would say. A classic conflict.

Now this situation would conventionally be viewed as one involving only people. But is it? Look again at the situation from the MT viewpoint. The first example, true, only involves people. But the second involves another syston — the existing Pink Family syston.

I have already suggested that the Family syston is one of the strongest and most important of those in which humans are involved. And in this situation, it seems to me that it is the Pink Family syston which is fighting back, struggling to maintain its existence. Of course this battle can be analysed into actions of its component systels, just as a military battle can be analysed into the movement of individual troops.

But from my viewpoint here, Peter and Betty Pink and their two children already formed an established syston, and that syston would always act in its own interests, sometimes to the point where attempts to break descriptions of the behaviour of the syston up, into a list of how the individual systels behave, leads to bafflement — the systels seem to be acting senselessly and illogically.

I suggest that the reason for this confusion is that it is not people who are active here, but rather people and systons, or systons and systons, and the behaviour of a syston may be quite different from the sum of the behaviour of the people involved. To make sense of the situation, it is first necessary to identify the systons which are active.

You Can't Fight City Hall

When the scale of conflict is larger, the systons involved appear more strongly. At the local community level, there are often conflicts between individual ratepayers and the local Council. I have myself been involved in a bitter conflict with a local authority, one in which the authority appeared to be conducting a senseless vendetta against one of its ratepayers. From the individual point of view, their actions appeared purposeless and unjustified — they were just trying to show that "they were the boss".

In retrospect, it appears to me that I was fighting the Council-syston rather than the individual local councillors involved. A Council spokesman might say that the authority of the body was under threat, or, at a milder level, that the Council must be seen to be in control of the municipality. Here we have a legally-defined syston, acting according to its own rules, the local by-laws, but also according to unwritten and even unrealized rules inherent in the makeup of the syston.

The War of the Roses

With really major conflicts on the scale classed as wars, the fact that systons are involved rather than individual people is usually obvious. It is nearly always countries or states which officially or unofficially 'declare war' between themselves.

Of course, even though these systons have names, the names do not always clearly define the systels involved. The War of the Roses was fought between the 'House of York' and the 'House of Lancaster' in England from around 1455 to 1499, and this was a civil war, in which the actual participants varied from day to day and had no clearcut territorial basis. While this is being written today, a civil war rages in Yugoslavia, in which a so-called 'Yugoslav Army'

is attacking what is supposed to be part of Yugoslavia itself.

Nevertheless, even if the make-up of the systons involved is not entirely clear, it seems that the view that systons are involved in major conflicts, rather than individuals, is not particularly outrageous. Many other types of conflict could be looked at across the whole spectrum of human interactions, but perhaps we can generalize the situation with a Proposition:

Proposition 108A*. Most of the problems of human existence are due to conflicts between syston and syston, or syston and individual, rather than between individuals

Searching for Peace — What to Do?

One of the great desires of people generally is for peace. People do not want wars. So why do wars continue to occur?

We will look at this matter in more detail in the second part of the book, in fact devote a whole chapter to it. But for the moment, I will just put forward the last proposition again, for the special case of wars:

Proposition 108B*. Wars occur as a consequence of the dynamics of interaction of country- and state-systons

Now that is not a very profound Proposition, but it is a start. The first step in improving a situation is to understand it. When we have understanding, we may see how to act to change the situation — and perhaps also, whether the result of the achieved change will really lead to the aim desired.

Let us now look again at systons generally, using a new model to give a visual feel for how they interact.

The Matrix Cocoon

People often see things in fairly linear terms. In political systems, for example, a useful convention is to describe things as being, say, 'leftish' or 'to the right of Genghis Khan'. Political diversity is represented as positions on a range or spectrum, as in figure 108.1.

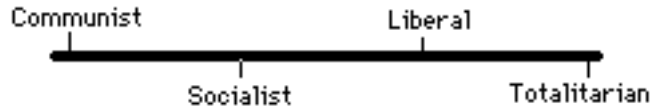


Fig. 108.1. Political systems on a linear spectrum

Now of course this is just a convenient representation, the communists are only 'to the left' by convention. Other scales have been used, it is interesting that the visible light spectrum has also been used, with the communists 'red' and the liberals 'blue'. But the point is that these

ranges are all linear.

With Matrix Thinking we will try to get away from the linear approach, and represent things more generally. A representation we can use is that of the Matrix Cocoon (figure 108.2).

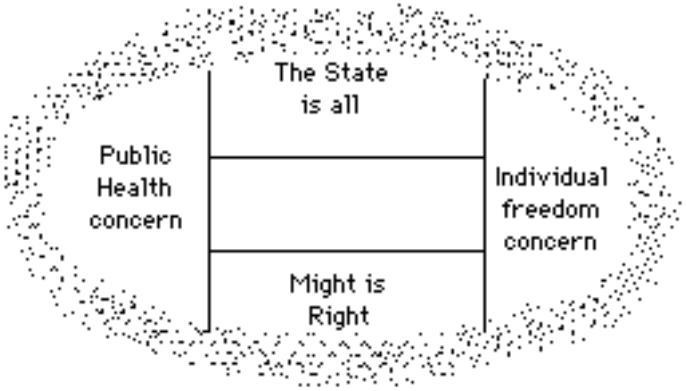


Fig. 108.2. A Matrix Cocoon representation

With this model, the whole Matrix of human affairs is thought of as like an egg-shaped cocoon (with fuzzy edges). In looking at any situation we can notionally allocate parts of the cocoon to different, often competing, aspects which interest us, as in figure 108.2.

Of course this representation is actually a cross-section across a three-dimensional cocoon. The allocation of aspects within the cocoon is purely arbitrary, to try and build up a picture which can be instinctively grasped.

We can then attempt to represent the underlying beliefs and assumptions of particular systons by mapping them on the matrix allocation, as in figure 108.3.

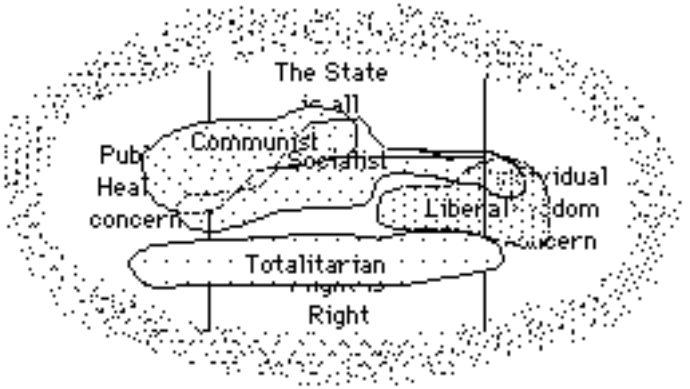


Fig. 108.3. Political systems mapped on a matrix cocoon representation

In theory, an aspect could be allocated a volume within the cocoon rather than an area in a cross-section, allowing representation of more complex interrelationships, but this makes the model harder to grasp. There is also a theoretical reason not to extend these models from two dimensions to three, which we will come to later.

This may be interesting, but what is its point in this book? What we are again approaching is the need, in MT, to clearly distinguish between different systons. After this, we can suggest rules by which the systons may interact.

In figure 108.3, the labels applied such as 'Communist' or 'Liberal' are just that, only labels. In any actual scenario, for an actual country, the labels may well be applicable to particular political party-systons, the 'Liberal Party', or whatever. The aim of mapping the systons on a matrix aspect cocoon is to clarify the relationships of the systons.

There is a danger in this sort of mapping. All systons change with time, and a mapping which was valid for a political party 20 years ago may have shifted dramatically since then. So a mapping cannot be regarded as fixed. And a mapping for a particular label in one country, say the 'Social Democrats', may have no similarity at all for the party with the same label in another country.

Going by the Rules

We now arrive at one of the most basic points in the use of Matrix Thinking to change human society, hopefully for the better. It is based on a Proposition which is not contentious, but rather is a working assumption which is seldom clearly stated as such. It concerns rules for the interaction of the segments and parts of society which we have here called systons.

Proposition 108C**. Voluntary rules can be set up for the operation of systons which in themselves define the class to which the systons belong

Perhaps an example will help make the meaning of this Proposition clearer. Some states, like WA, have rules for setting up a class of limited company called a Co-operative Company. These rules set up a company structure and method of operation rather different to that for an ordinary limited company. For example, each shareholder in a 'co-operative company' has one vote, irrespective of how many shares they hold, and company profits are distributed by rebates on shareholder financial activity, rather than as dividends.

The point here is this. A group of people wishing to start up a company to run under the rules of the Companies (Co-operative) Act will normally have the desire to operate under rather different principles to those of a normal limited company. Their action in incorporating their new company under a particular act is voluntary — they could choose from a range of Acts allowing the incorporation of many different types of body.

The role of the Western Australian Government has been to set up a number of allowable company structures, each of which has an associated set of rules. The rules are voluntary in the sense that if you don't like them, you can choose a different set, and incorporate your company under those. Once you have chosen your company structure, the set of rules for that structure are compulsory.

By choosing a particular act under which to incorporate your company, you automatically define the company-syston class to which your company belongs. It may be a Public Limited Company, a Co-operative Company, a No-Liability Company, or whatever; it cannot be more than one at the same time.

Setting up Rule Structures

Now there is nothing exceptional in all this. The company example has been chosen here because it is quite well-defined and familiar. The importance of the matter from the MT viewpoint is the proposition that this situation is applicable to *all* systons.

As we progress it will be appropriate to suggest particular sets of rules, particular Rule Structures, for particular syston scenarios. The point that these rules are voluntary, in the sense that a choice can be made on which set of rules is to be followed, has already been made. A further point is that any given set of rules is not immutable, but can be expected to undergo evolution and amendment as circumstances change.

Even so, it is convenient to have labels for particular Rule Structures, as is done in the case of setting up different types of company. To change these particular 'company' Rule Structures, amendment to an Act of legislation is usually required, and the change is relatively clearly flagged to the community. Other Rule Structures may be much less formally defined, and changes in these can take place continuously and imperceptibly.

Setting up a Rule Structure involves a considerable amount of infocap input, so the setting-up process can be viewed as one which increases infocap. In the final Proposition of this chapter, this point will be formalized as a particular example of the perceived benefits of infocap accumulation.

Proposition 108D. A syston is advantaged by the availability of a large set of competing voluntary Rule Structures which can operate within it***

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Chapter 109

DEVIATING FROM THE MEAN — Standardization and Diversity

"The time to standardize is when nobody cares any more"
— Old Computer Industry proverb

The 'Will to Order'

Aldous Huxley, in his book *Brave New World Revisited* [Huxley, 1984], makes a telling examination of an aspect of human behaviour which he calls the 'Will to Order'. An extract from this source will explain:

"The wish to impose order upon confusion, to bring harmony out of dissonance and unity out of multiplicity, is a kind of intellectual instinct, a primary and fundamental urge of the mind. Within the realms of science, art and philosophy the workings of what I may call this 'Will to Order' are mainly beneficient. ... It is in the social sphere, in the realm of politics and economics, that the Will to Order becomes really dangerous."

"Here the theoretical reduction of unmanageable multiplicity to comprehensible unity becomes the practical reduction of human diversity to subhuman uniformity, of freedom to servitude. In politics the equivalent of a fully developed scientific theory or philosophical system is a totalitarian dictatorship. In economics, the equivalent of a beautifully composed work of art is the smoothly running factory in which the workers are perfectly adjusted to the machines. The Will to Order can make tyrants out of those who merely aspire to clear up a mess. The beauty of tidiness is used as a justification for despotism".

"Really dangerous ... Subhuman . . . Dictatorship . . . Tyrants . . . Despotism" — quite strong stuff! Now let us look at a contemporary and rather mild example of the Will to Order, in this case applying to Australian education systems (Fig. 109.1).

All right. Now that was a very mild example, and it would be pushing things to class Mr Dawkins as a tyrant or despot just because his Will to Order impels him to push for such things as standardized handwriting styles. In fact many people would instinctively support any moves towards standardization or uniformity. Let us examine this matter more fully from the MT viewpoint.

Dawkins disappointed

THE Federal Government will continue pushing for uniform national education standards, despite the overwhelming rejection of the proposal by the conference this week.

The Federal Minister for Employment, Education and Training, Mr Dawkins, said yesterday he was disappointed the meeting could decide on common standards for sausages but not on his proposals for reorganising the education system.

Mr Dawkins had proposed easing the strings attached to tied education grants worth an estimated $870 million a year from the Federal Government to the States.

The Federal Government provides tied grants to the States in many areas such as English as a second language, disadvantaged schools, literacy and learning, and country area programs.

In return for the concessions proposed by Mr Dawkins, States would apply national curriculum and educational standards across Australia, including common starting ages, standardised handwriting styles and teacher quality levels.

Fig. 109.1. 'The West Australian', 1990 November 1

Standardization and Standardization

First, there are two quite distinct kinds of standardization. One type is what we might call Specification. Specification in this context means a description of some widespread entity — a system of electric plugs and sockets, for example — sufficient such that if the description is followed, any two of the appropriate components will fit together and operate satifactorily.

Now I think most would accept that this sort of standardization is highly desirable. Specification in the case of electric fittings means giving values for the sizes, shapes, and positions of the pins and sockets, with tolerances by which these may vary. It also means giving action roles to the different pins — one is to carry the active current, another is to act as an earth. There is no tolerance possible in these action roles.

If the specification is set up correctly, then all plugs and sockets conforming to it should be interchangeable, in the sense that any plug will fit into any socket, and any socket will accommodate any plug. In Australia, where there is a single nation-wide Specification for domestic electric plugs and sockets which is almost universally followed, a new electric appliance can be bought from a store and taken home and plugged in without problems.

In other countries, this is not so. Britain still has a mix of older and newer systems, quite incompatible. Electric equipment bought outside Australia cannot usually be plugged in here, even if the voltage supply is right. This undoubtedly is an annoyance, and a restriction on the operation of business competition, in that electrical goods used in Australia have to be fitted with 'Australian-approved' plugs.

Surely it would be more sensible to introduce an international standard for electric plugs, and make all manufacturers conform to it? More sensible perhaps, but wait on, it's that Will to Order leaping out of the woodwork again. Being sensible doesn't necessarily mean that it's for the good of the systons involved.

The point is this. A Specification is a *voluntary* code establishing a minimum degree of uniformity, sufficient to guarantee interchangeability or some other desired object. The code

will not normally concern itself with matters outside these aims — the plug specification will not refer to the outside colour of fittings, or the outside shape of socket boxes, for example. It is true that a government may require all or part of its constituency to conform with a particular specification, but that is another, external matter.

Don't Be Mean

Now we can look at the other sort of standardization, essentially imposed, involuntary uniformity for its own sake, or for the sake of perceived benefits. What it usually involves is an effort to push all expressions of some characteristic towards some uniform, average or mean value, as with Mr Dawkins' Australian handwriting styles.

In practice it is never possible to make all such expressions completely uniform. What can be achieved is to force the width of the band of values down, what we might call tight-banding. At the current time, women fashion models are quite strongly tight-banded, not with corsets, but in the sense that only quite narrow ranges of their heights and weights are acceptable to the fashion industry.

This 'Tight-Banding' is clearly quite a distinct meaning of the word 'standardization', and in MT terms is quite a different kettle of fish to 'Specification'. What is seldom openly considered is whether the Tight-Banding is beneficial or not, and if it is, who benefits. We will try and make some sense out this later. But first, we need a little more background on handling quantities which are not uniform.

For Whom the Bell Tolls

Many of the quantities which we come across in ordinary life, such as people's heights, approximate to what is called a normal distribution or bell curve (figure 109.2).

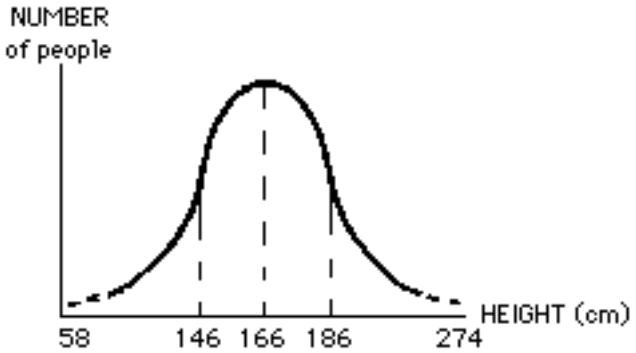

Fig. 109.2. The normal distribution or bell curve

With this curve, the quantity involved is counted from left to right, so in the case of heights, short people appear on the left and tall ones on the right. The height of the curve at a given point shows the number of people with that height, so the highest point corresponds to the most common height.

According to the Guinness Book of Records, the very shortest adults recorded have heights tending down towards about 58 centimetres, and the very tallest approach 274 cm. Halfway between these values is 166 cm, which is perhaps close to the average or mean value for the whole population.

The ideal bell curve is completely symmetrical, and tails away forever towards the extremities, approaching but never reaching some limiting value. A real distribution curve for a quantity like adult heights cannot match the ideal exactly — for example, this would allow a small but finite probability of people with not only zero, but even negative heights — but the model is close enough for our purposes.

If the curve is symmetrical, the most common value (the value at which the curve peaks) is the same as the mean value, 166 cm for adult heights. A useful measure of the spread or diversity of heights is the standard deviation or SD. This is actually mathematically calculated, but on the bell curve it is equal to the distance from the central mean line to the points where the curves change from concave to convex, the points of inflection. So if the SD was 20 cm, the majority of the adult population would be between 146 and 186 cm tall. A small part would be less than 146 cm tall, and a similar part would be taller than 186 cm.

The figures given here do not come from actual measurements, and in themselves are merely illustrative. The point is that the Standard Deviation referred to will give, with real measurements of the sort of quantities which follow a bell curve, a measure of their spread. In fact the SD is an expression of diversity, an expression of the amount that the quantity measured can spread out.

Back in Proposition 105A, I suggested that genetic diversity is an advantage for a human syston. We can re-state this proposition in new terms.

Proposition 109A**. Systons with larger standard deviations in their linear quantities are at an advantage compared with systons with smaller ones

It is important to note that neither of these Propositions suggest that *individuals* with values away from the mean necessarily have an advantage. Exceptionally tall and short people in fact encounter many disadvantages in a society tailored for the local mean — try riding a minibus in Quito! What is suggested is that the *syston* which contains these people is advantaged.

My Band and Your Band

Clearly the bell curves for a characteristic like adult height will vary for different populations around the world. The Watusis in Africa will have a curve shifted well to the right of that for the Congo pygmies. The standard deviations for the two curves may be similar or not — this is not an aspect we usually think about.

Another way in which bell curves may be useful is when parts of populations are looked at. For example, in humans women are on average shorter than men. The curve for the whole adult population is, in fact, made up of two curves, one for each sex (Figure 109.3).

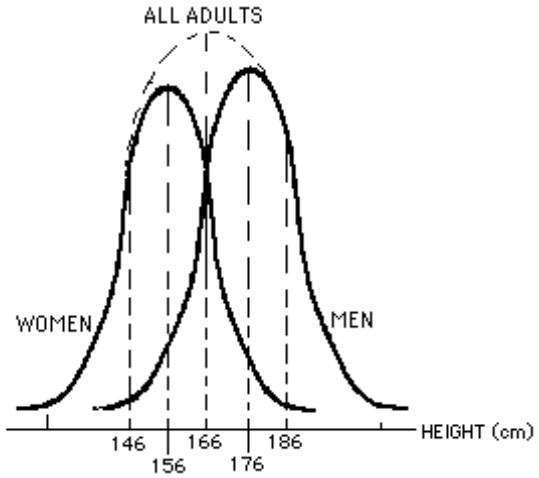

Figure 109.3. Separate bell curves for heights of women and men

It is an interesting point, that if you have two bell curves for comparable quantities, such as the heights of men and of women, they will always combine together to give another bell curve for the composite group. Logically this must be so.

Underheight, *not* Overweight

The old public weighing machines which gave you your weight always used to have height/weight tables to tell you what your weight should be for a given height. The old joke about these tables from some of us was "Of course I am not 14 pounds overweight, just 3 inches underheight".

At least they did provide two tables, one for men and the other for women. But they had no recognition of differences in bone structure and build, or of age — all factors which can have a big effect on deviations from the 'norm'.

The bell curves we have just been looking at provide a major advance over the 'normal weight' tables in looking at the world. They move the 'judgement focus' used from zero dimensions to one, from a point to a line. Even further advances are possible in the move towards gaining an MT aspect of our society, but for now let us apply the twin bell curves to an actual example — the topic of Aggression.

Why be Aggressive About It?

Look again at Figure 109.3 and suppose that the bell curves represent not height, but aggressiveness. It seems to me that it is not an unfair assertion to say that men, on average, are more aggressive than women.

The bell curves give an extra dimension to such an assertion. They bring out the fact that even if such an assertion is true, there will still be many men who are less aggressive than many women, and vice versa.

In Chapter 107 we looked at the importance of complementary action by systels, people working together 'as a team', and in so doing filling more of the spectrum of a process. In basic MT terms we might say that the expansion in the number of roles involves more diversity, more infocap, and hence works to the greater benefit of the enclosing syston.

The point to be brought out here is that different roles, different systels in a complex syston, may demand quite different degrees of aggressiveness. I once tried to sell my house myself, not using an agent, and without success. A house agent I knew smiled kindly and said that I just did not possess the necessary 'killer instinct'. Was he right?

Another area where aggressiveness may be important is in competitive sports. The champions in some sports, and in other areas of human endeavour which are intensely competitive, are frequently viewed as having unattractive personalities — ruthless, aggressive, with giant egos. Of course this is not a general rule, such an observation would be contrary to the whole MT viewpoint, which only mildly notes a certain shift in the aggressiveness bell curve when certain types of player are the subject of examination.

Another absolutely vital aspect of the MT approach is that it is non-judgemental. Aggressiveness in individuals is widely viewed as undesirable, MT makes no such claim. The furthest that MT can be forced along this line is the observation that a wide spread in any characteristic, even aggressiveness, can be expected to advantage a wider syston. Advantage to the individual is another matter entirely.

We can pursue this reasoning now in a related area, one generally regarded as 'difficult' — the question of homosexuality.

Homosexuality

From the linear-thinking viewpoint, homosexuality is regarded as a problem in two ways. First, its actual existence is a problem for society, a 'perversion' from the norm. Second, why it should occur at all is a problem to explain.

Taking the second part first, on conventional reasoning it is hard to fathom why homosexuality should show up in generation after generation, with no obvious cause. Committed homosexuals are clearly much less likely to have children than is the norm, and whether from a genetic or a socially-learned origin, homosexuality would therefore seem to be much less likely to be 'passed on'. And yet it continues.

As to the first part, there seems little doubt that the general view is that homosexual behaviour is 'bad for society', and should be curbed as much as possible, preferably 'cured'. Let us now consider this sensitive matter from the MT viewpoint.

The MT inclination would have to be to say, that if homosexuality has continued to show up over the ages and in almost all societies, it must have some sort of role in those societies. Let us look for such a role.

Consider, once again, Figure 109.3, but this time assume the two bell curves represent expressions of femininity and masculinity, or more precisely, female-type and male-type psychologies. We will see elsewhere that there is a fundamental difference between these two