LATERAL THINKING AND INDEXING*
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Dr de Bono, originator of the concept of Lateral Thinking, arrestingly declared the human brain to be an efficient thinking system but a bad indexing system.

Do we want our indexes to be blurry, exact, or both? Not such an obvious matter as one might suppose, given Dr de Bono's terms. Not an indexer, but a bird, is his example of the most precise brain; in a given situation, it can immediately identify and react appropriately. But this degree of precision is locked into an exact reaction, and inhibits the power to be creative; the bird does not think.

Only a blurry approach permits thinking, where we are not too exactly locked into a reaction, but can create ideas and move on. The purpose of language is to develop the principle of cross-classifying and linking; a 'Flag-pole' system of classification, whereby an item goes to the nearest, not exclusive, category, rather than a 'box' system indicated by a certain set of features into which events definitely do, or do not, fit; an exclusive class.

Most of our culture and thinking is based on the Aristotelian, exclusive concept. The alternative is the 'field technique' in thinking, which does make life more difficult, but continually opens up endless new possibilities. Lateral thinking is a highly logical process in a patterning system, but does not seem logical without knowledge of this patterning.

An author, considers Dr de Bono, is not the best person either to index or to entitle his own book. In both index and title he summarizes what he thinks is in the book, on the exclusive, post hoc system. Indications in a lateral-thinking system would attempt to be of use to anyone wanting to find a certain thing; their message not, 'This is what he intended to say', but, 'This is a useful thing to find'. How widely should an indexer cast his net? Can we attempt to match the process of thinking, which rarely uses just one type of classification, but sees a multiplicity of cross-references on complicated levels which are useful in thinking but not for searching. So—are our indexes intended for the thinker or for the searcher? Blurry or exact?

With ingenuity and wit, and overhead projection of his continuously drawn diagrams, Dr de Bono gave us examples of the process of lateral thinking, and of its means of problem-solving; for instance, by applying to the problem situation the connotations, suitably particularized, of a randomly chosen word. Solving problems by random association is the antithesis of our traditional understanding of sequential thought; but logical according to the patterning system. The human brain is an infinite processing system, which acts to organize the incoming information into patterns. Again he contrasted two types of record: first, random ink stains left on a towel, which are a good record of what has been done to the surface, needing an outside thinker to correlate these discrete items of information, with no distortion. The other type of record is similar to the effect of blobs of hot ink poured here and there on to gelatine; the first blob will form a pool, the next will carve a channel; a self-organizing, linking system, where incoming information organizes itself into a pattern depending on the sequence of input. As the links are internal, they do not need an outside processor, quite unlike the information system of computers composed of category, class, or binary system.

The mind sets up its tracks in thinking, so that faced with a situation we feed in what follows, knowing what the words mean. There are limitations to a single-track system, however. The concept of a patterning system was illustrated by the possibility of two asymmetrical tracks, an initially narrower one leading off from the straight, broad highway, but in fact opening a quicker path to one's destination. This could be realized only with hindsight.

A derivative of the asymmetric patterning system of the human mind is humour. Dr de Bono described humour as the most significant characteristic of the human mind; reason he placed as the most important, but an easy system to construct. If computers were able to laugh, they could give back answers, and not be dependent on programming. Dr de Bono gave some examples of the humour of hindsight, and the audience proved that they indeed, unlike computers, had the ability to laugh.

*Summary of the address given to the Conference on July 14th.
The switch of humour is that of the logic of hindsight—one sees that the alternative channel was open all along, after arriving by the longer, obvious route. We must devise ways of cutting across the asymmetry of our mental patterns, and humour is one of those ways.

Applying these ideas to indexing, Dr de Bono suggested that our difficulties are, that if we decide to lead readers, by our indexes or abstracts, to find what they expect to find, then we cannot indicate to them how we ourselves saw it in a different way. Do indexers have a brief to look at things in a new way? We have no chance to explain to the reader why we have viewed concepts as we have. An index may be indicative or creative; the second type can be understood only with insight, seeing that it makes sense after it is understood: ‘Once you get there, you can see that it makes sense’.

All the worthwhile ideas of the world, declared Dr de Bono, are seen to be logical only with hindsight.

Opponents of these ideas have declared that they ‘do not deal in patterns, they deal with information and group it into patterns as required’. Dr de Bono maintained that the mathematical multiplicity of combinations is colossal, so vast that we could not begin to operate working through them systematically. Patterns, ways for the brain to jump from A to B, are therefore necessary.

Considering the faculty of judgement, the natural organization of the mind, Dr de Bono described this as a process of recognition, matching and negative discrimination; defining what a thing could not be. He had shown an unusual design for a wheelbarrow to different groups and invited their comments; among groups of intelligent adults, critical comments had exceeded ‘interested comments’ in a ratio of 27-20 to 1; among teenagers, one-third of the comments had been positive, ‘interested’. This latter attitude shows more of lateral thinking, cutting across the pattern, and instead of judgement, using movement. The operative word in judgement is ‘no’. Dr de Bono suggests an alternative attitude of hypothesis, supposition, even poetry, whose operative indicator he calls ‘po’—meaning, let us see what it brings about. This attitude treats an idea, not as a judgement situation, but as a stepping stone to see what it leads to. Again, by posing such apparently absurd, provocative propositions—‘A factory should be down-stream of itself; cars should have square wheels; planes should land upside-down’—Dr de Bono showed how the best effects of these ideas can then be identified, retained and applied in the realm of the possible. ‘Po’ challenges the concepts that are taken for granted by identifying them and opening up tracks from them; challenging the basic concept, and moving into practical ideas. ‘If you start at the end, problem-solving may be easier than at the beginning!’

Learning backwards is also a better way than going from the well-known to the poorly-known, where there is increasing likelihood of mistakes, which must be unlearned (except in the case of language). Starting from the least familiar, there is less chance of mistakes as we proceed. How does this apply to creativity? Again, we start somewhere other than at the logical beginning; but it must be a random starting place, which will then connect with the problem area, opening up a new track in the patterning system.

Lateral thinking presupposes that we are working in a universe of patterns, and need a system of provocation to cut across, as patterns are asymmetric. The implications of looking at the patterning system are that we must ask, are we trying to communicate or to think? There is a huge difference between the two.

Language is not a tool for thinking, though used in the process of thinking. It is essentially not a thinking system but a communication system. In a true thinking system each word uttered would open possibilities; really a visual language for thinking in is needed, with full field effect, opening up rather than narrowing down concepts. Language is used in this way in poetry, opening up images.

As for indexing: do we feel that we are in the communication or in the thinking business? Do we work to follow the thinking process of the person who has produced the book, or the consultor, or our own? To try to do all three together may detract from the index’s effectiveness.

DISCUSSION

Throughout his talk, Dr de Bono had drawn a sequence of illustrations which were constantly projected on to a screen. Mr Holland asked whether he would have found it difficult to communicate his talk to us without this visual method, and whether he used visual aids himself. The reply was, yes, Dr de Bono prefers the visual method, in particular as it helps to do away with
Jargon—he always avoids using such terms as 'set', 'expectancy', and feels there are many specialized words missing from our language—one, for example, for 'the way we look at things'. He has found, however, that the devising of new words, as well as taking much time for them to be generally adopted, causes positive resentment.

We apologize both to Dr de Bono and to readers for the lack of visual aids in this summary of his talk, and trust that sufficient of his meaning comes through at least to encourage readers to consult for themselves his books, in particular The mechanism of mind.

Mrs Wallis pointed out that Dr de Bono's own books are published without indexes. He explained that he intends them to come together as a whole, specific passages and drawings making sense in the continual flow rather than in isolation. He wishes to foil those who intend to extract sentences as the apparent sole justification for a concept, out of context.

Mrs Legro suggested that Dr de Bono feared a lack of control over the index. He agreed that an indexer may see something more than the author himself, and explained that he is against the abuse of an index; fragments taken out of a pattern do not reproduce the pattern.

Mrs Dainty asked whether he would then index his books himself; no, but he would provide keywords. The question of indexing poetry was considered, and Dr de Bono's own use of conventional thinking. He had developed the basic concepts of a self-organizing system when working in medicine.

Mrs McCarthy questioned the concept of working backwards, but Dr de Bono explained that he did not recommend working from the complicated to the simple, but only that there is profit in deliberately changing our starting-point and in disrupting a thought-sequence which channels itself increasingly towards the unfamiliar. Mr Moore asked how these concepts applied to games, and Dr de Bono described a game that he has already marketed in conjunction with a Cambridge mathematician, and revealed that he is working on devising another with the originator of 'Master Mind'. Writing rules is a fascinating exercise in communication.

Dr Boehm asked whether it is possible to achieve lateral thinking by computers. Dr de Bono said this would be possible if we could operate the field effect: the difficulty is with the pre-packed input. If only computers could educate themselves and be allowed to make mistakes—they would equate with minds!

LANGUAGES OF ASIA, WITH SPECIAL REFERENCE TO THE ISLAMIC WORLD

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As P. H. Reaney, the authority on English place-names and surnames says: all surnames are local, denote relationship, occupation or office, or are nicknames. This is largely true also of Oriental names. European names can cause great difficulties to cataloguers and indexers, and Oriental surnames are worse, as the degree of stabilization is less developed, and the principle of family names or surnames is not universally accepted.

My purpose is, therefore, to attempt to bring out a few points of the structure of Eastern names. I shall run rapidly through the continent of Asia, making a more leisurely journey through the Islamic world.

Far East

The three principal languages are quite unrelated, but Chinese has affected Japanese and Korean, and Japanese in turn has affected Korean. A feature of Chinese and Korean is that the family name is usually monosyllabic and is written before the given name, as in Mao Tse-Tung, which should always be indexed under 'Mao'.

The stupendous invention of the characters