

the way we look at things'. John F. Kennedy used the phrase 'grace under pressure' for characterizing the gift. It is an ancient story in politics. But players beware! It is also a crime to exceed the limits of grace. The opposition benches in the Commons may chant, 'Charm, Charm, Charm'.

6 Gregory Bateson

A Theory of Play and Fantasy

This research was planned and started with a hypothesis to guide our investigations, the task of the investigators being to collect relevant observational data and, in the process, to amplify and modify the hypothesis.

The hypothesis will here be described as it has grown in our thinking.

Earlier fundamental work of Whitehead, Russell (1910-13), Wittgenstein (1922), Carnap (1937), Whorf (1940), etc., as well as my own attempt (1951) to use this earlier thinking as an epistemological base for psychiatric theory, led to a series of generalizations:

1. That human verbal communication can operate and always does operate at many contrasting levels of abstraction. These range in two directions from the seemingly simple denotative level ('The cat is on the mat'), One range or set of these more abstract levels includes those explicit or implicit messages where the subject of discourse is the language. We will call these meta-linguistic (for example, 'The verbal sound "cat" stands for any member of such and such class of objects', or 'The word, "cat", has no fur and cannot scratch'). The other set of levels of abstraction we will call meta-communicative (e.g., 'My telling you where to find the cat was friendly', or 'This is play'). In these, the subject of discourse is the relationship between the speakers.

It will be noted that the vast majority of both meta-linguistic and meta-communicative messages remain implicit; and also that, especially in the psychiatric interview, there occurs a further class of implicit messages about how meta-communicative messages of friendship and hostility are to be interpreted.

2. If we speculate about the evolution of communication, it is evident that a very important stage in this evolution occurs when the organism gradually ceases to respond quite 'automatically' to the mood-signs of another and becomes able to recognize the sign as a signal: that is, to recognize that the other individual's and its own signals are only signals which can be trusted, distrusted, falsified, denied, amplified, corrected and so forth.

Clearly this realization that signals are signals is by no means complete even among the human species. We all too often respond automatically to newspaper headlines as though these stimuli were direct object-indications

of events in our environment instead of signals concocted and transmitted by creatures motivated in such complex ways as ourselves. The non-human mammal is automatically excited by the sexual odour of another; and rightly so, inasmuch as the secretion of that sign is an 'involuntary' mood-sign; i.e., an outwardly perceptible event which is a part of the physiological process which we have called a mood. In the human species a more complex state of affairs begins to be the rule. Deodorants mask the involuntary olfactory signs, and in their place the cosmetic industry provides the individual with perfumes which are not involuntary signs but voluntary signals, recognizable as such. Many a man has been thrown off balance by a whiff of perfume, and if we are to believe the advertisers, it seems that these signals, voluntarily worn, have sometimes an automatic and auto-suggestive effect even upon the voluntary wearer.

Be that as it may, this brief digression will serve to illustrate a stage of evolution – the drama precipitated when organisms, having eaten of the fruit of the Tree of Knowledge, discover that their signals are signals. Not only the characteristically human invention of language can then follow, but also all the complexities of empathy, identification, projection and so on. And with these comes the possibility of communicating at the multiplicity of levels of abstraction mentioned above.

3. The first definite step in the formulation of the hypothesis guiding this research occurred in January 1952, when I went to the Fleishhacker Zoo in San Francisco to look for behavioural criteria which would indicate whether any given organism is or is not able to recognize that the signs emitted by itself and other members of the species are signals. In theory, I had thought out what such criteria might look like – that the occurrence of meta-communicative signs (or signals) in the stream of interaction between the animals would indicate that the animals have at least some awareness (conscious or unconscious) that the signs about which they meta-communicate are signals.

I knew, of course, that there was no likelihood of finding denotative messages among non-human mammals, but I was still not aware that the animal data would require an almost total revision of my thinking. What I encountered at the zoo was a phenomenon well known to everybody: I saw two young monkeys *playing*, i.e. engaged in an interactive sequence of which the unit actions or signals were similar to but not the same as those of combat. It was evident, even to the human observer, that the sequence as a whole was not combat, and evident to the human observer that to the participant monkeys this was 'not combat'.

Now, this phenomenon, play, could only occur if the participant organisms were capable of some degree of meta-communication, i.e. of exchanging signals which would carry the message 'this is play'.

4. The next step was the examination of the message 'this is play', and the realization that this message contains those elements which necessarily generate a paradox of the Russellian or Eppimindes type – a negative statement containing an implicit negative meta-statement. Expanded, the statement 'this is play' looks something like this: 'These actions in which we now engage do not denote what those actions *for which they stand* would denote.'

We now ask about the italicized words, '*for which they stand*'. We say the word 'cat' stands for any member of a certain class. That is, the phrase 'stands for' is a near synonym of 'denotes'. If we now substitute 'which they denote' for the words 'for which they stand' in the expanded definition of play, the result is: 'These actions, in which we now engage, do not denote what would be denoted by those actions which these actions denote.' The playful nip denotes the bite, but it does not denote what would be denoted by the bite.

According to the Theory of Logical Types such a message is of course inadmissible, because the word 'denote' is being used in two degrees of abstraction, and these two uses are treated as synonymous. But all that we learn from such a criticism is that it would be bad natural history to expect the mental processes and communicative habits of mammals to conform to the logician's ideal. Indeed, if human thought and communication always conformed to the ideal, Russell would not – in fact could not – have formulated the ideal.

5. A related problem in the evolution of communication concerns the origin of what Korzybski (1941) has called the map-territory relation: the fact that a message, of whatever kind, does not consist of those objects which it denotes ('the word "cat" cannot scratch us'). Rather, language bears to the objects which it denotes a relationship comparable to that which a map bears to a territory. Denotative communication as it occurs at the human level is only possible *after* the evolution of a complex set of meta-linguistic (but not verbalized)* rules which govern how words and sentences shall be related to objects and events. It is therefore appropriate to look for the evolution of such meta-linguistic and/or meta-communicative rules at a pre-human and pre-verbal level.

It appears from what is said above that play is a phenomenon in which the actions of 'play' are related to, or denote, other actions of 'not play'. We therefore meet in play with an instance of signals standing for other events, and it appears, therefore, that the evolution of play may have been an important step in the evolution of communication.

6. *Threat* is another phenomenon which resembles play in that actions

*The verbalization of these meta-linguistic rules is a much later achievement which can only occur after the evolution of a non-verbalized meta-meta-linguistics.

denote, but are different from, other actions. The clenched fist of threat is different from the punch, but it refers to a possible future (but at present non-existent) punch. And threat also is commonly recognizable among non-human mammals. Indeed it has lately been argued that a great part of what appears to be combat among members of a single species is rather to be regarded as threat (Tinbergen, 1953, Lorenz, 1952).

7. Historionic behaviour and deceit are other examples of the primitive occurrence of map-territory differentiation. And there is evidence that dramatization occurs among birds: A jackdaw may imitate her own mood-signs (Lorenz, 1952), and deceit has been observed among howler monkeys (Carpenter, 1934).

8. We might expect threat, play, and historionics to be three independent phenomena all contributing to the evolution of the discrimination between map and territory. But it seems that this would be wrong, at least so far as mammalian communication is concerned. Very brief analysis of childhood behaviour shows that such combinations as historionic play, bluff, playful threat, teasing play in response to threat, historionic threat, and so on form together a single total complex of phenomena. And such adult phenomena as gambling and playing with risk have their roots in the combination of threat and play. It is evident also that not only threat but the reciprocal of threat – the behaviour of the threatened individual – are a part of this complex. It is probable that not only historionics but also spectatorship should be included within this field. It is also appropriate to mention self-pity.

9. A further extension of this thinking leads us to include ritual within this general field in which the discrimination is drawn, but not completely, between denotative action and that which is to be denoted. Anthropological studies of peace-making ceremonies, to cite only one example, support this conclusion.

In the Andaman Islands, peace is concluded after each side has been given ceremonial freedom to strike the other. This example, however, also illustrates the labile nature of the frame 'this is play', or 'this is ritual'. The discrimination between map and territory is always liable to break down, and the ritual blows of peace-making are always liable to be mistaken for the 'real' blows of combat. In this event, the peace-making ceremony becomes a battle (Radcliffe-Brown, 1922).

10. But this leads us to recognition of a more complex form of play; the game which is constructed not upon the premise 'this is play' but rather around the question 'is this play?' And this type of interaction also has its ritual forms, e.g., in the ragging of initiation.

11. Paradox is doubly present in the signals which are exchanged within the context of play, fantasy, threat, etc. Not only does the playful nip not denote what would be denoted by the bite for which it stands but, in ad-

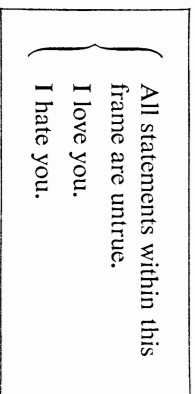
dition, the bite itself is fictional. Not only do the playing animals not quite mean what they are saying but, also, they are usually communicating about something which does not exist. At the human level, this leads to a vast variety of complications and inversions in the fields of play, fantasy and art. Conjurers and painters of the *trompe l'oeil* school concentrate upon acquiring a virtuosity whose only reward is reached after the viewer detects that he has been deceived and is forced to smile or marvel at the skill of the deceiver. Hollywood film makers spend millions of dollars to increase the realism of a shadow. Other artists, perhaps more realistically, insist that art be non-representational; and poker players achieve a strange addictive realism by equating the chips for which they play with dollars. They still insist, however, that the loser accept his loss as part of the game.

Finally, in the dim region where art, magic and religion meet and overlap, human beings have evolved the 'metaphor that is meant', the flag which men will die to save, and the sacrament that is felt to be more than 'an outward and visible sign, given unto us'. Here we can recognize an attempt to deny the difference between map and territory, and to get back to the absolute innocence of communication by means of pure mood-signs.

12. We face then two peculiarities of play: (a) that the messages or signals exchanged in play are in a certain sense untrue or not meant; and (b) that that which is denoted by these signals is non-existent. These two peculiarities sometimes combine strangely to a reverse conclusion reached above. It was stated (4) that the playful nip denotes the bite, but does not denote that which would be denoted by the bite. But there are other instances where an opposite phenomenon occurs. A man experiences the full intensity of subjective terror when a spear is flung at him out of the 3D screen or when he falls headlong from some peak created in his own mind in the intensity of nightmare. At the moment of terror there was no questioning of 'reality', but still there was no spear in the movie house and no cliff in the bedroom. The images did not denote that which they seemed to denote, but these same images did really evoke that terror which would have been evoked by a real spear or a real precipice. By a similar trick of self-contradiction the film makers of Hollywood are free to offer to a puritanical public a vast range of pseudo-sexual fantasy which otherwise would not be tolerated. In *David and Bathsheba*, Bathsheba can be a Trollistic link between David and Uriah. And in *Hans Christian Andersen*, the hero starts out accompanied by a boy. He tries to get a woman, but when he is defeated in this attempt, he returns to the boy. In all of this there is, of course, no homosexuality, but the choice of these symbolisms is associated in these fantasies with certain characteristic ideas, e.g. about the hopelessness of the heterosexual masculine position when faced with certain sorts of women or with certain sorts of male authority. In sum, the pseudo-

homosexuality of the fantasy does not stand for any real homosexuality, but does stand for and express attitudes which might accompany a real homosexuality or feed its etiological roots. The symbols do not denote homosexuality, but do denote ideas for which homosexuality is an appropriate symbol. Evidently it is necessary to re-examine the precise semantic validity of the interpretations which the psychiatrist offers to a patient and, as preliminary to this analysis, it will be necessary to examine the nature of the frame in which these interpretations are offered.

13. What has previously been said about play can be used as an introductory example for the discussion of frames and contexts. In sum, it is our hypothesis that the message 'this is play' establishes a paradoxical frame comparable to Epimenides' paradox. This frame may be diagrammed thus:



The first statement within this frame is a self-contradictory proposition about itself. If this first statement is true, then it must be false. If it be false, then it must be true. But this first statement carries with it all the other statements in the frame. So, if the first statement be true, then all the others must be false; and *vice versa*, if the first statement be untrue then all the others must be true.

14. The logically minded will notice a *non sequitur*. It could be urged that even if the first statement is false, there remains a logical possibility that some of the other statements in the frame are untrue. It is, however, a characteristic of unconscious or 'primary process' thinking that the thinker is unable to discriminate between 'some' and 'all', and unable to discriminate between 'not all' and 'none'. It seems that the achievement of these discriminations is performed by higher or more conscious mental processes which serve in the non-psychotic individual to correct the black-and-white thinking of the lower levels. We assume, and this seems to be an orthodox assumption, that primary process is continually operating, and that the psychological validity of the paradoxical play frame depends upon this part of the mind.

15. But, conversely, while it is necessary to invoke the primary process as an explanatory principle in order to delete the notion of 'some' from between 'all' and 'none', this does not mean that play is simply a primary process phenomenon. The discrimination between 'play' and 'non-play',

like the discrimination between fantasy and non-fantasy, is certainly a function of secondary process, or 'ego'. Within the dream the dreamer is usually unaware that he is dreaming, and within 'play' he must often be reminded that 'this is play'.

Similarly, within dream or fantasy the dreamer does not operate with the concept 'untrue'. He operates with all sorts of statements but with a curious inability to achieve meta-statements. He cannot, unless close to waking, dream a statement referring to (i.e. framing) his dream.

It therefore follows that the play frame as here used as an explanatory principle implies a special combination of primary and secondary processes. This, however, is related to what was said earlier, when it was argued that play marks a step forward in the evolution of communication — the crucial step in the discovery of map-territory relations. In primary process, map and territory are equated; in secondary process, they can be discriminated. In play, they are both equated and discriminated.

16. Another logical anomaly in this system must be mentioned: that the relationship between two propositions which is commonly described by the word 'premise' has become intransitive. In general, all asymmetrical relationships are transitive. The relationship 'greater than' is typical in this respect; it is conventional to argue that if A is greater than B, and B is greater than C, then A is greater than C. But in psychological processes the transitivity of asymmetrical relations is not observed. The proposition P may be a premise for Q; Q may be a premise for R; and R may be a premise for P. Specifically, in the system which we are considering, the circle is still more contracted. The message 'All statements within this frame are untrue' is itself to be taken as a premise in evaluating its own truth or untruth. (Cf. The intransitivity of psychological preference discussed by McCulloch, 1945, and paradigm for all paradoxes of this general type. Russell's 'class of classes which are not members of themselves'. Here Russell demonstrates that paradox is generated by treating the relationship, 'is a member of', as an intransitive.) With this caveat, that the 'premise' relation in psychology is likely to be intransitive, we shall use the word 'premise' to denote a dependency of one idea or message upon another comparable to the dependency of one proposition upon another which is referred to in logic by saying that the proposition P is a premise for Q.

17. All this, however, leaves unclear what is meant by 'frame' and the related notion of 'context'. To clarify these, it is necessary to insist first that these are psychological concepts. We use two sorts of analogy to discuss these notions: the physical analogy of the picture frame and the more abstract, but still not psychological, analogy of the mathematical set. In set theory the mathematicians have developed axioms and theorems to discuss

with rigour the logical implications of membership in overlapping categories or 'sets'. The relationship between sets are commonly illustrated by diagrams in which the items or members of a larger universe are represented by dots, and the smaller sets are delimited by imaginary lines enclosing the members of each set. Such diagrams then illustrate a topological approach to the logic of classification. The first step in defining a psychological frame might be to say that it is (or delimits) a class or set of messages (or meaningful actions). The play of two individuals on a certain occasion would then be defined as the set of all messages exchanged by them within a limited period of time and modified by the paradoxical premise system which we have described. In a set-theoretical diagram these messages might be represented by dots, and the 'set' enclosed by a line which would separate these from other dots representing non-play messages. The mathematical analogy breaks down, however, because the psychological frame is not satisfactorily represented by an imaginary line. We assume that the psychological frame has some degree of real existence. In many instances, the frame is consciously recognized and even represented in vocabulary ('play', 'movie', 'interview', 'job', 'language', etc.). In other cases, there may be no explicit verbal reference to the frame, and the subject may have no consciousness of it. The analyst, however, finds that his own thinking is simplified if he uses the notion of an unconscious frame as an explanatory principle; usually he goes further than this and infers its existence in the subject's unconscious.

But while the analogy of the mathematical set is perhaps over-abstract, the analogy of the picture frame is excessively concrete. The psychological concept which we are trying to define is neither physical nor logical. Rather, the actual physical frame is, we believe, added by human beings to physical pictures because these human beings operate more easily in a universe in which some of their psychological characteristics are externalized. It is these characteristics which we are trying to discuss, using the externalization as an illustrative device.

18. The common functions and uses of psychological frames may now be listed and illustrated by reference to the analogies whose limitations have been indicated in the previous paragraph:

- a. Psychological frames are exclusive, i.e., by including certain messages (or meaningful actions) within a frame, certain other messages are excluded.
- b. Psychological frames are inclusive, i.e. by excluding certain messages, certain others are included. From the point of view of set theory these two functions are synonymous, but from the point of view of psychology it is necessary to list them separately. The frame around a picture, if we consider this frame as a message intended to order or organize the perception

of the viewer, says 'Attend to what is within and do not attend to what is outside.' Figure and ground, as these terms are used by Gestalt psychologists, are not symmetrically related as are the set and non-set of set theory. Perception of the ground must be positively inhibited and perception of the figure (in this case the picture) must be positively enhanced.

- c. Psychological frames are related to what we have called 'premises'. The picture frame tells the viewer that he is not to use the same sort of thinking in interpreting the picture that he might use in interpreting the wallpaper outside the frame. Or, in terms of the analogy from set theory, the messages enclosed within the imaginary line are defined as members of a class by virtue of their sharing common premises or mutual relevance. The frame itself thus becomes a part of the premise system. Either, as in the case of the play frame, the frame is involved in the evaluation of the messages which it contains, or the frame merely assists the mind in understanding the contained messages by reminding the thinker that these messages are mutually relevant and the messages outside the frame may be ignored.

d. In the sense of the previous paragraph, a frame is meta-communicative. Any message, which either explicitly or implicitly defines a frame, *ipso facto* gives the receiver instructions or aid in his attempt to understand the messages included within the frame.

e. The converse of (d) is also true. Every meta-communicative or meta-linguistic message defines, either explicitly or implicitly, the set of messages about which it communicates, i.e. every meta-communicative message is or defines a psychological frame. This, for example, is very evident in regard to such small meta-communicative signals as punctuation marks in a printed message, but applies equally to such complex meta-communicative messages as the psychiatrist's definition of his own curative role in terms of which his contributions to the whole mass of messages in psychotherapy are to be understood.

f. The relation between psychological frame and perceptual gestalt needs to be considered, and here the analogy of the picture frame is useful. In a painting by Roualt or Blake, the human figures and other objects represented are outlined. 'Wise men see outlines and therefore they draw them.' But outside these lines, which delimit the perceptual gestalt or 'figure', there is a background or 'ground' which in turn is limited by the picture frame. Similarly, in set theoretical diagrams, the larger universe within which the smaller sets are drawn is itself enclosed in a frame. This double framing is, we believe, not merely a matter of 'frames within frames' but an indication that mental processes resemble logic in *needing* an outer frame to delimit the ground against which the figures are to be perceived. This need is often unsatisfied, as when we see a piece of sculpture in a junk shop window, but this is uncomfortable. We suggest that the need for this outer

limit to the ground is related to a preference for avoiding the paradoxes of abstraction. When a logical class or set of items is defined – for example, the class of matchboxes – it is necessary to delimit the set of items which are to be excluded, in this case, all those things which are not matchboxes. But the items to be included in the background set must be of the same degree of abstraction, i.e., of the same ‘logical type’ as those within the set itself. Specifically, if paradox is to be avoided, the ‘class of matchboxes’ and the ‘class of non-matchboxes’ (even though both these items are clearly not match boxes) must not be regarded as members of the class of non-matchboxes. No class can be a member of itself. The picture frame then, because it delimits a background, is here regarded as an external representation of a very special and important type of psychological frame – namely a frame whose function is to delimit a logical type. This, in fact, is what was indicated above when it was said that the picture frame is an instruction to the viewer that he should not extend the premises which obtain between the figures within the picture to the wallpaper behind it.

But it is precisely this sort of frame that precipitates paradox. The rule for avoiding paradoxes insists that the items outside any enclosing line be of the same logical type as those within, but the picture frame, as analysed above, is a line dividing items of one logical type from those of another. In passing, it is interesting to note that Russell’s rule cannot be stated without breaking the rule. Russell insists that all items of inappropriate logical type be excluded (i.e., by an imaginary line) from the background of any class, i.e., he insists upon the drawing of an imaginary line of precisely the sort which he prohibits.

19. This whole matter of frames and paradoxes may be illustrated in terms of animal behaviour, where three types of message may be recognized or deduced: (a) Messages of the sort which we here call mood-signs; (b) messages which simulate mood-signs (in play, threat, histrionics, etc.); and (c) messages which enable the receiver to discriminate between mood-signs and those other signs which resemble them. The message ‘This is play’ is of this third type. It tells the receiver that certain nips and other meaningful actions are not messages of the first type.

The message ‘This is play’ thus sets a frame of the sort which is likely to precipitate paradox: it is an attempt to discriminate between, or to draw a line between, categories of different logical types.

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