



Bacciagaluppi_M_1987a

Proximate causes of psychopathology

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„Proximate and Remote Causation of Psychopathology in an Ethological Framework,“ Paper presented at the „Sociophysiology“ Satellite Symposium of the IBRO Second World Congress of Neurosciences in Pécs, Hungary, August 1987, 18 pp.

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In an ethological framework, proximate causes of psychopathology are those events which thwart innate behavioral tendencies. A typical experimental example is provided by Harlow's studies. The separation of infant rhesus monkeys from their mother, and their rearing in isolation, leads to species-typical abnormal behaviour (MacGuire and Fairbanks, 1977, p. 13).

In human studies, John Bowlby (1973) observed the effect on children of unwilling separation from their mother. The first phase of a child's reaction is protest, in which the child feels separation anxiety and functional anger, aimed at achieving reunion with the mother. If this reaction does not elicit appropriate parental reactions, it is followed by two other phases, despair [002] and detachment, in which, functional anger is replaced by dysfunctional anger. According to Bowlby, these reactions are due to the thwarting of a primary attachment need. This need is innate. It was selected in the course of evolution on account of its survival value in prehistorical conditions (Bowlby, 1969).

Most of the empirical work reported by Bowlby concerns the physical absence of the mother, due either to separation or loss, because these clear-cut events lend themselves more readily to quantitative study. It should be stressed, however, that according to Bowlby emotional unavailability in the mother is just as pathogenic, if not more so, than actual separation. Both the initial frustration and the later failure of the child's protest are often due to inappropriate parental responses, rather than to impersonal events.

Bowlby started by observing the effects of the frustration of attachment needs, and this remained the main focus of his work. The theory which he built up from these observations is now known as attachment theory. However, autonomy needs can also be frustrated by inappropriate parental responses. In pathological conditions there is often a *twofold frustration of basic needs* in the child, and hence a dual source of anger (Bacciagaluppi and Bacciagaluppi Mazza, 1982). [003]

Parents often fail to provide appropriate responses „because, if they have suffered in their own childhood from the twofold frustration of „basic needs, they cannot, in their turn, satisfy these needs in their children. They cannot satisfy their children's initial attachment needs, and they will later tend to prevent them from achieving autonomy, „because they may more or less covertly seek to satisfy their own infantile needs by eliciting parental behaviour in the children. This is the situation described by Bowlby as the



inverted parent-child relationship. The resulting structure may be described as *an interplay between the parent's and the child's dual unsatisfied needs* (Bacciagaluppi and Bacciagaluppi Mazza, 1982).

Remote causes of psychopathology

If attachment and exploratory behaviour in children were selected in the course of evolution, so was the complementary behaviour in parents. What prevents the innate appropriate responses from operating in parents?

In the search for these underlying causes of psychopathology, the breakdown of traditional structures has often been held responsible. The classical example is the concept of *anomie* (the absence of rules) introduced into sociology by Durkheim in his study of suicide (Durkheim, 1897). More recently, in an [004] ethological framework, J. P. Scott has used the concept of „disaggregation of social systems“ (Scott, 1977). A famous example quoted by Scott is Zuckerman's study of „baboons in the London zoo.

In our epoch, we are witnessing a breakdown of this sort in the transition from the peasant to the industrial culture. For example, in their field research on a Mexican village, Fromm and Maccoby (1970) suggest that the breakdown of the patriarchal structure of Mexican peasants makes the male vulnerable to alcoholism (op. cit., p. 170).

This transition is at present highly relevant and available to observation. In this paper, however, I would like to draw attention to a much earlier and more basic transition, that from the hunter-gatherer to the peasant culture. This transition took place approximately ten thousand years ago, when the domestication of plants and animals gave rise to agriculture and herding.

In order to reconstruct the hunter-gatherer adaptation, in addition to fossil and archaeological findings, we can draw on the observation of surviving hunter-gatherer populations, especially of those, like the Kalahari Bushmen, which live in the same area in which the human species originally evolved (DeVore and Konner, [005] 1974). These hunter-gatherers live in small nomadic groups. They have few material possessions. There is a basic gender-linked division of labour: the men hunt and the women gather, carrying their babies with them. Births are spaced approximately every four years by the natural contraceptive device of prolonged breast-feeding. Scarcity of resources is reacted to not by warfare but by band dispersal. According to Richard Leakey (Leakey and Lewin, 1977). the original hunter-gatherer adaptation was not characterized by violence but, on the contrary, by cooperation and sharing.

The advent of agriculture led to increasingly rapid and radical changes in the physical and social environment. It created a food surplus that allowed rapid population growth. It also involved the switch to sedentary habits, the creation of private property, urbanization and trade. It gave rise to the peasant adaptation, which has a typical family structure and character structure (Farb, 1978). Peasants inherit the land through the male line and base the family on the presence of three generations living together. They produce a large number of children, in order that at least some will survive, help with the work, and care for the parents in sickness and old age. The character structure stemming from this adaptation still exerts an influence on our attitudes today, for most Westerners are only a few/ generations removed from [006] peasant ancestry. As Fromm and Maccoby (1970, p. 127) point out, there is a lag- between socioeconomic change and changes of the traditional character.

These two adaptations have a different standing. The hunter-gatherer adaptation is the result of *biological* evolution lasting hundreds of thousands of years. The peasant adaptation is the result of *cultural* evolution, too recent for adaptation to have taken place at a genotypic- level.

To be sure, there are examples of genetic modification in man following the domestication of animals. One is the production of the enzyme lactase, and therefore the capacity to digest milk, in adults of European descent (Harris, 1980, p. 98). This is an example of a new social custom, developed with, the domestication of cattle, that started natural selection in favour of a rare gene (Cavalli-Sforza, 1975, p. 29). As regards genetic changes affecting behaviour, the Lumsden-Wilson theory (Lumsden and Wilson, 1981) holds that they can occur in as few as a thousand years. However, as Bateson (1979) has stressed, natural selection has favored those developments that protect the embryo and juvenile from external changes. We may presume that innate behaviour at the beginning of life has remained basically unchanged and is still adapted to the prehistorical environment. The innate behavioral traits [007] characteristic of the hunter-gatherer adaptation are still potentially present in each of us at birth. The peasant adaptation is superimposed onto the earlier one at each generation.

At many points, these two adaptations are *in conflict*. This implies a conflict between biological and cultural evolution, in contrast to the position of the human sociobiologists, who assume that, because the capacity for culture is itself a product of evolution, culture will usually maximize inclusive fitness. In their recent book on cultural evolution, Boyd and Richerson (1985) point out that certain evolutionary forces characteristic of cultural evolution may lead to maladaptive outcomes in terms of genetic fitness. For example, they can increase the frequency of genetically maladaptive cultural variants such as celibate religious orders.

This conflict has arisen notwithstanding the coevolution of genes and culture, because the two processes are taking place at increasingly different rates. Particularly in the case of innate behavioral tendencies at the beginning of the life cycle, which tend to remain stable, the conflict seems to be between a stable genetic adaptation and a diverging cultural adaptation.

In this conflict, *the cultural variant wins*. As Fromm (1932) [008] stated in an early paper, economic conditions necessarily prevail over man's instinctual endowment. When the peasant mode of production became a dominant cultural variant, it molded the family and character structures best suited to its own continuation.

It is suggested here that *this conflict is pathogenic*, and may be considered the basic source of psychopathology. Although man is characterized by his flexibility, namely by his capacity for phenotypic adaptation to the environment, there are limits to this capacity. Strain appears if the environment differs too widely from the prehistorical environment to which we are genotypically adapted.

In their Mexican study, Fromm and Maccoby (1970) regret that industrial society is destroying the life-centered values of the peasant culture (op. cit., p. 5). But they themselves describe peasants as „highly individualistic, conservative, suspicious and reluctant to spend“ (op. cit., p. 4). In terms of Fromm's characterology, this does not correspond to the productive character – the normal human character which emerges in optimal environmental conditions – but, at best, to the hoarding character, or the anal-sadistic character of traditional Freudian characterology. Thus, the peasant culture does not seem to be conducive to the optimal development of human resources. [009]

On the contrary, it is suggested in this paper that the family-structure of the peasant culture, „by keeping the children bound to the family, is inherently frustrating of basic human needs and gives rise to psychopathology.

The effects of this family structure may be seen in present-day clinical situations. In his work in family therapy, Stierlin (1978) has described *multiple binding mechanisms* which serve to tie children to the family. Psychological binds, based on the exploitation of motivational systems, are used in addition to external, economic binds. Stierlin described these mechanisms in terms of traditional Freudian structural theory, but they can be reformulated in terms of attachment theory: a detached parent elicits anxious attachment, an aggressive parent elicits submission, a seductive parent elicits inappropriate sexual attachment, role inversion elicits premature parental behaviour in the child.

A special binding mechanism is of a cognitive nature, and consists in the discouragement of awareness. Bowlby (1979) has discussed how adults apply pressure to children to prevent them from processing certain information. [010]

Another important binding mechanism, which arises in the context of role inversion, is separation guilt, discussed by Arnold Modell (1964). Modell started from the phenomenon of „survivor guilt“, which was described by Niederland in survivors of the Holocaust, and arrived at the concept of separation guilt, based on the feeling that one's own autonomy is damaging to others.

In this type of family structure, attachment needs are frustrated because acceptance of the children is conditional and therefore incomplete. Later, autonomy needs are equally frustrated by the obligation to remain bound.

The frustration of these basic needs gives rise to defensive aggression, but this is typically met by punishment. At this point, to use Fromm's terms (Fromm, 1973). benign aggression is transformed into malignant aggression. This corresponds to the distinction, in Bowlby's early work (Durbin and Bowlby, 1939), between simple and transformed aggression, and, in his later work (Bowlby, 1973), to that between functional and dysfunctional anger. Thus, a third innate behavioral tendency in the child – that towards defensive aggression – is also frustrated. [011]

As an example of the operation of „binding mechanisms we may examine the multiple effects of a suicide threat on the part of a parent. Four components may be described in the parent's message. (1) The prospect of separation. This elicits in the child separation anxiety and simple aggression. (2) Anger in the parent. This increases the anxiety in the child: aggression is held in check lest the threat is carried out. Aggression in the child begins to undergo transformation. (3) Blame, namely, as Friedman (1985) defines it, „the attribution of causal responsibility for the distress of others“. This third component tends to turn the child's anger back unto the child itself. If there is separation, the child is made to feel that only he/she is to blame. Furthermore, the child is made to feel guilty for the parent's distress. Separation is presented as a just punishment for the damage inflicted by the child on the parent. (4) The display of suffering on the parent's part. This elicits altruistic, or prosocial, behaviour in the child and gives rise to remorse, based on love, as distinct from guilt feelings caused by blame (Friedman, 1985). [012]

In ethological terms, the situation of the child subject to these „binding mechanisms may be compared to that of a cornered animal. According to Scott's ethological model (Scott, 1977), the inability to escape from the situation is one of four factors af-

fecting maladaptive agonistic behaviour. Using psychoanalytic terminology, Bowlby (Durbin and Bowlby, 1939; Bowlby, 1973, p. 250) describes three kinds of transformation of aggression: repression, displacement and projection. In addition, Scott (1977) describes two kinds of disorganized individual agonistic behaviour. One consists in outbursts of uncontrollable rage, the other is expressed as psychosomatic symptoms such as high blood pressure and constipation.

Depression may be another important consequence of a traumatic situation where escape is blocked. According to Seligman's learned helplessness model (Seligman and Maier, 1967), depression sets in when the individual realises that he has lost all control over environmental responses.

When the family thus becomes a closed system, it no longer performs its normal function, as defined by Bowlby, of a safe base from which to explore. It can rather be likened to a prison, or a concentration camp, and this is indeed how many patients represent it symbolically in their dreams. [013]

Here is a clinical illustration, drawn from psychoanalytic practice. The patient was the object of role reversal on the part of both parents. The mother, who had been an adopted child, developed depression after giving birth to the patient and was hospitalized for some time. She later became very demanding of the patient and would support her demands by quoting her own suffering. The father was often away when the patient was small. He later developed a physical illness, stayed at home, relied mainly on the patient to look after him, was covertly seductive and would reproach her if she was late. When this patient was a little girl she used to enjoy ill-treating animals. She came into therapy after a suicide attempt.

At the beginning of therapy she dreamed she was in a concentration camp. A doctor showed her many little girls with battered faces and tried to rape her. The concentration camp may be viewed as her relationship with the hostile mother, allowing no escape, and the doctor as the father who proved a disappointing subsidiary attachment figure and actually cooperated with the mother to keep the child bound. This situation elicited a great deal of desperate anger, which was at first redirected onto weaker objects and was later turned back onto the patient herself.

In a later concentration-camp dream, the patient was shown some experiments performed on children, then expected to be killed for having seen them. Here, the prohibition to see was at work. Overtly, this patient's family was supposed to be a very happy family in which everybody loved each other. [014]

Prospects

I believe we should distinguish between, comparatively short-term maladaptation due to the breakdown of the peasant culture, and long-term maladaptation due to the superposition of the peasant culture onto the hunter-gatherer adaptation. There is some evidence that, although modernization may exacerbate short-term maladaptation, it may lead to a solution of the long-term conflict between cultural and biological evolution. Judging from the data reported by Boyd and Richerson (1985), there seems to be a convergence between our prehistorical hunter-gatherer adaptation and Western industrial societies for traits such as non-authoritarian child-rearing patterns (op. cit., p. 48) and field-independent cognitive style (op. cit., p. 179).

Another such convergence may be taking place as regards the reduction of family



size, also discussed by Boyd and Richerson (op. cit., pp. 199-202). There is a tendency to view this development as contrasting with ordinary Darwinian fitness. Actually, large families are characteristic of the agricultural adaptation. Judging from surviving hunter-gatherers such as the Kalahari Bushmen, our prehistoric adaptation was characterized by smaller family size. [015]

Another hopeful development was pointed out „by the historian Arnold Toynbee (1976). The Lower Palaeolithic Age was characterized by uniformity between human groups. Later, differentiation took place, which leads to the ingroup/outgroup distinction and facilitates the displacement and projection of aggression at a group level. Toynbee suggests that the modern age, characterized by fast communication, may once more lead to uniformity.

It may be hypothesized that cultural and biological evolution coincided during pre-history, diverged after the agricultural revolution, and may be in the process of converging once more. [016]

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