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**"The Doctor-Patient Relationship Revisited
An Analysis of the Placebo Effect"**

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An overview of prescientific medicine, evolution, and individual human development is presented in an attempt to discover the generic factors operating in all interpersonal therapies. We hypothesize that the placebo effect rests on the universal human need for a group and, by symbolic extension, a system. BECAUSE medicine began as an empirical art rather than an experimental science, its archives are littered with obsolete models and discredited practices that were sustained and, as it were, subsidized by a persisting, probably universal, transcultural force of enormous potency that we have come to recognize as the placebo effect. Shapiro (1) defines it as "the psychological, physiological or psychophysiological effect of any medication or procedure given with therapeutic intent, which is independent of or minimally related to the pharmacologic effects of the medication or to the specific effects of the procedure, and which operates through a psychological mechanism." It is generally agreed that the history of medicine up until the last 100 to 150 years has been the history of this pervasive placebo effect. Each age and each culture, lacking truly specific therapies and not even aware of this deficiency, subscribed to its own variant of the three or four basic

models of illness (2). If the symptoms were caused by intrusion of harmful substances, the patient was starved, puked, leeches, or purged; if caused by loss of vital substances, he was plied with edibles and inedibles; if caused by taboo violation, confession, expiation, and purification were applied to the sinner; and if caused by witchcraft, countersorcery, witchhunts, and perhaps scapegoating were the accepted practice. In spite of the fact that many who might have survived their illness unaided succumbed to the treatment, there were sufficient successes to perpetuate the practice. This is not surprising when we take into account the fact that 60% to 80% (3) of the case load carried by a general practitioner falls into the category of functional illnesses, an area where the placebo effect would be prepotent and might even be properly considered a specific.

Just as the *Penicillium* mold was once looked on as a bothersome bacteriostatic contaminant that spoiled culture growths, so the placebo effect has sometimes been considered an unwanted therapeutic contaminant that interfered with efforts to isolate specific remedies. Perhaps an analysis of this unmatched healing force would lead to its becoming a purer and more useful therapeutic agent. The proper placebo is probably a specific in its own right for functional maladies such as hypochondriasis, psychophysiologic disturbances, and most emotional disorders. Furthermore, if the placebo is viewed as supplying a critical need for optimal human functioning, then such an analysis would also show the essential psychological factors that underwrite normalcy.

We might then be in a position to describe the generic factors involved not only in suggestion but in other interpersonal influence. To this end we present an overview of prescientific medicine, evolution, individual human development, and psychotherapy, in an effort to formulate a hypothesis concerning two factors that we believe are the necessary and sufficient ingredients in the placebo effect.

Prescientific Medicine

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since the content of the therapeutic procedures and the theories that justified them varied both culturally and historically, one would expect that the common therapeutic denominators would be found in the form or structure of the medical transactions. Through the bewildering array of these transactions one can discern two invariable characteristics, one associated with the medical theory and the other with medical practice. First, each etiologic theory explained the condition of illness, possession, or deviancy (the names changed with the times) in a cognitively specific way that both expressed and confirmed the prevailing *Weltanschauung*—magic, religious, mystic, rational, and so forth. The conceptual boundaries of one became the conceptual limitations of the other because medicine was an integral and integrating part of the cultural system. At the very least, the sick role provided a socially sanctioned respite while the practitioner fitted the symptoms into a coherent, meaningful system, syntonic with the prevailing culture. Second, the practitioners—socially approved healers, designated by a variety of names: shaman, priest, *hungan*, and so forth—occupied a social niche of respect, reverence, and influence comparable with the parental role. Thus the historical material suggests that, regardless of period or culture, those defined as patients—distressed or disabled—have always been helped by two aides of incalculable importance: participation in a shared cognitive system that made otherwise chaotic symptoms understandable and access to a relationship with a culturally sanctioned parental figure. We shall label these system formation and group formation, respectively, and examine them in detail.

Group Formation

EVOLUTIONARY ROOTS

The condition of man as a social animal derives from both evolutionary and developmental sources. It traces its phylogenetic roots back past the earliest prehomimid hordes and is inextricably tied- to the evolutionary progression of the central nervous system. Instinctual knowledge became superseded in higher animals by an open-ended capacity to learn from the environment, resulting in a longer gestation period that required increased protection of the pregnant female, an incomplete development of the central

nervous system at birth that required postpartum experiences for full maturation, and an infantile helplessness that required a prolonged period of contact with parents or parent surrogates for physical survival. All this is by way of saying that the progressive complexity of the brain, which eventuated in extending the range of environmental mastery, would have stopped at any stage that was not accompanied by a tandem development of social drives that provided the essential societal matrix. The condition of maternal incapacity, central nervous system immaturity, and infantile helplessness was such that physical survival depended on being born into a supportive community encompassing a division of labor and a cultural apparatus for transmitting life-preserving skills. An average expected environment of this complexity could hardly have been left to chance and more probably resulted from concurrent social drives for group formation. A survey of social evolution, from the loose aggregates of herds and flocks up through the elaborate hierarchical structures of subhuman primates such as baboons and chimpanzees, suggests a step by step correlation of cerebral and social development, each making the other possible. With the introduction of language, interpersonal communication achieved a higher order of specificity and accelerated the socialization process, but it should not be overlooked that language itself could not have developed unless there had been a prior capacity for grouping. In the beginning was not the *word* but the *group*.

DEVELOPMENTAL ROOTS

Embedded in the individual history of each human being is a physically and emotionally critical relationship with a caretaking person—usually but not necessarily the mother—resulting in the formation of a *dyadic bond*. The importance of this primordial parent-infant relationship is unrivaled and, if seriously impaired, results in irreversible mental and emotional damage, not only in monkeys, as Harlow and Zimmerman's experiments (4) have demonstrated, but in humans as well (5, 6). Interestingly, even so basic a process as the endocrine development of pigeons, once thought to be the inevitable unfolding of a genetic program, has been shown to depend on the visual perception of a conspecific (7). Nor can the

importance of an interpersonal relationship be dismissed as a phenomenon related only to evolutionarily older animals or developmentally immature humans. Asch's studies (8) of college students provides graphic if distressing evidence that, even among the vigorous and intelligent, social isolation impairs perception of reality and ability to use one's faculties. The ample literature on brainwashing techniques (9) 5 9 6 April 1973 • Annals of Internal Medicine • Volume 78 • Number 4 and the recurrent phenomenon of mass hysteria are further examples of man's perpetual emotional dependence on other men.

All later group formation (a developmental extension of the pair) probably owes much of its therapeutic* potency to a reactivation of the feelings of basic trust adherent to the original mother-infant dyad. When we take into account that man's capacity for abstraction allows this relationship with the significant other(s) to be real, fancied, symbolic, anticipated, or remembered, we recognize that there are no beings called human who do not have such a relationship. Little wonder that alienation is one of the most dreadful psychological states, for at the deepest level of functioning, one human being is no human being.

System Formation

Just as the infant's immediate survival depends on the mentioned dyadic bond, the developing child's long-term survival hinges on the availability of a communicable body of knowledge concerning both his physical and social environment. From the group that underwrote his cerebral development and guaranteed his physical survival comes also his fundamental picture of the world—his cognitive system.

By "system" is meant a comprehensive, integrated, coherent organization of cognitive structures concerning the total environment, animate and inanimate.

In the vernacular it is an understanding of how things "hang together"; it enables man to locate himself spatially and historically. Further, it provides a conceptual-perceptual structure beyond whose limits few men transgress even in imagination. This learning of a cognitive structure occurs so early and so consistently that we are aware of no humans without a system; religion, communism, and rationalism are all systems. So identified is the system with the

original group from which it was learned that the emotional security adherent to the original dyad is largely transferred to the incorporated system in the maturing (socialized) individual and eventually the system comes to stand coequal with the group as a source of security.

It is suggested here that these two factors—group formation and system formation—are as essential to psychic functioning as nourishment is to physical functioning, are the basic factors composing what is subjectively experienced as a feeling of "meaning," are invariably used in all successful interpersonal therapies, and are the necessary and sufficient components of the placebo effect. If this is correct, then it would follow that the drives for group-system formation would be prepotent over arousal drives, such as sex and aggression. Clinically we would expect that a threat to group-system relations should lead to either an inhibition of the arousal drives or their intensification in the service of restoring the group-system, whereas a significant disruption of the group-system would result in a psychological or physiological breakdown. The specific treatment for such a malady would then be the restoration of the individual to his supportive group-system network. As the physician himself may sometimes be the remedy, so the placebo in such cases becomes the specific.

Comment

There are at least three aspects—theoretical, investigative, and philosophical—that bear on this interesting phenomenon. From a theoretical viewpoint, many valid factors such as faith, hope, suggestion, and transference have been invoked to explain the placebo effect, but the group-system hypothesis appears to have the advantage of parsimony and simplicity of application to fields as otherwise diverse as politics, religion, psychotherapy, and general practice. We can, for example, beneath a variety of different labels, discern the integrating force of the group-system in Alcoholics Anonymous, Synanon, religious cults, faith healing, zealous political movements, brain washing, and many forms of psychotherapy. Psychodynamic-insight psychotherapies and therapeutic communities alike provide the patient with both substitute relationships and a systematized Weltanschauung.

From an investigative viewpoint, accuracy requires that group-system factors be carefully controlled. The true double-blind approach would need two refinements.

First, the explanation (cognitive system) that accompanies the agent should not simply be uniform but should be uniformly culturally specific to the subject's prevailing system. In other words, rational-scientific or mystical explanations should be matched and syntonetic with the systemic conceptualizations of the subjects. Second, the agent should be dispensed in similar individual or group settings.

Battegay (10) has shown, for example, that "psychoactive drugs are more effective administered to groups of patients than to individuals."

But perhaps the most important aspect of the placebo effect lies less in what we can learn about drug response than in what it teaches us about mankind's basic needs. What he takes from the placebo may be what he needs from life—a sense of "meaning" that derives from integration with his group and

* The term "therapeutic" is here used according to Webster's definition of mental therapeutics to mean "treatment directed to influencing the mind." The label of good and bad influence is one of value and not relevant to this issue.

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with his system. Just as physiologic regulators of homeostasis provide the physical milieu for optimal functioning, so psychological regulators provide the parallel emotional milieu, with, of course, the same consequences from malfunctioning. The poikilothermic mechanisms that enable man to endure the cold are the same ones that allow him to die of fever; the symbolic mechanisms that provide man with sufficient group-system contact to traverse the lonely reaches of outer space may under other circumstances make him feel isolated in a crowd, and the suicide is just as dead as the victim of anaphylactic shock. While we accept the usefulness of chemical intervention to restore physiologic homeostasis, we should be no less enthusiastic about the application of the group-system formation through the medium of the doctor-patient relationship as a restorer of euergasia. It would be well to view the placebo as a drug of significant potency, involving considerations of dosage, timing, route of administration, indications, and even side effects, with the recognition that,

like other drugs, it works better in the hands of some than others. An awareness that its active ingredient derives from group-system needs, that it is the physical reaffirmation of man's essential tie with his sociocultural nexus, is a step in this direction. It is a measure of medicine's maturity that we can return to the precise use of the placebo out of insight rather than ignorance. This powerful and pervasive agent, which was once the mainstay of treatment and then the contaminant of research, may emerge in its own right as a therapeutic specific par excellence.

Glossary

Weltanschauung: a comprehensive conception of the world, especially from a specific viewpoint.

dyadic bond: the intense, primary attachment of the infant toward the mother.

conspecific: a member of the same species.

eurgasia: normal psychobiological functioning.

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