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## ABSTRACT

The writings of Gotthard Booth, M.D., especially his concept of the object relation, demonstrate a change in medical thought away from a mechanistic to a holistic conception of man. His concept of the object relation and the diagnostic rationale that he developed from it reveal changes in medical conceptualization that are consistent with those changes in conceptualization across a variety of disciplines that have been identified as part of an emerging paradigm.

THE CONCEPT OF THE OBJECT RELATION IN THE WRITINGS OF  
GOTTHARD BOOTH, M.D.: AN EXAMPLE OF  
AN EMERGING PARADIGM IN MEDICINE

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Submitted in partial fulfillment of the  
requirements for the Master of Arts degree,  
Wilfrid Laurier University.

Thomas Charles Foster

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## A NOTE ON THE REFERENCES

For the sake of brevity, I have used the letters (CE) to refer to The Cancer Epidemic: Shadow of the Conquest of Nature on all occasions except the first. In the case of Booth's unpublished materials, I have used the full name followed by the letters GBA, signifying Gotthard Booth Archive. In the case of "The Physician Between the Spirit and the Flesh," an unpublished book fragment to which I made frequent reference, I used the letters (PBSF) after the first usage.

In the case of my remarks on the work of Viktor von Weiszaecker, I am referring to the English translation of his book Der Gestaltkreis unless otherwise cited. This translation is being prepared for publication at the present time; bibliographic information on it appears following the bibliographic information on the German edition in the List of Works Consulted.

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## I. An Historical Sketch

In our culture, medicine begins with the work of the Greek physician, Hippocrates. A large body of work, some seventy volumes in all, have traditionally been attributed to this man, who lived approximately five centuries before Christ. A modern historian (Coulter) has suggested that in actuality the seventy volumes were not written by Hippocrates but by numerous writers over a period of several hundred years. He goes on to analyze the body of works according to the therapeutics advised in each and thereby he identifies two competing systems of medical thought. Subsequently, he shows these systems to be operative throughout medical history until the beginning years of this century. These systems he designates by the terms "empirical" and "rational".

The "empirical" physician, according to Coulter, was identifiable by his denial of *a priori* knowledge of the interior workings and processes of the human body and he believed that he could only know what his senses told him; he refused to theorize about internal causes and effects. He differed from the layman mainly by his skilled observation and the knowledge accrued through his experience as a physician. He saw his role as supporting the

self-recuperative power of the organism. Through the ages, he referred to this power vicariously, as *physis* (nature) or as *vis medicatrix naturae* (the healing power of nature).

The "rational" physician, on the other hand, was one who believed that he could, through the power of his mind, describe and understand the processes, causes and effects in the interior of the body. Thus, he differed from the layman by his knowledge of the invisible, and, consequently, through the respect and authority accorded to him by the layman, he became priestlike. Through his superior knowledge he tended to denigrate the idea of a self-recuperative power inherent to the organism and he took an active rôle as manipulator and controller of nature as he fought disease.

It is sufficient here to note that these two approaches to medical thought have been in existence for two millenia and, except for a brief hiatus this century, during which the medical profession on this continent tipped heavily in the direction of what has been called the "rational" approach, both approaches have lived side by side (if not altogether amicably). To me, the major distinction between the two approaches is whether one sees man as a creature in nature or as a creature existing somehow apart from nature. One approach supports



the organism as a creature in nature, the other tends to usurp nature's place in the control of the functions and the life of the organism.

Coulter traces this division in medicine through the encounter of Galenic and Paracelsian Medicine in the early sixteenth century and through the encounter of homeopathic and allopathic medicine of the last century to the time of the issue of the Flexner Report of 1910, a report without precedent or equal in the history of medicine; its implementation led directly to the medicine which we have now.

Basically, the Flexner Report was a report on the medical schools in the United States and Canada. A later report covered schools in Europe. Completed in 1910, the Flexner Report was modelled on a similar report done four years previously by the American Medical Association's Council on Education (Berliner: 585). It reflected a need felt by members of the AMA to couple medical education to college or university education and to base medical education on research. It had a profound impact on medicine; traditionally, the practitioner's art had been the mainstay of the profession. After the Flexner Report, research was the mainstay, and research dwelt upon pathology and diagnosis rather than therapy. Berliner has said that it reflected the prevailing "scientism" of this

continent at the turn of the century through which the normal organisation of society changed from one that was essentially agrarian to one that was essentially corporate (574, 575, 590). An important effect in medicine is that "scientific medicine" (as it was called in the Flexner Report) for the first time sundered the connection of body to mind (576). Throughout our history the idea that one part of the body affected the rest of the organism had always been a significant element of medicine (576); Galen, the Roman physician, "believed that melancholic women were more prone to cancer than those of sanguine temperament (LeShan: 1)." With the advent of "scientific medicine" the connection of the part to the whole was lost. It is the holism of Booth's work which is revolutionary and pioneering when set against the mechanistic medicine of the last seventy years.

## II. Paradigmatic Change

The advent of "scientific medicine" has been called a change in the medical paradigm (Berlinger: 576). At this point it is best to look at the meaning of the word *paradigm*, to look at paradigmatic change in the course of history, and then to look at the paradigm which is now emerging.

Basically, the word, *paradigm*, means pattern or model: it means the model by which we understand the universe to work; the pattern by which we arrange our knowledge, to which we compare new evidence for the purpose of ascertaining credibility, and the pattern through which we look, as through a lens, in accumulating new knowledge. It refers to an arrangement of concepts which governs the way we see the universe. It influences the questions we ask and the way in which we ask them. A paradigm remains solidly in place until a bulk of anomalous evidence accrues which is outside its governance. At that point, a new paradigm emerges which accounts for the anomalies and the emerging paradigm replaces the old paradigm which departs, having collapsed under the weight of contradictory evidence.

An example of the way in which new evidence may be discovered and lead eventually to the emergence of a new paradigm can be seen through the work of Johannes Kepler and Isaac Newton. In 1609, Kepler used the precise calculations of the Danish astronomer, Tycho Brahe, to derive the three laws of planetary motion (Pauli: 158). In doing so, Kepler established himself as a founder of what we call classical science, and today we know those laws as Kepler's Laws. Yet Kepler didn't think of himself as a scientist; the paradigm of Kepler's day was theological. Kepler considered that he was explaining the ways of God to man when he wrote about the motion of the planets. He was enthused by the Copernican heliocentric theory, but his inspiration was religious.

Today, in a contemporary physics text, we may read the first of Kepler's laws, as follows:

Each planet travels about the sun in an elliptical orbit; the sun is at a focus F of each ellipse (Borowitz and Bornstein: 158).

The physicist, Pauli, calls the replacement of circle by ellipses a great revolution in astronomy (158). Yet, if we look at a passage from the work by Kepler which leads to the statement of the above law, we notice that he started by talking of circles and spheres and we can appreciate

that Kepler's vision was of triune Godhead. Kepler was convinced of the heliocentric system, but he saw the system as an example of God's symbolizing himself to man. Specifically, Kepler saw God symbolized in the geometry of the sphere (the sun being the grandest example in nature); he explained the consciousness of man compared to God in an analogy by which he compared the geometry of the circle to that of the sphere, and eventually, he developed the geometry of the ellipse and his laws of planetary motion. A quotation from this work of Kepler's suffices to show the inspiration behind his vision:

First of all the nature of every thing was bound to represent God its creator as far as it was able to do so within the condition of its being. For when the all wise Creator sought to make everything as good, beautiful, and excellent as possible, He found nothing that could be better or more beautiful than Himself. Therefore when He conceived in His mind the corporeal world He chose for it a form that was as similar as possible to Himself. Thus originated the entire category of quantities, and within it the differences of the curved and the straight, and the most excellent figure of all, the spherical surface. For in forming this the most wise Creator created playfully the image of His venerable Trinity. Hence the centre point is, as it were, the origin of the spherical body; the outer surface the image of the innermost point, as well as the way to arrive at it; and the outer surface can be understood as coming about by an infinite expansion of the point beyond itself until a certain equality of all the individual acts of expansion is reached. The point spreads itself out over this extension so that the point and surface are identical, except for the fact that the ration and density and extension

is reversed. Hence there exists everywhere between point and surface the most absolute equality, the closest unity, the most perfect harmony, connection, relation, proportion, and commensurability. And although Centre, Surface, and Distance are manifestly Three, yet are they One, so that no one of them could be even imagined to be absent without destroying the whole (168-171).

To Pauli, Kepler's ideas "represent a remarkable intermediary stage between the earlier, magical-symbolical and the modern, quantitative-mathematical descriptions of nature (154). To me, Kepler's Laws are evidence which arose from a departing paradigm and which provided the groundwork for an emerging paradigm, the classical scientific paradigm -- which actually changed man's perception of the universe.

When Isaac Newton (1642-1727) was asked at the pinnacle of his career about the basic ideas of his revolutionary work, he made a remark about standing on the shoulders of giants. When he made this remark he was referring to the work of Galileo and Kepler (Manuel). Newton's theory of gravitation, namely, the law of the diminution of forces of gravity in inverse proportion to the distance of the heavy masses from each other, is based on Kepler's Laws (Pauli: 155-6). Newton's work in optics, gravitation, and the calculus changed the world. His scientific discoveries literally changed the way man viewed the universe. The emergent paradigm was that of classical science; for the first time in history

it seemed to be within man's ability not only to understand the forces of nature but to manipulate them to humanity's bidding. The machine age began with Newton's mechanics. It was a paradigmatic shift of immense power. So powerful that, although it now begins to shift once again, much of our conceptualization is still influenced by his discoveries and the world that grew from them. Even our thinking about the character of Newton, the mental image that we carry of this man who was a legend in his own time, has been strongly affected by the changes he brought about. We don't think of him as an intensely religious man, and yet he was. When Newton died he left behind a total manuscript legacy which included notebooks, commonplace books, correspondence, working notes and drafts of his mathematical discoveries, optics, dynamics, and alchemical experiments, shipbuilding blueprints, educational projects, ecclesiastical calendars, historical theology, interpretations of mythology, world geography, economic treatises, chronological and historical studies of ancient kingdoms, commentaries on Daniel and the Apocalypse, medical abstracts and potions (Manuel: 14). The biblical chronologies and historical theology alone constitute about three quarters of a million words. "On virtually all of these *'foul and waste papers'* Newton's executor, Thomas Pellet, once wrote in a bold hand, *'not fit*

*to be printed' (17)."* [italics mine]

When eighteenth-century philosophes adopted the Newtonian scientific world order as a model for their social and moral systems, they were doing violence to their source in one vital respect. They were banishing the God who was for Newton the immanent power in the whole of existence (363).



### III. Another Paradigm Emerges

Newton's legacy included the mechanical principles and the mathematics for a seemingly exact determination of the physical world. His discoveries enabled the creation of the machines that tooled the Industrial Revolution. In the process the universe came to be looked at as magnificent clockwork and man came to be viewed as just another machine (Berlinger: 577). In its turn the 'scientific medicine' of this century institutionalized the mechanistic conception of man.

By definition, scientific medicine rejected the idea of social causality of disease or illness, since the social basis of humanity was placed outside the realm of what was considered scientific. Research was structured in such a way as to reinforce this exclusion of social causality. The predominant focus of medical research became pathology and pathological anatomy. Therapeutics, hygiene, and symptomatology, all mainstays of wholistic medicine, were largely ignored. Physiology, which in previous times had meant the relationship of man to nature . . . now meant only the study of the workings of man . . . . Diagnostics and therapy were also affected . . . the body was considered to be the analogue to the machine, thus allowing for an instrumentalist approach to the body. Individual parts could be examined and treated without the rest of the body being affected. The machine model . . . applied to therapeutics, has important corollaries. The machine model allows for the use of statistical assumptions about the body -- in particular the assumption of a mode of central tendency (normality) which allows diseases to be treated as universal entities rather than as individual afflictions different for everyone. While diagnosis and therapy are

based upon collective assumptions employing the use of the normal distribution, the patient is thought of almost as an abstraction apart from the collectivity, with the social context of the problem not being accounted for on an individual basis. Illness is treated as a natural process, and, as such, the possibility of social causality becomes alien to diagnosis and therapy (577-8).

Yet, at about the same time 'scientific medicine' came into being, discoveries were being made that again caused a revolution in the scientific world and which were laying the groundwork for a paradigm which is now emerging. Shortly after the turn of the century, Einstein published his general theory of relativity and started a major revolution in physics. His theory was put to the test when precise measurements of the precession of the planet Mercury were shown to accord exactly with his calculations. Newtonian mechanics could never exactly account for this planetary motion. What this demonstrated was that Newton's mechanics were a special case of the general theory of relativity. While mechanics gives a very fine approximation of what is going on in the day-to-day world, it is inaccurate for the very, very large or the very, very small. Moreover, relativity theory and, slightly later, quantum mechanics show that neither space nor time are absolute, or even separable; they show measurement is not absolute but relative to the position and velocity of the observer; they show that matter and energy are not different but convertible, one into the other. These

scientific facts have caused no end of discussion over the years; they have influenced philosophy as well as science and they are some of the basic evidence that has enabled the nascent emergence of a paradigm -- a new way of looking at things.

In terms of medicine, it is good to remember that we are made of bits and pieces that are microscopically small; that even the smallest cell in our body carries in it, DNA, and that the DNA carries all the information for the construction of the whole body. Thus each cell is a hologram to the body. One physicist has pointed out that our DNA is constantly exchanging quanta with its environment (Bohm); we are involved in quantum events whether we are aware of it or not. Another physicist has called to our attention that it is time for our medicine to use the new physics for its model (Capra, 1977). One writer has taken notice of the changes in thought and belief identified by other researchers as taking place across a wide variety of disciplines and has used them in conjunction with a content analysis of eighteen years of The New England Journal of Medicine in which she looked for principles of an emerging paradigm as part of the basis for her thesis in health planning (Jackson). The following are seven major shifts in conceptualization as quoted by Jackson:

1. Systems are not merely sums of individual elements. As they become more complex, the interactions between parts become important and the system displays unique properties.

simple/probabilistic to complex and diverse

2. The old conception of order was hierarchical with a top-down chain of command. It is possible to have a non-hierarchical order where no one element commands the rest.

hierarchy to heterarchy

3. Instead of viewing the relationship between parts as being analogous to a simple machine, images of the world are seen as dynamic and interconnected. Information about the whole is contained in each part.

mechanical to holographic

4. The simplest causal model is linear (action and reaction). The emerging paradigm goes beyond negative feedback systems (which maintain homeostasis) to include positive feedback systems. In such a system, the elements interact and evolve to their mutual benefit (mutual causality).

~~linearly causal~~ to mutually causal

5. The old conception of orderly change was 'components assembled according to a plan with a predictable outcome'. According to the emerging paradigm, the diverse elements of a system constrain but do not determine exactly the final form of a system. New forms or a new order can be created from small fluctuations.

assembly to morphogenesis

6. Possibilities can be known but precise outcomes cannot be predicted. Ambiguity about the future is a condition of nature.

determinism to indeterminism

7. Objectivity is an illusion. The observer can never totally separate himself or herself from the context. Subjectivity is not the only alternative. Perspective, a view at a distance from a particular focus, is suggested as being more useful conceptually.

objective/subjective to perspective

Many of these principles of the emerging paradigm are apparent in the thought of Gotthard Booth. Before turning to Booth, however, there is a last major area that must be introduced.

As the revolution at the turn of this century began slowly to affect our thinking of the outer world and to raise interesting epistemological questions, there was also an equally impressive revolution taking place in regard to our inner world. Sigmund Freud pioneered a therapeutic process known as *psychoanalysis*. Through the analysis of a patient's free association of mental images and memories of events and dreams, he was able to reveal some of the workings of the conscious and unconscious mind. He was able to show that we are not only capable of conscious thought and action (I will turn right to go into the store), that we not only show influence of emotion physiologically (I smile or cry or my blood pressure suddenly increases), but that we

are capable of experiencing emotions of such strength that we can not express them voluntarily. In such a case the event triggering the emotion may be defensively repressed from conscious recall to remain in our unconscious mind (which Freud said we had). From that level is exerted an emotional pressure for expression which may finally exhibit itself in the disturbance of one or more of our bodily organs; Freud showed this to be so in the case of a patient with debilitating pains in her legs. He psychoanalysed her and cured her in the process. In such a case, investigation at the acute stage of the phenomenon using the tools of "scientific medicine" may discover no morphological changes in the affected organ; the condition is then called a *functional* disturbance. Should the functional disturbance become chronic, however, morphological change is likely to take place and then the condition is known as *organic*.

Freud, in mapping the interplay between conscious and unconscious mind, gave us a number of terms by which to describe functional disturbances of the psyche. "Neurotic" and "obsessive-compulsive" are examples of such terms which describe disturbances which may evidence themselves in the patient's emotional discomfort and unusual behaviour when faced with seemingly usual circumstances. Freud carried on a steady psychoanalytic practice through which he was able to cure many patients of such disturbances. It is noteworthy

that the "scientific medicine" of his day had little to offer these same patients. Freud developed a theory of the structure of the psyche, a dream theory, and he gave us a voluminous body of work which included insightful thought on death (which Booth was to use) and sexuality (which at first brought cries of outrage from professional circles in late Victorian Vienna).

At first working with Freud, but then breaking with him, Carl Jung developed a theory of a layered unconscious which included an unconscious content of a personal nature as well as a collective unconscious: a kind of racial memory shared by all of us. He constructed his own theory of personality development (individuation) through which we grow as individuals by consciously realizing unconscious contents. He developed his own idea of the structure and function of the personality and his own theory of personality types. In counterpoint to Freud he produced his own dream theory.

More will be said regarding the work of these two men later on. More to the point now is the fact that although "psychoanalysis" contains "analysis" and although the process is analytical, the thrust of the work of Freud and Jung is to bring the *synthetic* into medicine. Neither of them were content to allow the unconscious to be the repository only of instincts as mechanistic schools of thought would have had it. Neither were they about to use the words "psyche"

and "conscious mind" interchangeably, thereby lopping off unconscious influence on human health and endeavor.

From the analytical fundament of "scientific medicine", as it had happened in the change from classical to modern physics, anomolous evidence had begun to accrue: since "scientific medicine" based its conception of illness on cellular pathology, there was nothing to be discerned in a functional disturbance, yet cellular pathology sometimes evolved from a functional disturbance, and psychoanalysis sometimes cured the functional disturbance. Later in the century, it was noticed that not only were physical symptoms sometimes abated through the process of psychoanalysis, but that psychic disturbances sometimes followed successful surgery (Jellife). The word "psychosomatic" came to be used by those who discerned the emerging synthetic element in medicine; their intention was to join the mind and body together again, but their attempt was never really successful. It is in this area that Booth made significant contributions.



#### IV. Gotthard Booth: Background

An understanding of Booth's cultural and educational background is helpful to understanding his thought. Booth was born in 1900 in Germany. His ancestors on his father's side were German, on his mother's side English. His mother's family was of the mercantile class who lived in Germany but who retained their English citizenship. His great-grandfather was raised as an orthodox German Jew, his grandfather was a Lutheran, and his father was a Quaker. His mother was an Old Catholic. He was born Gotthard Cohen. When he immigrated to the United States in the early thirties, he dropped the Jewish surname and adopted his mother's maiden name (Booth, 1955c: 6). He had taken his medical degree at Heidelberg and undergone psychoanalysis with Paul Schilder before his immigration. He practised as a psychiatrist in New York until his death in November of 1975. At the time of his death he had published sixty-six papers in a variety of professional journals, both medical and religious. Following his death his library and papers (including unpublished materials and correspondence) were taken in charge by a charitable organization dedicated to his holistic concept of health,

and this organization was subsequently instrumental in bringing about the publication of his magnum opus, The Cancer Epidemic: Shadow of the Conquest of Nature.

Booth grew up in a European tradition in the days of Edwardian England and a cosmopolitan Europe before the Great War, when travelling between countries could be accomplished without passport. He was a youth of fifteen when Einstein published his General Theory of Relativity. He watched the stable culture of his childhood disintegrate under the impact of the war. As a young medical student at the University of Heidelberg, he was open to the intellectual ferment stirred by such men as Freud, Jung, and Jaspers. As a young scientist, he naturally looked to animal behaviour for an analogue to human behaviour. In this respect, European tradition is different from our own; Booth studied the work of ethologists, who study animals in their natural, rather than captive, state. Booth read the works of Tinbergen, Lorenz, Portman, and von Uexkull. From the latter came the statement, "For every animal, there is a world. (von Uexkull, 1921)," and the concept that in ideal circumstances the individual organism fits into its environment like a key into a lock. Booth uses von Uexkull's

statement to signify both the unique perception of the individual organism in interacting with its environment and the essential nature of a good fit with its environment to the health of the organism.

In a book fragment entitled "The Physician Between the Spirit and the Flesh (GBA)," written between 1950 and 1960, Booth devotes some pages to a description of his education. In some particularly illuminating passages he recollects three great teachers who exercised a profound influence upon him and upon the development of his professional life. He writes at length of Karl Jaspers, the physician turned psychiatrist turned philosopher, whose lectures at Heidelberg he audited for two years beginning in 1919. Booth remembers Jaspers' lectures on Kierkegaard -- how, as a student who figured himself to be an agnostic, he was "brusquely awakened by the drama of Kierkegaard's lonely encounter with God (4)." Again, Booth writes of those lectures:

Since then the religious significance of the individual, the uniqueness of his responsibility for himself and for others has been firmly established in my thinking (4).

This is not a casual statement on Booth's part: for many years he undertook to do the psychological screening for candidates for the ministry for General Seminary (New York City) and Union Theological Seminary (New York City) (Booth, 1958b,c; 1963a); no matter how one categorizes

his papers, approximately one quarter of them deal directly with the religiosity of man, the patient, or the minister and illness. Medicine and religion were always close in his mind. He pointed out that both were concerned with the salvation of the individual but that where medicine had become increasingly concerned with the perfection of the individual, religion has always recognized the limitations of man and the transcendent quality of perfection (1949a). He wrote that his experience with the thought of Jaspers contributed to his future psychiatric thinking by making "a clear distinction between the transcendent quality of the spiritual realm and the concrete conditions for spiritual manifestations (PBSF: 5)."

As he continued his medical education, Booth began his clinical studies as an externe at the Hospital for Internal Medicine in Munich. There he worked with George Heyer. Booth describes Heyer as a man "dedicated to the task of proving the power of the soul over the chemistry of the body (7)." In Munich, Booth assisted Heyer in experiments which showed "that the chemistry of the gall changes according to the type of food suggested in hypnosis (7)." Through his work with Heyer, Booth received an introduction to psychosomatic medicine. Perhaps it was at this time that Booth became convinced of the truth of the graphologist, Ludwig Klages' formulation: "The

soul is the meaning of the body, the body is the expression of the soul (7)."

Booth never lost sight of this formulation; it is fundamental to his concept of medicine. In the book fragment previously cited, he gives a short psychological exegesis of it:

Thus each organ system, such as digestion, circulation, breathing, is conceived of expressing a specific function of the psyche; a disease process in a certain organ indicates a serious conflict in the psychological sphere which it expresses (8).

In another paper, referring to specific diseases, he writes:

Frustration of the typical form of adjustment expresses itself through regressive development of the representative organ system. Excessive weight becomes physically and socially awkward for the person who desires to carry greater weight in action and position . . . the ulcer patient with his destructive aggressiveness is reduced to a baby diet (1945: 5-6).

This kind of exegesis is also presented for arthritis and Parkinson's disease, high blood pressure, and tuberculosis/cancer in Booth's published papers, which span approximately forty-five years of practice. In passing, it is worth noting that never does Booth suggest that the psychological understanding of the disease process means that it's all in the mind and therefore curable by psychotherapy. Rather, it means that to the human organism physicality has psychological meaning. In another paper,

he again addresses the terms *physical* and *psychological*; he says that *physical* has to do with the measurable, *psychological* has to do with meaning. He presents the two as two different frames of reference which never "cause" each other. As an example, he writes of an individual who has been diagnosed as schizophrenic and who responds favorably to doses of vitamin B.

The common illusion of the mind influencing the body, or vice versa, is due to the narrowness of the conscious mind. The latter fact makes us shift our attention always to the most striking aspect of a given situation, a phenomenon used deliberately by professional magicians in the production of miracles. When we describe the disappearance of a psychotic disturbance after the administration of vitamin B, we are shifting our attention from the striking psychological manifestations to the physical action and back to the psychological field. Actually, we are dealing all the time with two different frames of reference; (1) a nervous system which has been deprived of vitamin B and is changing physically under the influence of vitamin B medication; (2) a human personality is expressing itself, first in the forms consistent with vitamin B deficiency, then in forms consistent with adequate vitamin B supply. External appearances suggest an interruption of the psychological causality by the physical element of vitamin B. Actually, there is only the sequence of physio-chemical events in the nervous system which falls under the category of causality. When we want to apply the category of causality to the psychological conditions of the patient, we must concern ourselves with his personal and cultural background, including the psychological constellations connected with his vitamin deprivation and his later treatment (1946a: 388-389).

He also put it very succinctly:

. . . that body and mind do not stand in an

independent relationship like a bottle and its contents, but that they are one and the same thing seen in different frames of reference (1945: 4).

The causality to which Booth objects is that which proceeds to cross from one frame of reference to another. I believe the emergent paradigm principle of mutual causality applies here.

Returning to "The Physician Between the Spirit and the Flesh" and Booth's work with Heyer, Booth states that the physical methods of the physician have psychological meaning. Writing of his clinical work with Heyer, Booth says:

Physical methods like massage, breathing techniques, medicines were used as carriers of psychological effects which were often considered indispensable for an effective cure. Above all, the intricate relationship was recognized which exists between all levels of the human organism, from the blood chemistry to the religious observances to the spiritual decision (9).

In another paper he states it:

. . . neither physical nor chemical methods alone effect reliable cures. The less propitious the psychological situation of the patient, the more uncertain are the results of scientific treatment. . . . we may be sure that the percentage of failures includes cases in which the psychological constellation prevented the scientific tool from taking effect (1949a: 213-244).

Here, the system is complex and diverse; the treatment is probabilistic, the outcome indeterminate (see pp. 14-15 above).

The insights that he gained with Heyer permeate all of Booth's written work. As he finished his

externship with Heyer, he met his third great teacher, Viktor von Weiszaecker, who offered him a residency in the Neurology Department of the medical clinic of the University of Heidelberg.

Booth writes that as he began his work with von Weiszaecker, he was at first disappointed that laboratory work was dominant and clinical work with patients was given less consideration than he had expected. Then he came to realize that to von Weiszaecker the existing concepts of science were inadequate for dealing with medicine. In a review of von Weiszaecker's book

Der Gestaltkreis Booth writes:

. . . the somatic side has been described in terms of classical physics and chemistry, the psychologic side in terms which are purely materialistic (libido, repression, fixation, sublimation), partly biologic (sex, aggression), partly cultural (e.g. adjustment, love, hostility, domination). The result is [and now Booth translates von Weiszaecker] that 'events. are alternately described as subjective, as objective, as physically conditioned or produced, as psychologically influenced or ordered. Things, so to speak, change back and forth, and since they do not always give up their names, enormous difficulties arise.' (1949b: 129).

It would be difficult to overstate the importance of Booth's year of clinical work with von Weiszaecker to his later work; Booth states that he owed to that year "all the decisive insights which directed my work as a physician (PBSF: 25)." In the first place, according to Booth, von Weiszaecker "was the only German university



professor who accepted Freud's work as a part of clinical science (12)." Thus, Freud's concepts of psychoanalysis were an integral part of the daily clinical discussions. Secondly, the results of von Weiszaecker's experiments provided the basis for Booth's concept of object relation.

Von Weiszaecker was trained as a physiologist but at one time had considered a career as a philosopher. He was determined to put medicine on a sound philosophical footing and to test the validity of each concept on healthy human beings (13). In so doing he introduced the subject into research, much as Einstein had done in physics. His experimentation joined his knowledge of the pathology of the nervous system to his observation of healthy human subjects at the basic physiological level of perception and action, especially the relationship between perception and action through which healthy people are able to maintain their equilibrium. His conclusions appear in a book which details the outcome of his experiments and explains the surprising data which he obtained. The book is entitled Der Gestaltkreis: Theorie des Einheit von Wahrnehmen und Bewegen, which title Booth has translated as The Gestalt Circle: Theory of the Unity of Perceiving and Moving (CE: 25). Booth has also referred to this book variously as The Circle

of Form Genesis (1949b: 129), The Circle of Gestalt Formation (PBSF: 16), and The Circle of Morphogenesis ("Kairos and Somatic Medicine": 5; GBA). Von Weiszaecker's work, taken together with ideas from other sources and observations of his own, enabled Booth to develop his major contributions to medicine.

Booth was enabled to develop the concept of the object relation as the fundamental expression of human life. In short, for the moment, Booth saw the object relation as the *modus operandi* of life as the organism cohered with its environment, securing whatever was important to it. He made no distinction in the importance of the object between the physical, concrete object, the mentally conscious object, or the unconsciously symbolic object. He understood the individual organism to be expressing itself by the *way* it went about securing its object, that is, by the *way* it went about maintaining coherence with its environment. Moreover, he saw that of the plenitude of options open to the organism in securing its object, that the organism, throughout the duration of its life, predominantly chose a dynamic that expressed its own idiosyncratic bias. Further he saw that the personality bias predisposed the individual organism to specific types of disease and ultimately to a specific form of death as symbolic substitutes for the expression of its object relation when that had become disturbed.

Booth was able to determine some of the general modes of expression of the object relation (psychobiological typology), identify illness as a symbolic expression which follows a disturbance of the basic relation, and to develop a diagnostic technique by which to determine the potential liability for specific illnesses in healthy subjects. We will look first at von Weiszaecker's work, then at some of the modes for expression, and then at the diagnostic technique and the rationale for its use. Together they describe Booth's concept of object relation. Finally, we will look at Booth's conception of death as a completion of the individual expression.

### V. Object Relation: The Basic Relation

The naive experience of life, according to Booth, has always suggested that organisms have the inherent capacity to move spontaneously in response to some change, either internal, such as hunger, or external, such as the appearance of a mate or an enemy. It is indicated that the activities of the organism are not from an inner motivation purposefully directed by the organism. Newton's physics, on the other hand, demonstrated that nothing in the inanimate world moved unless some exterior force acted upon it. Following upon the success of Newton's work, scientists studying biology and psychology looked for proof that man was a physio-chemical machine which functioned on the basis of genetically determined structures, past conditioning, and outside cause. The idea of an inner experience, of an organism having a choice, was looked upon as an illusion. Regarding perception, it was considered that an exterior 'cause' caused a reaction in the subject, which led to a new perception, 'caused' a movement, led to a new perception, and so on. Life was viewed as a sequence of cause and effect. Alfred North Whitehead, a major source for Booth in the philosophy of natural science, went to rigorous length in a philosophical discussion of perception to point out the fallacy

of what he called the 'bifurcation of nature'. He strongly objected to the notion that there is a *causal* nature 'out there' which acts on an organism and causes it to perceive an *apparent* nature. He insisted that there was no basis in observation for two natures and that the bifurcation of nature was a nasty muddle which had the effect of making matter more real than it could be observed to be. He traced the problem back to Aristotle, but the history of it is outside the scope of this thesis.

Through a series of experiments von Weiszaecker shows that qualitative changes in the reactions of the subject are obtained at certain points in the quantitative change of disturbance. He speaks of subject and object cohering; subject and environment are glued together. Coherence of subject and object is maintained until it is broken by some overwhelming disturbance; at that point a new coherence is established. Some examples are in order to get at the idea of coherence: If we hang a basket over a man's arm and then drop into the basket, one at a time, progressively heavy stones, while observing the man we will see that he first flexes his arm in response to the change in weight; at a certain point, as we continue to drop in heavier and heavier stones, he will move his body without moving his feet; finally he will put

out a foot and step forward to maintain his balance. All we have done is to progressively change the quantity of weight in the basket; the subject has, at certain points, qualitatively changed his movement. According to von Weiszaecker, these points of qualitative change are double-determined, i.e. they are determined by externally caused movement and by self-movement, and they are points at which coherence (in this case, balance) is maintained at the price of qualitatively different movement on the part of the subject. The stages of change have been simple muscle flexion, then proprioceptive self-regulating reflex, and then, taking a step forward. These changes are not governed by one reflex law but by several. The transitions in movement represent interruptions in reflex law; furthermore, they do not explain the transitions that take place in innervation. Von Weiszaecker therefore introduces a performance principle and a conduction principle. Reflex is then important for the conduction principle where one studies the function of the nervous substance itself. The performance principle is based upon the subject's maintenance of coherence with the environment through a variety of ways.

In writing of perception von Weiszaecker describes self-movement as the disturbing factor. No longer is the disturbance of the subject's inertia external, but

brought about by the subject's self-movement. A simple example is to walk into a room. Here my movements cause a series of apparent movements in the environment. The vase, sitting on the table, appears to be in front of the fireplace. As I walk into the room, the vase and table move until by the time I am in the center of the room the vase and the table appear to be to the left of the fireplace. Naturally, I don't take such movements of the environment seriously, for if I did I would never be able to orientate myself. I pass over such movements as being necessitated by geometrical perspective; by so doing I provide myself with a visually coherent environment. Von Weiszaecker regards my sacrificing some of the movements in my environment (that is, my not taking some of the movements seriously) in order to maintain coherence as an example of biological decision-making which increases my chances of survival. Von Weiszaecker shows, through his experimentation, that in perception,

There is a change in the visual performance occurring in leaps while the variation (of disturbance) is continuous and only quantitative.

He goes on to say that a biological characteristic required from self-motion is that:

If I move, I let movements appear to me.

and If the appearance of my environment is inert and if its appearance is disturbed by my movement; I do not take the perceived movements seriously.

In the case of actual movements in the environment, for instance a butterfly moving in my visual field, I will make the necessary movements of my eyes and musculature to maintain coherence with my object, the butterfly. In this case, my movements allow the object and its movements to appear. Only under the condition of sequences of movements is the coherence with the object maintained. Von Weiszaecker says he is therefore justified in calling the entire process -- sight and movement -- one act. He also points out the case in which the movements of the subject are directed toward as rapid as possible a change of objects -- a maximum of interruptions of coherence -- the act of reading. He states:

In the visual behaviour there is always one part of the visual world whose coherence is retained, another part whose coherence is sacrificed. The visual act consists of this permanent division. If we say that we let objects appear through a self-motion, then this act includes a division of the environment into a coherent one and a sacrificed one. . . . perception does not contain self-motion as a conditioning factor: perception is self-motion. It is a fact that, if I walk through a revolving door, I can see the interior of the building only if I enter it; and only if I leave it do I not see it any more. This parable may explain how the principle of interrelation is a real principle of biology. Thus, the negative performance is not a kind of special performance; but the term may indicate that, in the recognition of biological performances, we deal with the relationship of the mutual exclusion of perception and movement. One can call this exclusive relationship in short the principle of the revolving doors.

In the appendix of his book, von Weiszaecker has a note



regarding this intriguing metaphor of the revolving doors;  
he writes:

Every act is perception and movement. But while perceiving I am unable to perceive the movement which enables it and while moving I am not able to enact the perception which enables it. In this respect, movement is a not-perceiving-it and perception is a not-moving-it. They are concealed from each other.

Elsewhere in the appendix, von Weiszaecker states that this concealment implies a duality of reality. I do not wish to extrapolate upon this implication of von Weiszaecker's work except to say that it makes the development of what Whitehead called the bifurcation of nature (though Whitehead convinces me of its fallaciousness) more understandable.

Booth has stated that von Weiszaecker's work shows that we live dependent upon a ground of being of which we cannot have objective knowledge, we can know life only to the extent to which we participate in it; life is not a sequence of causes and effects, but a series of biological decisions.

VI. Psychobiological Typology:  
Descriptors of Modes of Expression

Booth began his scientific work with studies of Parkinsonism, an illness characterised by paralysis accompanied by tremor (1935), then spent several years in the study of chronic arthritis (1936a,b, 1937b, 1939a,b), then looked at arterial hypertension as well (1946a). By 1946 he had widened his perspective on somatic disease and had developed his diagnostic technique which allowed him to describe the relationship between the function of the organs in an individual organism and the perception of form by that organism (1946b). By that time he had also begun to look at the personality profiles of tuberculosis and cancer patients and was developing a differential diagnosis based upon a projective testing technique. The irrational (1965), unscientific reaction to his concepts by medical colleagues placed obstacles in his way, and therefore it wasn't until 1955 that he was able to test his ideas on a significant group of patients (CE: 251-252; CE: Acknowledgements; Correspondence: 1939-1955/GBA).

Though his ideas grew from his work with von Weiszaecker and he developed his typology concurrently with his diagnostic, for the purposes of this thesis I

will take up the main elements of his typology and diagnostic separately.

Booth considered that every individual was a biogenetically unique organism, with its unique intrauterine and post-natal experiences acting as conditioning factors. He accepted the psychological typology as put forward by Jung (1958), i.e., that there were two attitudes toward life that could be taken by an individual; one could be either extroverted, expressing oneself in gregarious, outgoing personality manifestation, or introverted, finding expression in the individual inner world of the personality. Booth accepted Jung's statements that there were four basic mental functions of personality through which a person could express himself: the intellectual, the intuitive, the sensual, and the emotional. Both Booth and Jung noted that there were no pure cases which exemplified just one attitude and just one function. Personalities are a mixture of attitudes and functions, with one attitude and function predominating over the long run. As a cautionary note, Booth quoted from Whitehead's Concept of Nature: "The abstractions of science are entities which are truly in nature, though they have no meaning in isolation from nature (1963b: 23)."

Booth found in his clinical work with patients intangible similarity among patients in a given somatic disease

group: he felt that there was some feature of personality shared by all the arthritics with whom he worked; likewise, there were similar personalities among all the Parkinsonism patients; he noticed different personality-sharing characteristics among the arterially hypertense, among tuberculosis patients, and among cancer patients. He worked on this problem of identification from 1935 until 1945. During this time he used different projective testing techniques, including Rorschach's Psychodiagnostic, a technique which employed inkblots to arouse responses from the subject that could be quantified for diagnostic purposes, and he investigated graphological analysis (1937c, 1939b). He said that the Rorschach method demonstrated the autonomous individuality of perception in different personalities while the graphological analysis demonstrated the individuality of action (1946a: 393). He went on to say that:

The specific character and the co-ordination of perception and action in human beings represents an extension of the principles which Von Uexkull demonstrated in the animal world: the complete co-ordination of the inner and outer worlds of each organism. 'There are as many worlds as there are subjects. These subjective worlds are formed by limited numbers of spatial elements, movement patterns, time elements and qualities of content' (Booth, 1946a: 394; von Uexkull, 1928: 182).

He continued, saying that constitutional dispositions in human beings carried the implication of corresponding worlds of their own. It is easy to see that Booth is here

conceptualizing perception and action as the basic expression of the individual as he did when he worked with von Weiszaecker. In this context I do not think it far-fetched to consider Jung's statements regarding the instincts and archetypes of the collective unconscious as inherited patterns of action and perception (Jung, 1978: 135-138) having a bearing on the somatic constitution of the individual (which Jung did not state) as well as on the psychic constitution. Booth continues to say that although all individuals are a mosaic of different constitutional dispositions, one disposition is predominant (1946a: 394) and that:

1. Sickness takes the specific character of the element of the personality structure which is frustrated.
2. Sickness assails the function of the personality which has been used most particularly in meeting the demands of society (1946a: 402).

Thus he develops an understanding of illness along the lines laid down by Jung regarding psychological illness but he extends the principle to include somatic illness as he extends Jung's concept of psychological types to include psychobiological types. He began to see the individual as predominantly using one organ or organ system to secure coherence with the primary objects in the environment, and developing illness in the organ or organ system through which the individual has failed to secure its object.

A couple of points may need clarification here: *object*, to the individual, may be literally anything, for in Booth's use of the term, both psychological and physical environments embrace the object to which an individual may relate; thus, sexual potency, physical strength, a loved one, or a career are all objects in Booth's sense of the term. Secondly, his psychobiological typology posits the liability toward illness deriving from the predominant, or strongest, organ or organ system. In Booth's understanding, disease comes as a result of one-sided personality development (1946a: 402). Health can then be re-established by adjusting the environment so as to favor the specific demand of the patient, or the patient can make a new adjustment to the environment by developing previously neglected functions of the personality (1944). When one considers arthritis or cancer, which tend to develop for the most part in the later stages of life when the personality constellation is well set, one realizes that the necessary adjustment on the part of the patient may present a formidable difficulty.

In a later paper, Booth again presents the major points of his concept of illness issuing out of a disruption of object relation between the individual and his environment; he presents them twice, from slightly different angles:

- 1) The genetically dominant biological function determines the object relation of the subject throughout life.
- 2) When the life situation interferes with the achievement of the subject's idiosyncratic object relation, the organ of the dominant function becomes diseased.
- 3) The somatic symptoms of the disease express on a regressive level the nature of the dominant biological function (1975: 420).

and

- 1) The organism maintains its physical health as long as its dominant biological system can successfully interact with its environment.
- 2) The dominant organ system undergoes regressive changes when either loss of vitality or environmental vicissitudes prevent the subject from satisfying its dominant object relation.
- 3) The diseased organ system expresses the dominant psychobiological need on a regressive, symbolical level . . . (421).

In his work Booth identified some of the psychobiological types; in so doing he considered the body as part of the unconscious of the personality. He considered that he had initiated the work of identifying psychobiological typology and hoped others would continue that work. He identified the following types for which I offer abbreviated descriptions:

The locomotor type -- in this group the predominant organ function is of the muscles and joints. It works hard, plays hard, and tends to develop arthritis and Parkinsonism.

The vasomotor type -- in this group the predominant organ is the circulatory system. It finds meaning in

circulating throughout the social milieu, appointments, schedules, rhythmically keeping track of life. It tends to develop cardiovascular disease.

The tuberculosis/cancer type -- in this group the predominant expression is not limited to a particular organ or organ system. Its predominant characteristic is an abnormally strong need for affection. The familial incidence of tuberculosis and cancer is well documented. Many people have recovered from tuberculosis only to die of cancer. The particular disease expression, be it tuberculosis or cancer, depends upon whether the individual has developed completely in the psychosexual sphere, i.e., to the genital level, or whether he is psychosexually fixated at the anal stage of development. Tuberculosis occurs most frequently in the age group when the sexual drive is strongest, cancer is most frequent when the sexual drive begins to decline. The connection to sexuality and anality of these two diseases was found to be most unpalatable by the medical profession; Booth violated cultural taboos when he made his assertions concerning the psychosocial dynamics of tuberculosis and cancer. He devoted many years of his life to amassing the evidence concerning cancer which has been published in his book, The Cancer Epidemic: Shadow of the Conquest of Nature. In it, he provides an analysis of the psychosocial dynamics



of cancer and the unconscious symbolic meaning of its localization in various bodily sites. It is not within the scope of this thesis to go further into the cancer phenomenon; suffice it to say that in the abovementioned book he shows that he was able to differentiate one hundred patients, some of whom were suffering from tuberculosis and some of whom suffered cancer, accurately into two groups, without ever seeing the patients or knowing their names. This he accomplished by looking only at the Rorschach records of the patients, the test having been administered by other doctors.

## VII. The Rorschach Test: Inkblot as Environment

Booth's successful use of the Rorschach Test to diagnose somatic illness is unique as far as I know. Others have made the attempt, but not successfully so far as I know. Booth had used it for several years unsuccessfully until one day he noticed something he had not noticed previously.

Rorschach had published his book Psychodiagnostics in 1921. The book is basically the rationale for his use of the test, and it instructs one how to administer the test and how to score the results. The scoring procedure is formal, resting upon numerical proportion between one type of response and another.

The visual percept underlying each response can be defined in terms of location, outline, kinesis, shading, and color that accounted for it. The meaning attributed to the percept, 'the content,' is significant only in respect of certain broad categories that do not involve either psychological theories or cultural value judgements. Thus, the personal preconceptions of the observer are by-passed in the description of the experimental material (CE: 34).

The test is composed of ten cards, each of which has an inkblot on it. Rorschach made the inkblots himself, and they are deliberately non-representational. Five of the inkblots are black on a white card, two are black and red on a white card, and

three are colours of various hues. All cards, when viewed in the position which Rorschach drew them are divided by a vertical axis of symmetry.

In an excellent biography of Herman Rorschach, Henri Ellenberger has stated that Rorschach, early in his life, had deliberated on whether to enter a career in natural science or to become an artist (177). He also states that Rorschach had made inkblots several times during his life, once having them shown to school children, at other times showing them to inmates in asylums where he was director (182). The ten cards which he chose to publish were the ten among the thirty that he had produced that had provoked the most interesting responses. Rorschach found that when he showed the cards to clinical psychiatric groups of patients that he not only got individual-specific responses but that he got psychiatric group-specific responses as well. Subsequently, he categorized the responses and standardized a formal procedure for scoring the test result. The expansion, ongoing investigation, continued formal definition, and refinement of the testing procedures by those who have followed Rorschach to the present day attest to the importance of Rorschach's original discovery.

It is not known with certainty when Booth began to use the test, but he published his first paper in the Rorschach Research Exchange in 1936. By the end of his

life he had amassed more than 1700 Rorschach records, in some cases having multiple records on individuals covering healthy periods of their lives as well as records taken when they were ill with somatic disease. This last is significant because it amounts to longitudinal data which demonstrates that the critical percepts are constant in an individual throughout his life. In other words, using Booth's method of testing and scoring it is possible to spot tendencies toward somatic illness in healthy individuals and it therefore has some predictive value (CE: 37). Whitehead's cautionary note regarding the abstractions of science is well worth remembering (see p. 5, above). The adaptive, adjustive, and recuperative powers of the human being are sometimes astounding; tendencies should be noted, but prediction smacks of hubris.

As mentioned previously, Booth's early attempts to find differences between somatic disease groups were unsuccessful. He therefore ignored the aspects of the cards which had formerly appeared to be the important ones and began a systematic study of the gestalt character of the inkblots. He began to notice whether or not a specific content was centered in the vertical axis of symmetry, and if so, whether the dividing character of that line or space was disregarded, or whether the response suggested a discontinuity of structure between halves of the inkblot

(1946b: 368). He began to pay closer attention to kine-  
thetic responses and to animal responses. Finally, he  
paid closer attention to integrating and disintegrating  
types of response (368). On this basis he was able to  
differentiate patients with diseases of the locomotor  
system from those with diseases of the vasomotor system.  
At this point he reasoned that Rorschach had originally  
set about developing scoring categories that worked with  
psychiatric cases and therefore his scoring categories  
reflected attitudes and experiences which were either  
conscious or had been conscious in the past. However, he  
reasoned, the disturbed functions of those suffering from  
diseases of the locomotor or vasomotor system, are carried  
out below the cortical level of activity (368).

Since the classical Rorschach categories reflect  
primarily the conscious level, they are not  
likely to give direct indications of the under-  
lying primitive and deeply unconscious dynamics.

It appears that two of these subconscious  
dynamics are reflected in a new and very primi-  
tive aspect of the Rorschach cards in the two  
entirely different forms of reacting to the  
symmetrical structure. It may be considered  
significant, or a fortuitous mnemonic accident,  
that the axial emphasis of the L- [locomotor  
group] bears resemblance to the central organi-  
sation of the locomotor system of the vertebrates,  
while the axial openness of the V [vasomotor  
group] bears resemblance to the organisation of  
the vasomotor system from its start with the  
vacuola of amoeba. It seems at least as if the  
individual had the tendency to project into an  
indefinite medium *forms reflecting the structure of  
the predominant functional system* (368-369).

Booth continued his work with the inkblots for nearly

thirty years from the time he made the above discovery. Later, he was to state that the perceptual field of the individual is isomorphic to the field set up unconsciously by the relative strengths and weaknesses of the organs and organ systems. When a person was faced with an inkblot and asked to say what it looks like, that person becomes consciously preoccupied with finding similarities to concrete objects, but his unconscious dynamics limit him to certain formal patterns involving outline, colour, shading, and kinesthesia.

The functional predominance of a specific biological function in a given individual expresses itself in the predominance of specific gestalt tendencies in his or her inkblot percepts. Unconsciously, biological dynamics structure the perceptual field (CE: 32-33).

### VIII. Death: The Completion of Individual Expression

Booth practised medicine for fifty-one years. In that time he saw many people die and he had many occasions to be with the newly bereaved. His thoughts on death are fully integrated with his thoughts on life. First of all, he did not see life and death as opposites; he considered "the *form* of death an essential part of *life*. . . birth and death define the whole person just as the obverse and reverse of a coin define its value (1975: 415)." He considered that our modern society did not understand the concept of *natural* death but acted like a preliterate culture that believed in death caused by witches and demons: with the aid of modern science we have substituted bacteria, bad food, and so on for the witches and demons. Though in an elementary statistics course we would quickly learn that statistical correlation does not imply causation, we irrationally throw that basic fact out the window as we remind another that cigarette smoking causes cancer (meanwhile we have never considered that whatever predisposes for cancer may also predispose for cigarette smoking). Booth disapprovingly quotes from the introduction of the report of the Presidential Commission on Heart Disease, Cancer, and Stroke (1964):

The fact that the life span of the average American has been lengthened by 23 years since 1900 is vivid

proof of the reversibility of any disease process. This statement was offered as part of a report which led to a campaign against the above mentioned diseases. It is a clever statement produced by misinterpreting statistics and overlooking historical fact. In fact, the average American life has not been lengthened by twenty-three years since 1900; since 1900 the average American has had a much better chance of not dying before the age of five. It is not a question of the reversibility of disease process, it is a matter of prevention; the change in infant mortality was effected by improved nutrition and clean water supply.

Though it is widely assumed that the introduction of antibiotics and effective immunization campaigns marked a dramatic breakthrough in the fight against infectious disease, most of the reduction in mortality rate had already occurred, and there was only a slight inflection in an otherwise declining curve following this introduction (Berlinger: 577)

Today, much of our medicine seems to be aimed at prolonging the life of man and yet when I read in the newspapers accounts of an incurably, hopelessly unconscious human being kept alive indefinitely, I feel that we are prolonging the death of man through physio-chemical mechanics devoid of quality or dignity. Booth says that "The modern phobia of external causes of death has caused a neglect of the inner causes of death . . . (1975: 416)."

These inner causes to which he refers are the same



unconscious psychobiological dynamics which allow us to cohere with our environmental objects in health, the same which we express in illness when our relation to a vital object is sundered.

In 1923, Freud made a statement in Beyond the Pleasure Principle regarding death. He wrote:

The survival instincts are meant to secure the organism's own path towards death . . . . Thus the paradox is brought about that the living organism defends itself with the utmost energy against dangers which could help it to reach the goal of its life by a short-cut.

Booth quotes this passage (1975: 417) and adds that Freud posited an unconscious 'death instinct' with destruction as its purpose, in order to return us to inanimate material. He then goes on to state that each of us has a built-in genetic bias that limits our existential awareness to those situations which are isomorphic to our biological structure.

The selective perception of what is vital for the subject is the explanation of Freud's observation that the survival instincts secure the organism's own path toward death. Their paths are genetically preselected (419).

This is not really pessimistic, once we have it clearly in mind that *we* are definitely going to die one day. It means that as we make our moment-to-moment biological decisions, we do so on the basis of what is vital to us. In so doing we develop our own characters and life-styles and in so doing we move on toward our own death. Death

is, then, a completion of a process initiated at birth. The form of death is an essential part of the individual life.

In another paper Booth reflects upon the life histories of family members, friends, and patients who had died. He says:

I found evidence that their lives had not been just a struggle for physical survival which had been terminated gratuitously by the impersonal accident of mortality. The opposite was true. I found that they had used up their vitality in giving expression to the personal values . . . . Ordinary people revealed themselves as unsung heroes who had lived and died for the fulfillment of their own understanding of human existence. Physical survival had been a means of self-realization, not an end in itself. Even the military hero could not accomplish his ultimate deed unless he had protected his life before risking it in the crucial situation. (The Enduring Communication with the Dead, GBA: 1-2).

He goes on to say that the better we realize that the illness and death of a person expressed a vital motivation for that person:

the more deeply one becomes aware of an immortality which is completely independent of metaphysics and religion . . . . Their influence on many lives has often been more powerful than that of family, friends and lovers. The immortal dead remain alive and keep growing as parts of our being to the extent to which they manifested values that have relevance for us (2).

Later, in the same paper he again approaches this thought; I will quote it and then immediately quote the words of one of his great teachers, Karl Jaspers. I believe the two texts invite comparison:

In grief we may learn to accomplish the most difficult task of love, that of sacrificing our pride in order that the deceased may become more fully a part of ourselves.

Communication with the dead endures to the extent to which we integrate the message of their lives, the values we shared with them, and, as much as possible, the values that had remained alien to us while they were alive (Enduring Communication with the Dead: 11).

What frees us from solitude is not the world, but the selfhood which enters into ties with others. Interlinkage of self-existent persons constitutes the invisible reality of the essential . . . the best gift the contemporary world can give us is this proximity of self-existent human beings . . . There is no longer a pantheon, but there is a place set apart in the imagination for the remembrance of genuine human beings, of those whom we have to thank for being what we are. . . those great ones in proportion to as they have been, so to say, reincarnated in the living who have exerted an effective influence upon us (Jaspers: 189).

IX. CONCLUSION

Booth was a pioneer in a holistic conception of medicine. His view of the human being in sickness and health, in life and death, surpasses the dichotomy implicit in the term psychosomatic. His conception of the object relation conveys a synthetic understanding of man that involves a paradigmatic move from the strictly analytical, objective, probabilistic, linearly causal medicine; it is as profound a move as that which took place in the move from classical science to modern physics. His insistence that physical methods involve psychological meanings and that psychological meanings may find physical expression implies not only that the physician should be cognizant of possible psychological meanings to the patient in his physical therapies but also that his psychological relationship with the patient may have physical issue in the life of that patient.

Science, in our culture, has always turned upon the measurable. Physics, as the science of measurement, has provided the model for the other sciences, and for medicine. This century has been one of fundamental changes in the concepts of physics. The concepts of space, time and causality, as well as the conception of matter in sub-atomic physics have changed; the idea of the objective observer has been

dropped. From the viewpoint of modern physics the universe is an interdependent whole in which it is only possible to define the parts through their interrelations. Man is an integral part of this whole.

It is in this sense of interrelation and wholeness that Booth's concept of the object relation demonstrates a change in medical thinking which is congruent with the paradigm change of modern physics. His effective use of a diagnostic technique based upon his concept of the object relation lends much strength to his ideas.

Booth's conception of the human being is that the organism is completely rooted in its environment, able to be conscious of one part of it while the rest is concealed. The individual makes the choice of what elements are within its focus from moment to moment. As the organism coheres with its object, other potential environmental elements are sacrificed. Man, therefore, can not know his ground of being; at any second, he can know only a small part. An individual's perspective then, is just that -- his perspective. The old notions of the subjective and the objective are put away.

The individual perspective, in turn, is influenced not only by conscious decisions, but by genetic factors that govern the strengths and weaknesses of the bodily organs as well as by intrauterine and post-natal experiences.

The individual human being is viewed as a complex and diverse organism as little governed by probability as the individual electron.

The question of whether the body controls the mind, or vice versa, has no meaning to Booth's work. Mind and body are conceived as frames-of-reference, aspects of one integrated creature, abstractions of science that do not exist independently nor cause each other in a linear way. In this arrangement the order is heterarchical; the direction of influence is from unconscious to conscious with both the body and the mind partaking in the formation of unconscious motivation.

In the case of the object relation being disturbed, a bodily part becomes a hologram of the disturbed relation, unconsciously symbolizing the disturbance to the organism in its relation to its environment.

While Booth's use of his diagnostic procedure can have predictive value in terms of future possibilities, no precise outcome for the future or the health of the individual organism can be known. The future remains indeterminate as the present possibilities are diverse and their future mutually causal interaction too complex for determination.

Booth was a practitioner who struggled for years to integrate what he had learned with what others had found and with that with which he was confronted daily. He began

to enunciate a general understanding of health and illness but he stated that the identification of psychobiological types was only in its beginning stages. He hoped that others would take up his work.

A limitation in his work perceived by some who have read his work is that he did not set out a system of therapeutics; he advised no therapeutic programme that can quickly be tried in a clinical situation. Therapy is implied throughout his work but it derives from Booth's great regard for the individual personality and the suggestions he makes deal largely with the intangible interaction of the physician and patient. Although he approved of the use of modern physio-chemical medical treatment, he thought that its success was dependent upon the physician discovering the meaning of the illness to the patient and then acting accordingly. In this approach, the loss of an organ to the surgeon's knife may take on some of the meaning formerly attributed to religious sacrifice.

Booth's various writings suggest a number of areas for further research. Psychological profiles of individuals in various disease groups exist already; a careful investigation of extant literature for the *meaning* of various illnesses might be useful. Also a carefully designed questionnaire turning upon the *meaning* of various physio-chemical therapies might be sent to psychiatrists with a request that they

help in the research by consulting their files. Finally, though it has not been possible within the scope of this paper, the question of *time* as it pertains in modern physics and as it pertains in the human psyche might be the starting point for fruitful research. The timing of the first symptoms of illness with respect to the psychological life history of the patient has been the subject of some research by Booth and others (see Booth, "Kairos in Somatic Medicine"), yet much of this research has been conducted along chronological lines while the psychoanalytic literature speaks of the unconscious as *timeless*. Booth uses the word *kairos*, the auspicious moment, a time-frame which is not chronological. In keeping with other changes of conceptualization that have taken place in modern physics, it might be helpful to medicine to look at the concept of time not divorced from space with reference to the physicality of the body.



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