Anthropology at the intersection of Medicine, Psychology and Culture

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Synopsis

Developments within modern culture intimately cohere with advances within the domains of medicine and psychology. Medical technology penetrated into the secrets of the genetic code (the genome project) and increasingly assumes a guiding role in the life expectations of ordinary people, almost competing with the role of *caring* which 20th century psychology took over from the church. The desire to achieve medical control flowing from the modern spirit of *technicism is* placed against the background of the science-ideal. The reductionist consequences of the science-ideal are confronted with the alternative of a comprehensive totality perspective on the structure of being human. The latter is also protected against the relativistic implications entailed in the assessment of the *uniqueness* of cultures - by arguing that the latter does not contradict universal features, but presuppose them. The co-conditioning role of *language is* explained against the background of the so-called linguistic turn at the beginning of the 20th century. A brief discussion of the human subject in medical practices and within modern society is followed by the characterization of a fundamental circularity present in modern medicine.

1. Introduction

Although the development of Western civilization is characterized by an ever expanding knowledge of the universe, the ultimate quest for an understanding of the mystery of being human continually accompanied this process. A few historical perspectives may elucidate some of the relevant concerns of anthropological considerations focused on the intersection of Medicine, Psychology and Culture.

1 An earlier version of this Paper was presented at the Conference on *Medicine, Psychology and Culture* at the University of Vienna, June 2002.

2. Some historical perspectives

The initial dualism between a rational soul and a material body introduced by ancient Greek philosophy and elaborated during the Middle Ages exerted an influence throughout the entire subsequent reflection on the nature of being human.

Yet, when Descartes entered the scene of modern philosophy, this dualistic understanding of human nature acquired a different foundation. He introduced a *machine model* but nonetheless still tried to safeguard a separate domain of functioning for the human soul. This restriction was fundamentally challenged by the extreme and consistent naturalism present in the thought of the British philosopher Thomas Hobbes. Since he was familiar with the mechanics of Galileo, he proceeded from the basic concept of a *moving body.* The human soul was exclusively viewed in terms of motions.

Rousseau was the first thinker who reverted to a position which acknowledged the fundamental *feeling of freedom* inherent within each human being. Immanuel Kant then carried this ideal of a free autonomous personality to its ultimate consequences. The human being belongs at once to two different worlds: the world of *sensory experience* and the supersensory world of *ought to be* (the spheres of *Sein* and *Sollen*). Ever since the Western understanding of the human being was caught up in the tension between these two ideals: on the one hand the ideal of a natural scientific explanation, leaving in principle no room for the freedom of the human being, and on the other the ideal of a free and autonomous human personality.

Medical science increasingly came under the influence of this natural science ideal and its *technocratic* and *technicistic* (and therefore: *reductionistic)* consequences. The experimental method employed by modern natural science and medicine tends to disregard the *multifaceted* nature of the human being and in doing so it succumbs to the motive of *controlling* and *directing* not only health and sickness but even *death* (consider the position of *euthanasia* in many European countries). As a consequence, the human being repeatedly was reduced to a "nothing but" perspective. The combination of a psychologistic and materialistic approach resulted in the kind of picture portrayed by the sociologist, Sorokin, who aptly (while discussing the crisis of our age in 1946) captures this mentality in his following statement:

> Hence the general tendency of the sensate mentality to regard the world – even man, his culture, and consciousness itself – materialistically, mechanistically, behavioristically. Man becomes, in sen-

> sate scientific definitions, a 'complex of electrons and protons', an animal organism, a reflex mechanism, a variety of stimulus-response relationships, or a psychoanalytical 'bag' filled with physiological libido. 'Consciousness' is declared to be an inaccurate and subjective term for physiological reflexes and overt actions of a certain kind (Sorokin, 1946:93-94).

3. Abstraction and technical control

The initial science-ideal of modernity finds its roots in the desire to *control* reality through *rational reconstruction* and *technical mastery*. On the basis of *experimentation* certain factors are isolated and attempts are made to construct *models* of reality. This naturally entails a *reduction*, because non-relevant aspects are disregarded in the *abstraction* guiding the experimental situation. When this primordial *abstraction* and *reduction* is not kept in mind sufficiently, modern medicine, driven by the underlying ideal to *control*, tends to *identify* its models with reality.

The challenge to medicine and psychology within the culture of our time is therefore once again to develop an understanding of the human being that can do justice to the multifaceted and multidimensional nature of the human being *preceding* all abstraction and reduction.

What is needed is a theoretical explanation of each and every layer of the human body, without reducing those layers which are founded on more basic ones to those foundational structures. In order to accomplish this goal, it will be necessary not only to develop important anthropological distinctions, but also to analyze the involvement of the human being in a highly differentiated human society. Culture should not to be seen as the *second nature* of a human being, but as its *first* and most *basic* feature. From this perspective it will be clear that the human being does not merely *exist*.

4. Being human – a self-transcending animal?

Measured against the yardstick of an animal, the human being appears as a *deficient* creature (Portmann). Yet, as Gehlen has pointed out, the so-called *unspecialized* nature of the human body is much rather to be appreciated as a *positive* sign of the unique *creativity* of being human. The human being does not merely live, but *leads* his or her life (Plessner). It does not merely relate, but *acts* (Gehlen). It *is* not simply, but *chooses* itself constantly (Sartre). All of this entails, in comparison with other forms of life, a higher *consciousness* and a unique *accountable human freedom*. Whereas the animal is *instinctively secured* and *bound to a specific milieu*, the human person is "Weltoffen" and only poorly equipped with in-

stincts.

5. The complexity of the human body

Within the complex existence of the human body one has to distinguish carefully between *structurally different layers*. First of all, one has to acknowledge the indispensable "building blocks" of living beings, the atoms, molecules and macro-molecules required. The well-known differentiation between *physical chemistry* and *organic chemistry* testifies to the remarkable phenomenon that the material constituents of living things display characteristics within living entities which are not found in non-living nature. Von Weiszäcker uses the logically more precise concept: "*unbelebt*" for non-living entities (1993:32). Nonetheless, it is only in the disciplines of *bio*-chemistry and *bio*-physics that the *biotically directed functions* of the foundational atoms, molecules and macro-molecules are brought to light. Moreover, we also have to acknowledge that living entities (such as a living cell), without violating any physical laws, do function in a distinctive way in the physical aspect itself! Trincher (from the Institute of Medical Physiology at the University of Vienna) mentions in this regard four macroscopic characteristics highlighting the unique manner in which the living cell functions in the physical aspect of reality.

1) The spatial macroscopy which defines the cell as a spatially delimited surface;
2) The temporal macroscopy, which determines the finite time in which the energy cycle of the cell occurs;
3) The isothermic nature of the cell, which is responsible for the constancy of temperature throughout the cell;
4) The persistent positive difference between the higher internal temperature of the cell and the lower external temperature of the environment adjacent to the cell surface (Trincher, 1985:336).

Without cancelling the inner lawfulness and sphere of operation of its physical-chemical foundation, the biotic functioning of a living entity makes these (in themselves physically qualified) "building blocks" serviceable to the biotic functioning and biotic needs of the living organism of a living entity. The organism of a living entity is *alive* as a whole and in *all its parts*. However, the same cannot be said in respect of the *living entity as such*, since the latter also embraces the *non-living physical foundation* of anything alive. Plants, animals and human beings all evince this *biotic* dimension of the *living organism*. In distinction from animal cells, plant cells have a clearly-defined *cell-wall* – which is related to the absence of a *nervous system* in plants. Only *sentient creatures*, such as ani-

mals and human beings, display *sensitivity* and *consciousness*. However, the sensitive feeling life of animals are restricted to what is *accessible* and not (physical concern), with what could be utilized as food, to fellow species members and those who are not, with individuals available for mating and those who are not (the biotical concern), and with what is the cause of anxiety and what is comforting (think about the instinctively secured behavioural patterns activated by particular signals in animal life – Eibl-Eibesfeldt). Only human beings transcend the restriction of animal feeling life with its inherent drives and needs. This is already seen in the distinctive attentiveness ("Aufmerksamkeit") of humans:

> The narrow limitedness of animal interest is opposed to the flexible freedom of choice present in human beings. An animal can transcend the bondage to its drives only to a limited degree, whereas I am able, in every moment and according to my total power to discern, encompassing my full inner-participating dedication, to pay attention to something, however minute and unimportant it may appear to be (Portmann, 1974:102).

6. The importance of a theoretical totality view

An integral part of a comprehensive view of being human must include an account of the *free* and *formative fantasy* of humankind. This *free* and *formative fantasy* is manifested in unique criteria which enable a distinction between typical human artifacts and animals tool-making.

One of the crucial questions is whether or not we can really rely on *anatomical* and *morphological* studies to explain the differences between humans and their supposed Hominid ancestors. It frequently happens that recourse is taken to the presence of tools in order to determine the human nature of fossil findings. But if we consider archaeological evidence as an aid to interpret fossil findings, are we still working within the framework of paleo-biology? Schindewolf warns us that obviously the paleontologist should 'disregard' the "technical and cultural achievements of man" because considering them would take us "outside a biological approach" (1969:67). Seemingly without being aware of the fact that they are transcending the limits of biological research, as the archaeologist, Narr, establishes, even scholars inclined to follow a natural scientific approach now once more start looking for the line between humans and animals where signs of the typical human spirituality are seen in *cultural* activities (1959:393).

The Swiss biologist, Portmann, warns that, in order to get a better understanding of the origin of humankind, we should dispense of the unwarranted and unproven assumption that human *spirituality* is a late phenom-

enon in the development of the human body. If this assumption is rejected, however, and human nature is considered in its *totality*, then the distance between the human being and animals will come to the fore in its full magnitude (Portmann, 1965:57-58). To this we may add his acknowledgement of the fact that his own investigations into the ontogenetic uniqueness of humankind are "guided by the conviction that that which can biologically be grasped is essentially co-determined by those aspects of humankind, which have to be investigated with methods different from those employed by the experimental biologist" (Portmann, 1969:23-24). The anthropologist, A. Gehlen, also points out that a *total view* on being human functions as the *guiding philosophical view-point* in his research – and this total-view cannot be deduced from the view-point of any *special science* (1971:13). In one of his earlier works, P. Overhage displays a similar sensitivity: "To reduce the whole question about the human origins simply to the biotical-bodily (morphological-anatomical) facet, witnesses an astonishingly one-sided approach and imply a radical simplification of the total depth of the problem" (1959a:5).

Originally it was thought that the human being is the only creature that can use tools. When it turned out that animals are also capable of doing this, Overhage emphasizes the human ability to produce tools (1973:359). We have mentioned the fact that the name "Homo habilis" was introduced to indicate that this species was able not only to use tools, but also to produce them (cf. Gieseler, 1984:486). Although Y. Coppens tries to ascribe some of the oldest flaked stone tools of Omo to the Australopithecines, Jelínek says that the "whole situation is still far from clear" (Jelínek, 1985:343, cf. Clarke, 1985:287). According to him, archaeologists do accept the view that stone tools can be up to two million years old (1985: 343, or even 2.6 million years – cf. Narr, 1974:107). Early Acheulean artifacts, possibly about 1.6 million years of age, are associated with "Homo habilis" (Clarke, 1985:297).

In the first phase of the paleolithicum (i.e., the early stone age), Von Königswald claims to see evidence of a true invention (Von Königswald, 1968:167). Narr is more articulate, since he distinguishes three criteria which demarcate and qualify typical human tools (cf. Narr, 1973:61-62, 1974:105-107):

a) The *form* of the tool should not be suggested: The distinctive features of the kind of tool in making should not be exemplified (vorgebildet) by the form of the raw material – for example a stick which could only be freed from obstructing branches and leaves. The final product should still be 'concealed' within the raw material. It amounts to abstracting the form "to be brought to the fore" from

what is given to the senses.

b) The *function* should not be suggested: Tools are not projections of human organs. They are not to be seen as a strengthening, elevation or extension of bodily organs. Think about a chopping stone which strengthens the fist, or about a stick extending the reach of the arm or the fingers. When a tool is used to cut, it is performing a novel function which is not suggested by the function of any of our bodily organs (this function of cutting must be distinguished from scratching with the nails or from tearing apart with the teeth). In this sense, tools are the product of genuine inventions in the context of creating a new principle of technics and manipulation on the basis of a true insight into the nature and relationships between things.

c) The *way of production* should not be suggested: Tools should not be manufactured simply by using the natural organs of the body (hands, teeth). It must be created with the aid of existing (for instance, chopping) tools, although it is not strictly necessary that the latter themselves should represent artificial products.

Note that these criteria deal with objects which are qualified by the formative (cultural) mode of reality, i.e. they apply to *technical tools*, which must be distinguished from other cultural objects which are qualified by different (non-formative) functions (such as musical instruments – aesthetically qualified; money – economically qualified; and so on). Clearly, these criteria explicitly presuppose our typical and uniquely human *freely varying control* guided by our *formative fantasy*. Kant defined our fantasy as the ability to represent an object without its presence to the senses (1781:B151). Narr goes further by emphasizing that the human formative fantasy must be able to invent something *different* from what is present to the senses. Furthermore, he also states the requirement that truly human tools must be made with the aid of (formed or unformed) tools. Even the making of simple stone tools as such requires "tool-making tools" ("das Werkzeug zum Werkzeugherstellen"): "In this we see a trait transcending the known and expected behaviour of animals: It presupposes possibilities and achievements which we may view as essentially and specifically human in nature" (Narr, 1973:62).

Another way of formulating this perspective is to say that it is typical of the most basic human tools that their 'end' is to be a 'means'! They are formed in order to produce something else. This approach is on a par with the systematic characterization Van Riessen gives for a human tool: it is historically (culturally) founded and qualified (Van Riessen, 1948:509). Schuurman continues this classification in terms of a cultural foundational and qualifying function: "All technical objects are exceptional in the sen-

se that both their foundational and qualifying function are cultural or technical in nature" (Schuurman, 1980:10).

In stead of referring to the *formative* or *cultural* aspect of reality, we prefer to speak within the context of the subject-object relation about the *technical aspect* of reality. The structural conditions of this functional (modal) aspect require the *accountable freedom* and inventive imaginativity of the human being – the only creature capable of acting *responsibly* within the matrix of *normative conditions*.

6.1 Is the uniqueness of cultures in conflict with universal features?

Of course cultures do differentiate on the basis of different world views and divergent cultural-historical formations, but these differences do not result – as the contemporary postmodern thought-climate may tempt us to believe – in a negation of the *universality* of *logicality* and *historicity*.

Almost a hundred years ago Spengler already attempted to emphasize the uniqueness of cultures to susch an extent that the underlying tie of universality was assumed to be broken through. He even holds that there exists multiple "worlds of number," displaying different number types – such as those found in Indian, Arabic and Western cultures. Underlying these differences – so Spengler believes – there is a world orientation which impregnates every number symbol with a limited validity. It becomes the bearer of a unique spiritual quality flowing from the distinctive centre of a specific culture. According to him there cannot exist something like "number as such."[2]

Surely it is true that every distinct culture gives its own peculiar form and shape to its concept of number – and to every scientific discipline. However, these peculiarities remain dependent upon the *universal nature* a given *multiplicity* and other universal features of reality disclosed by the various scientific disciplines. For that reason the truth claims of any scientific discipline *transcend* the limits of any particular culture. Yet it cannot be denied that one can only be involved in scientific activities within the *context* of some *particular culture*, employing a specific language developed to the level of articulating the technicalities of the various disciplines.

2 "Eine Zahl an sich gibt es nicht und kann es nicht geben. Es gibt mehrere Zahlenwelten, weil es mehrere Kulturen gibt. Wir finden einen Indischen, Arabischen, antiken, abendländischen Zahlentypus, jeder von Grund aus etwas Eignes und Einziges, jeder Ausdruck eines anderen Weltgefühls, jeder Symbol von einer auch wissenschaftlich genau begrenzten Gültigkeit, Prinzip einer Ordoung des Gewordnen, in der sich das tiefste Wesen einer einzigen und keiner andern Seele spiegels, derjenige, welche Mittelpunkt gerade dieser und keiner anderen Kultur ist. Es gibt demnach mehr als eine Mathematik" (Spengler, 1923, I:78-79).

A comprehensive anthropological approach therefore has to realize that there is no "nature-independent spirit," just as little as it is possible to *reduce* the distinctive human capacities (such as the mentioned ability to reason on the basis of conceptualization and inferences, or the free formative fantasy of humans) to the *substratum* of the atoms, molecules and macro-molecules, the living organism or the sentient substructures of the human body.

Consider for a moment the unparalleled nature of *human language*. By means of *language* humanity owns and utilizes a consciousness of the past and the future, a consciousness including the knowledge of the individual person's limited lifespan. It is interesting, understandable and noteworthy that the geneticist Dobzhansky considers the *awareness of death* as typifying the distinctive characteristic of human beings. Some thinkers are even of the opinion that the ability to *commit suicide* typifies the unique nature of being human. Animal communication does not refer to the past or the future. It refers to the vital here and now. For this reason animal signs have strictly one content for every single sign (cf. Von Frisch and his understanding of the dance of the bees).

6.2 The human being as "Homo symbolicus"?

Cassirer (cf.1944) introduced the well-known distinction between *signals* and *symbols*. The former belongs to the physical world of being and the latter is a part of the human world of meaning, the world of human culture. Von Bertalanffy says that symbolism "if you will, is the divine spark distinguishing the most perfectly adapted animal from the poorest specimen of the human race" (1968:20). In order to identify symbols, he uses three criteria: (i) symbols are representative, i.e., the symbol stands in one way or the other for the thing symbolized; (ii) Secondly, symbols are transmitted by tradition, i.e., by learning processes of the individual in contrast to innate instincts; (iii) Finally, symbols are freely created (1968: 15, cf. 1968a:134).

Helmut Plessner wants to transcend the self-contradictory notion of an 'entelechie', presented to him by his tutor Hans Driesch. As an alternative, he introduces the notion of *positionality*. Physical entities are delimited by the surrounding environment. In the case of organic entities, this delimitation belongs to the entity itself (for example, the membrane), and thus evinces *positionality* (1975:291). This concept provides the possibility to view humankind as belonging to the *last* level of living beings. Animals are considered to be *closed* and *centric*, distinguished from the human being as an *eccentric* (and relatively 'Weltoffen') living being

(Plessner, 1975:292). The first anthropological 'Grundgesetz' (fundamental law) mentioned at the end of his Book: "Die Stufen des Organischen und des Menschen" (1928, reprint 1965) states the "vermittelte Unmittelbarkeit" (mediated immediateness) valid for all eccentric positions (cf. Plessner, 1975:297).

Language positions itself in between the *grasp* of the hand and the *view* of the eye – the eye as the "organ of making-something-immediately-present". Thus, in various respects, the hand and the eye become dispensable (cf. Hofer, 1972:203). Animal communication, according to Plessner, does not know a "mediation through objects" (1975a:380, cf.379). Surely, this phenomenon is particularly remarkable, since, in the domain of human sensitivity, the sense of seeing and of the sense of touching dominate that of smelling (cf. Haeffner, 1982:16).

> Precisely by means of the mediated immediateness of language, human beings possess an awareness of the past and the future – an awareness taking the limited life-span of being human into consideration. This explains the uniquely human awareness of death as well as the possibility to commit suicide.

The communication of animals does not refer to the distant past or remote future – it is restricted to the immediate needs of the animal. As a consequence, the 'signs' used by animals (signals, in terms of Cassirer's distinction), are strictly univocal. Just compare the remarkable dance of the bees where the (i) tempo, (ii) the direction and (iii) the tangent is constantly associated with the (i) distance, (ii) location and (iii) the course to be followed in order to reach the detected source (cf. Overhage, 1972:220 ff.). Lingual signs, on the contrary, presuppose choice and therefore require interpretation (cf. Nida, 1979:203; De Klerk, 1978:6).

Furthermore, it is striking that the typical human lingual ability is dependent on specific anatomical conditions absent in the anthropoids.

6.3 Language and human anatomy

Ever since Descartes it was believed that the uniqueness of the human brain is responsible for human language. The result was that anatomists insisted that anthropoids also have the 'machinery' available to articulate speech. The order of primates – which includes human beings according to the prevalent classification – is nevertheless, of course with the exception of humans, unable to vocalize. The ability to reproduce human speech sounds as it is found in birds is totally absent in the mammals. The vocal potential of the gorilla and urang-utang is exceptionally poor. The chimpanzee is somewhat better off, and the gibbon can produce sounds

covering almost an octave. All these anthropoids, however, completely lack the playful sounds produced by the human suckling. Not only transcend the unprecedented possibilities of human sound production that of the anthropoids by far, but this sound production also displays an exceptionally rich modifiability (Overhage, 1972:242).

Postmortem studies of the upper respiratory tract in mammals as well as cineradiographic studies have shown that the position of the larynx is crucial in determining the way in which an individual breathe, swallow and vocalize (Laitman, 1985:281). This implies that there are certain *anatomical peculiarities* which go hand in hand with the contribution of brain functioning in the production of human speech, in particular the gradual descent of the larynx after the post-natal period (cf. Portmann, 1973:423).

> The failure of the anthropoids to imitate human sounds follows from the totally different structure of their larynx. In all anthropoids it is positioned extremely high in the neck. Laitman remarks: "this high position permits the epiglottis to pass up behind the soft palate to lock the larynx into the nasopharynx, providing a direct air channel from the nose through the nasopharynx, larynx and trachea to the lungs. ..... In essence, two separate pathways are created: a respiratory tract from the nose to the lungs, and a digestive tract from the oral cavity to the esophagus. While this basic mammalian pattern – found with variations from dolphins to apes – enables an individual to breathe and swallow simultaneously, it severely limits the array of sounds an animal can produce. ... While some animals can approximate some human speech sounds, they are anatomically incapable of producing the range of sounds necessary for complete, articulate speech" (1985:282, cf. Goertler, 1972:249).

In order to provide the newborn human suckling with a milk tract separate from the respiratory tract, the position of the human larynx at birth is the same as in that of the mammals. In the period between the first and second year this highly positioned larynx starts its descent in the neck. This downward movement creates the pharynx cavity, necessary for the articulation of the richer voice disposition present in human beings. Laitman declares that the precise time this shift occurs, as well as the physiologic mechanisms which underlie it are still poorly understood (1985:282). As soon as the larynx reaches its destined low position, it can no longer lock into the nasopharynx. Consequently, in human beings, the respiratory and digestive pathways cross above the larynx. This creates the possibility to suffocate, which surely is, evaluated in itself, something negative. However, it is precisely this expanded pharynx which provides the human being with its unique potential to produce a rich variety of speech sounds.

The palate between the mouth and nose cavities serve as resonance basis for the produced sounds. Goerttler even mentions the fact that in the third month after conception a distinctively human structural element develops (it is called the vocal chord 'blastem' – 1972:250).

It is interesting to note in this connection that Laitman informs us that the basicranial similarities between the Australopithecines and extant apes suggest that their upper respiratory tract was also similar in appearance. Consequently, as with the living nonhuman primates, the pharynx portion available for sound modification in these early hominids would have been greatly restricted: "As a result, these early hominids probably had a very restricted vocal repertoire as compared with modern adult humans. For example, the high larynx would have made it impossible for them to produce some of the universal vowel sounds found in human speech patterns" (Laitman,1985:284). His conjecture is that the first instances of full basicranial flexion similar to modern humans do not appear until the arrival of Homo sapiens (estimated by him at 300,000 to 400,000 years ago): "It may have been at this time that hominids with upper respiratory tracts similar to ours first appeared" (1985:286).

6.4 Does human language depend on 'speech-organs'?

This question points at another astonishing feature of human speech production. If we define a speech-organ as that bodily part which exists solely in service of the production of speech sounds, then we are in for a surprise. Let us enumerate possible candidates: the lungs, larynx, mouth cavity, palate, teeth, lips and nose cavity. Without exception, all these organs perform primary functions which would normally proceed even if a person never utters one word (Overhage, 1972:243)! Human language simply takes hold of all these different organs in the production of speech sounds.

This highly developed and subtle cooperation, especially of three organs so heterogenous in character as the mouth, the larynx and the brain, integrated in the production of speech sounds, makes it rather difficult, if not hopeless, to provide us with an evolutionistic causal explanation of this astonishing phenomenon. The question arises what number of miraculous changes should have occurred to produce the articulation conditions necessary for truly human language formation.

> Such an unfathomable process of change affecting so many differently structured organs and organ complexes, closely correlated with each other, should have proceeded harmoniously as a total change, if it was to come to the unprecedented perfection of human speech (Overhage, 1972:250).

The inevitability of (lingual) *expression* and *interpretation* highlights the conditioning role of the uniquely lingual mode of human existence. In spite of the long-standing neglect in this regard, the famous linguistic turn which occurred by the end of the nineteenth century and the beginning of the twentieth century, testifies to the importance of this unparalleled feature of human culture. At the same time, this development in its own way demonstrates the fact that the human being is not alone, but is constantly dependent on the presence of and interaction with other human beings. This explains why human culture ought to be accounted for in terms of the highly differentiated social nature of the human being.

7. The fruitfulness of a comprehensive anthropological view

At this central point we are confronted anew by the question: who and what is a person actually? At the beginning of this chapter we referred to the mystery of human existence. The course of our exposition could even have given the impression that science could provide the solution to this riddle. Anyone seriously attempting to ascertain what exactly is known scientifically about humankind today is soon overwhelmed by the sheer magnitude of this knowledge – so much is known that no single individual could hope to be up to date with it all.

Investigations of the microdimensions of human existence has spectacularly expanded the scientific horizon during the past five decades. We only need to think back to the early 1950's when biologists and biochemists unveiled the mysteries of the DNA-molecule. More and more becomes known all the time about the complex duplication mechanics in the cell during reproduction and about the human 'genome'. Biological engineering is developing at an astounding rate – so much so that the inhuman possibilities with regard to the future genetic manipulation of humanity are truly disturbing. The recent completion of the international genome-project highlights the strong *atomistic* assumptions operative in this dynamic research program. Yet the underlying presence of *biotic wholeness* that transcends the limits of a mere sequential analysis of genes is now once again surfacing (thus reviving key elements of the holistic biology of Hans Driesch and pointing at the relevance of more recent system theory). Gierer remarks:

> Generally, cloning genes has been almost an obsession in recent years; young scientists were encouraged to extend all sorts of biological studies to include sequence analysis of the genes directly involved wherever possible. However, the realization is now increasingly emerging that there are many interesting questions that cannot be resolved in this manner. Development and evolution the

> formation and the function of the neural networks in the brain are processes that are not easily broken down into elements corresponding to effects of individual genes, individual biochemical components, or even individual cells. A systems approach seems to be required, and this is a challenge for theoretical as well as molecular biologists: in particular, if development as such is to be understood, we need to uncover the – presumably combinatorial patterns of the activation of different sets of genes in its course (Gierer, 2001:26).

These developments probably have as their all-encompassing background the rise of depth psychology during the first half of the 20th century – with such great psychologists as Freud, Adler and Jung in the vanguard. Many previously unexplained phenomena were suddenly wrenched into the centre of scientific interest. The astounding world of the sub- or unconscious was placed on the table and it became possible to discuss scientifically what has become virtually general knowledge today – e.g. pathological schizophrenia.

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We have noted above that the human being participates in the various dimensions of reality. While material things – atoms, molecules, macro-molecules and macro-systems – clearly belong to the realm of physically qualified entities, human existence is by no means excluded from this sphere. Our physical existence is, after all, bound to the necessary presence of all the substances out of which we are formed – from the four "organic" elements (hydrogen, oxygen, carbon and nitrogen) to the variety of inorganic substances – which are equally necessary for our normal human functioning. The bodily existence of a human being is therefore founded in this physical-chemical basis.

Yet human beings also have distinctive similarities when compared with the realm of *living* creatures. Like all living entities (embracing the 'protista', plants and animals), the human body is also built up out of living cells. When we think about the biotic meaning of the many vital organs in the human body – organs such as the heart, lungs, and brain – we realize that human beings take part, not only in a physical chemical

mension, but also in a *biotic layer. As* a bodily layer this biotic substructure is founded in the physical-chemical substructure, since the human body could not be healthy without the *necessaryfoodstuffs.*

Both these substructures are in turn foundational for the *sensitive-psychic substructure,* which houses a person's complex sensory equipment and a person's equally complicated emotional life – which are both closely interwoven with the sensory and motoric nervous systems of human beings. On this level human beings are obviously very similar to animals.

In our discussion of some of the unique and distinctive characteristics of human beings it has become clear that they are in possession of numerous abilities which animals lack – notwithstanding the fact that on the common level of the above-mentioned substructures human beings indeed lack a *bio-psychic specialization* when compared with animals.

However, when human beings act under the guidance of *normative vistas* they transcend animal abilities. Normatively correct or incorrect behaviour is only possible for humans. No animal can think *logically* or *illogically,* shape historically or unhistorically, act socially or anti-socially, be thrifty or spendthrift, just or unjust. The lack of specialization of the three human substructures mentioned above (the physical-chemical, the biotic, and the psychic-sensitive substructures) goes hand-in-hand with their directedness towards the qualifying normative nature of a person's bodily existence. Since the whole "normative instrumentarium" of a person not only indicates the distinctively humaneness of being human, but also qualifies the bodily existence of the human being in its entirety, it may be appropriate to refer to this qualifying dimension as the *normative structure* of being human.

When we want to comprehend all four of these structures in one encompassing perspective, the best suitable expression would be to designate it as the *human personality.* The term *personality* embraces the particular nature of each partial layer of the human being, i.e. it encompasses the typical human *tempo* (bound to the physical substructure), the *potential* and *inclinations* of a person (known as *biotic dispositions* – bound to the biotic substructure), the *temperament* (bound to the emotional-psychic substructure) and the *character* (bound to the qualifying normative structure of being human).

Since the variety of human expressions and bodily structures are concentrated in the human self-hood (which belongs to the central dimension of reality where ultimate commitments find their seat), we can typify a human being conclusively as a *committed personality.* The prefix simply

accentuates that no single person can escape from some or other world and life view.

7.1 The human subject in medical science and practice

Medical science is often accused of having lost a view of the whole and multi-dimensional existential reality of the human being – it easily reduces human beings to mere biotic organisms which can be manipulated and controlled as *objects.* Even from a nursing perspective this reduced view is sometimes accepted. The power of medical technique particularly grants apparent credibility to this reduction.

What is lost sight of is that a person indeed continues to be a human subject. In inter-human relationships a person therefore always appears primarily and finally as a *co-subject,* and never in the first instance as an *object* destined to be manupilated. Of course there are many historical examples of societies which degraded human beings into mere utilitarian objects. We only need to recollect the institution of slavery which was still common practice in the West a mere 180 years ago.

To value and respect a human being as suci~in medical, nursing and psycho-therapeutic practice requires, before anything else, recognition of the position of being human as a *subject.* Yet, the human being as a committed personality is not qualified by any aspect of reality. Whereas material things are qualified by the *physical aspect* of energy-working, that plants are qualified by the biotic aspect of *life,* and that animals are *sentient* creatures (qualified by the sensitive psychical aspect of feeling), it would be meaningless to attempt to use any normative aspect as a *qualifying function* of human existence.

Suppose we were to claim that human beings are *social* creatures, that is, that our entire temporal existence is encompassed by the *social aspect.* That would imply that a person could only act in a *social manner.* What do we then do with those activities of people qualified by other aspects of reality -such as economical activities, analytical activities, just or unjust actions, and so forth. It is exactly the complete freedom of a person to choose to act on different occasions under the guidance of any of the range of normative aspects which particularly distinguishes humankind's normative abilities.

One moment we can be engaged in the scientific analysis of a particular problem or phenomenon, the next moment we can be involved in those technical acts required to form something freely and with cultural creativity (something that could not come into existence by itself). At yet an

other moment we can *buy* something (economic activity), appreciate the beauty of a sunset *(aesthetic* evaluation) or simply relax with friends (a *social* activity).

Consequently, if we want to understand the multifaceted subjectivity of human existence in a meaningful way, it is essential to recognize that human existence cannot be encompassed by or being limited to *any single aspect of reality.* Since none of these aspects can *qualify* or *finally characterize* human existence it is *not* desirable to speak about the "realm" of human beings – "realms" are limited to natural creatures: the realm of material things, the plant realm, and the animal realm. This usage is linked to the specific qualification of each of these realms by a particular natural aspect of reality.

Structurally this means that our temporal, earthly existence is characterized by the richly varied normative structure of our bodies – a characteristic structure which in itself is unqualified by any particular normative aspect. If this was not the case, a person would have been restricted to act *only* socially, analytically, or economically, as we have argued above.

Illness normally involves a defect in the *biotic functioning* of the patients. Naturally there may be multiple possible causes of this biotic dysfunctioning – illness may be the result of a shortage of necessary chemical elements, defects in the functioning of particular biotic organs, or it may even be the result of psycho-somatic factors (tension, worry, excitement, and so forth) or cultural factors. Primarily the duality *illness-health* has its origin in the *biotic aspect* of reality – physics does not even deal with these *biotic terms.*[3]

The presence or absence of particular chemical bonds can without doubt have important consequences for normal human functioning. Think of the important role of *iodine* in the nature and functioning of the *thyroid gland.* The *thyroid gland (glandula thyreoidea) is* placed around the lower part of the human larynx and the beginning of the wind pipe. It is responsible for the secretion of the important thyroid gland hormone *(thyroxine)* which, probably via an influence on the process of oxidation *(oxi-*

3 In a different context Von Bertalanffy uses the distinction between physical and biotic terms to indicate the limitations of (evolutionistic) attempts to understand living beings in physical terms only. He writes that physics cannot even indicate the difference between a living and a dead dog: "The laws of physics do not tell a difference. They are not interested in whether dogs are alive or dead". He continues on the same page that this remains true even if we take into account the most recent scientific advances: "One DNA molecule, protein, enzyme or hormonal process is as good as another; each is determined by physical and chemical laws, none is better, healthier or more normal than the other" (1973: 146).

dative phosphorilation) in the mytochondria, initiates the exchange of substances throughout the cells of the body. This is essential for normal biotic growth as well as emotional and psychic health. Iodine itself is qualified physically-chemically in terms of its own inner structuredness. While retaining this inner physical nature it is however *enkaptically* bound in the *biotic* functioning of the thyroid gland.[4] Only the thyroid gland functions *subjectively* in the biotic aspect of reality (it is *alive).* Of course this functioning depends on the enkaptically bound iodine (a physico-chemical entity) for the production (internal secretion) of the thyroid gland hormone. This biotic function – with its influence on the physical-chemical substructure in the human body – is itself foundationally enkaptically interwoven with the psychic-sensitive substructure and the qualifying normative structure of the human being – as proven by its importance for the healthy emotional and normative life of a human being. A hyperactive thyroid gland causes excessive energy use which can lead to a faster heartbeat and a general unease, with accompanying heightened nervous sensitivity. It is clear that the activity of the iodine and thyroid gland functions within the integrated nature of the entire human being. Dooyeweerd's theory of *enkaptic structural wholes* attempts to understand this functioning of a human being, keeping in view the complex substructural interweaving also present within the structural build-up of our bodies.

While all four of the human bodily structures have, apart from their enkaptic interweaving, a characteristic internal functional sphere, it is impossible to delimit any of them *morphologically,* i.e. to localize them in a particular *part* of the body. The foot, hand or leg of a human being is never simply physical, biotic or sensitive-psychic. The whole human personality, in all four of its enkaptically interwoven components, comes to expression in every part of the body. It is precisely for this reason that it is impossible for medical and nursing practice to try and work with a reduced "simply biotic-organic human being." This reduction can be directly linked to the mentioned *technicism* of our age – an off-spring of the modern *science-ideal.* The danger exists that such a *technicism* reduces illness and health to mere *scientist c abstractions* – losing sight of the *totality* of human existence. Technique can only be of service if it escapes the limitations of this reduced abstraction:

Manipulation of the human embryo in particular easily loses sight that this embryo is the minimal enkaptic structural whole of a *person* as a *human being*. Such manipulation consequently has consequences for all four structures of human bodily existence – consequences which, in the light

4 The term *enkapsis* captures the occurrence of forms of intertwinement where the interlaced structures maintain their own inner structure.

of the limited medical knowledge available in this regard, cannot be foreseen on several vital points. Such experimentation does not only affect particular biotic organs with regard to their internal biotic functioning, but rather a person as a totality.

Apart from the limitations contained in the recognition of the enkaptic interweaving of the human body, medical and nursing practice also has to take account of the variety of societal relationships in which every human being takes part. Whoever enters these professions must not only have an integrated and encompassing philosophical view of a person, but must also work with a balanced and encompassing philosophical view of the role individuals within human society.

8. Individual and Society

Human society cannot be understood merely in terms of supposedly *abstract individuals*, even if these individuals are considered to be in constant *interaction*. Being constitutive for the existence of the human being, the *social dimension* of reality inevitably entails that human beings are from the outset *linked with* and *involved in* different societal collectivities. It is within the context of human society that we come into contact with the many other typical and uniquely distinctive features of the human personality alluded to above. The social organization of societal collectivities makes possible the peculiar forms of labour and different kinds of economic enterprises which are currently found within (industrial) societies. It also enables the remarkable sphere of art production, entertainment and other forms of leisure. Add to this the presence of a legal system, certain moral codes of conduct, and different world and life views (ultimate commitments), and we must realize that the multifaceted picture of human culture is so basic and universal that one cannot deny it its scope merely on the basis of the fact that *particular forms* are found within each *distinct culture*.

9. A fundamental circularity in modern medicine

It must be clear that the preceding sketch of the complex structure of the human body precedes the *specialization* in and *differentiation* of the various scientific disciplines. Therefore an *anthropological totality view* of the human person has to accompany everyone of these disciplines in its endeavours.

In concluding one astounding fact, related to a historical perspective on the development of medicine still ought to be highlighted. In ancient Greek culture *health* and *illness* were not merely an expression of bodily

and psychical well-being, but also of divine and social acceptance. But in a gradual process of differentiation scientific medicine eventually distanced itself from the so called priestly medicine. Yet, this more scientific medicine stood in service of the ideal of beauty and health which played such a crucial role in Hellenic culture. During the middle ages the reek ideal of health was relativized. Although health was still related to The well being of this man's in a religious sense, it no longer coincided with the latter (cf. Glas, 1997:20).

What is remarkable about our culture is that science and technique took over the role which traditionally was played by life and world views. They pretend to be capable of interpreting human experiences and of providing the context of meaning within which such experiences should be understood – a pretension also found in contemporary psychology and psychotherapeutic practices. Gronemeyer Speaks in this context of a secular religious content acquired by modern medicine (1992:222-227). If this suggestion is to the point, we may here discern a return to the classical Greek role of medicine and the doctor. Glas Remarks that many cultures practically identified health and well-being in a religious sense because those cultures Assigned the role to the doctor to eliminate the obstacles standing in the way of achieving this goal (Glas, 1997:26).

10. Concluding remark

The general tendency found throughout the history of scholarly thinking, namely to approach reality in terms of reductive and one-sided perspectives did not leave anthropological view untouched. In spite of an astonishing and increasing specialization taking place within the fields of medicine, psychology and cultural reflection during the past century, the inevitability to proceed from a total-view of the human person remained a constant need. In this article we have tried to show that making explicit such a totality perspective does not hamper the integration of diverse specialized fields of learning. This insight may inform an integrated accountability within medical practice and it may deepen and enrich the specialized knowledge operative within psychology and cultural studies in general.

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