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Mysticism and Beyond

BUDDHIST PHENOMENOLOGY, PART II

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Dedicated to the memory of Mario Fraenkel

IN THIS PAPER a model will be presented for the human mind in which mysticism plays a clear role. Moreover, the model discusses also the cause of human suffering and desire and our possible liberation from it.

The model is based on experience obtained during several intensive vipassana meditation retreats (more than ninety days over a period of seven years, after several preparatory years of so-called concentration meditation). The motivation for such a training is twofold. First of all, the purpose of the training is inner calm and freedom, in themselves of enough value. Secondly, part of the training consists of an introspective study of consciousness. Thereby one obtains insight in the functioning of the mind, complementary to information obtained in disciplines such as neurophysiology and cognitive science.

The paper is organized as follows. First, several misunderstandings are discussed in §1. Then in §2 the model will be presented. It will be useful for the understanding of the description of the phenomenological data described in §§3,4. In §3 mystical and other experiences are described that are obtained during the path of mental purification. In §4 the account of this training will be continued, but no longer focused on existentialist experiences. It turns out that there is something better than mysticism: *freedom*. Finally in §5 a program is sketched for scientific verification of the reported phenomena and other statements.

* This paper is an elaboration of a lecture given at the University of Delft (October 2, 1992) for the symposium *Over grenzen* (On boundaries); a preliminary version (in Dutch) is in Vlug [1993]. It is an extension of the author's "Buddhist phenomenology" (Barendregt [1988]; hereafter called part I), a personal account of part of the mental training towards the purification of consciousness; for the reading of the present paper, however, no acquaintance with part I is required. It continues the description of experiences obtained during the practice of intensive vipassana meditation. Moreover, based on these experiences a model is presented for one particular aspect of the human mind: the mechanism of desire, suffering, mysticism and mental purification. The

§1. OPPOSITES

In discussions about mysticism and other forms of spiritual development, several pairs of opposites are often mentioned. Examples of such pairs are rationalism-mysticism, reductionism-holism and determinism-free will. In these discussions it is often assumed that there are two ways to view the world: the rational, reductionist and deterministic view versus the mystic, holist and intuitive one. Also other pairs are added: Western-Eastern, materialistic-spiritual. We claim that these pairs are only superficially opposed, that the predicates Western versus Eastern form an oversimplification that does not truly serve the spiritual traditions in the west or the scientific achievements in the east. It is remarkable that those opposites that are relevant only receive little attention. These are insight-control and internal-external.

IMPROPER OPPOSITES

Rationalism-mysticism. This seems to be a proper opposite. A rationalist only makes statements, if these are based on logical thought. In mysticism this is not the case; sometimes even some contradictory statements are made. Conversely, in mysticism one is warned against the influence of rational thinking.

Nevertheless this pair is only apparently in opposition. In Staal [1975] the following is stated: "Mysticism consist of experience. As such it is neither rational nor irrational; but this experience can be studied in a rational way." Paradoxical statements occurring in the language of a mystic may be made understandable, if we realize that using common language uncommon experience is being described.

The following example—already given in part I—may be explanatory. Suppose there is an island with inhabitants that are able to see only the colors black and white. In their "logic" one has the following law: "something is either white or black." In the language on the island the word for "black" is "non-white." Hence this law can be formulated as: "something is either white or non-white." Now someone on the island has the mystical experience that we know as seeing the color green. The mystic may say: "I have seen something; it was neither white nor non-white (and it was splendid)." According to the logic of the island this is a contradiction. But we know better.

model makes very clear the goal of the meditation training and explains well the phenomena described in the Buddhist literature. Further, the model is claimed to be useful for understanding several psychosomatic phenomena. The author considers the observed phenomena valid in general and of essential value for the eventual theory of the human mind.

A rationalist may object that even if the statements of a mystic may not be impossible, there is no logical ground for them. This objection can be refuted by pointing out that the statements of a mystic are empirical, based on experience in a trained consciousness. Nevertheless it would be good if a mystic would state clearly that he or she is speaking about internal experience.

So much for the allergy of rationalists against mysticism. As to the converse—the allergy of a mystic against rational thought—it can be said that again there is a misunderstanding caused by a difference in motivation. The mystical training is directed towards a cultivation of introspection as a refined instrument. This introspection should not be distorted by projections and the like. Often rational thinking acts as a disturbance for proper perception of phenomenological experience. Therefore one has to be careful with rational thought during the mental training towards purification of consciousness. It is sufficient to be always aware of our thinking or reasoning whenever present—however, that is not so easy.

In conclusion, mysticism and rationality are not incompatible. Both are based on a refinement of the human mind, albeit in somewhat different directions. It is important that rationality is not confused with bureaucracy and mysticism not with mystification.

Reductionism-holism. Reductionism is the method that tries to understand the behavior of certain objects in terms of their components. In this way science has achieved great successes. By selecting in a situation the right components whose behavior can be described and be used in a description of the behavior of the total situation, one has obtained a good understanding of many phenomena in nature.

Holism on the other hand emphasizes that one should not neglect the global view. “The whole is more than the sum of its parts” is one of the slogans of holism. As pointed out by Nagel [1961], the truth of this statement depends on the way the concept “sum” is interpreted. If one has an amplifier, a cd-player, speakers and wires, than one does not yet have a working stereo-set. The parts have to be connected in the correct way by using the wires. If in the interpretation of the concept “sum” this correct wiring is included, then the total *is* the sum of its parts. A holist may maintain that with a stereo-set one can listen to cd’s, something that is not possible with any of the parts. This is correct, but should be stated as “the properties of the whole are not the sum of the properties of the parts.” The aim of reductionism is to describe the properties of a whole as a function (not a mere addition) of the properties of the parts. Usually the total has extra properties (that is why we make compound objects). It may also happen that properties of the parts are lost after the total is formed (e.g., iron, Fe, is susceptible to rust, but iron oxide,

FeO₂, is not; sodium, Na, and chlorine, Cl, are poisonous but sodium chloride, NaCl, table salt, is not).

Holism may be defended as follows. If one has not yet succeeded to select in a given setting the proper components together with a successful description of these, then a more global approach is the only possibility. In this situation reductionism is a working hypothesis, a scientific program. Moreover, even if the reductionist analysis of a situation happens to be completed successfully, it is still important to pay attention to the total. As comparison one may think of the performance of a piece of music. First, one has to practise the difficult passages (reductionism). Thereafter these passages and the other parts should be integrated into a balanced total (holism).

As conclusion I want to state that reductionism and holism do not contradict each other. On the contrary, they can complement each other fruitfully.

Determinism-free will. It is noteworthy that in the history of human thought this pseudo-discrepancy has been three times the cause of intensive polemics. This happened in fundamental discussions in theology, in classical physics and more recently in artificial intelligence. The main idea is simple. Nature, including homo sapiens, is completely determined according to some theories. This for different reasons depending on the particular school of thought. According to some theological views God completely determines the world. According to classical physics the laws of nature and the state of the universe at a given moment completely determine the future. Now, if the world is completely determined, what about our free will? It seems at least that we have one. In artificial intelligence, in which man is considered as an information processing system, the question comes up in an analogous way.

One has invented many ingenious arguments to try to give a solution. Quantum mechanics seemed to be reassuring. Nature is apparently not deterministic, according to some interpretations of this theory, and thereby the human dignity is saved. To this one can make the following objections. First of all, this solution is not satisfactory, because in this way our behavior is based on stochastics, on the throwing of a die—not very dignified indeed. Moreover, in spite of the phenomena described in quantum physics, determinism is not ruled out in principle. The often cited experiment based on a theorem of Bell, see Aspect et al. [1982], is sometimes seen as a proof that determinism is impossible. But although the experiment is very interesting, it does not lead unambiguously to this conclusion.

The matter is, however, much more simple. In the philosophical struggle in which one tries to choose between determinism or free will, it is assumed that the two are mutually exclusive. This is not correct. The reader may try to give

a careful argument that determinism implies that there is no free will; this attempt will be in vain. The reason is that determinism means not only that things are completely determined but also that this is so by a cause, by nature. Well, we are part of nature and therefore our presence and our behavior is of genuine influence on the course of things.

The following example may be useful. Imagine we have a chess computer, a cheap one that always uses the same strategy. Now if playing against it we win a game, then we always can win by repeating our successful strategy. It is clear that this machine is deterministic and does not have a free will. Now imagine that we have a more expensive chess computer, one that learns from its mistakes. After winning from it in a game, we cannot win again with our previous strategy. The machine will remember that it is not good to repeat its moves. We can state that this second machine has a rudimentary form of a free will: it reacts differently under similar circumstances. But since the machine is programmed its behavior is deterministic. So determinism and free will are compatible.

Still one may object. In some views on a human free will—e.g., the one propagated in Christianity—there is an (eternal) soul that independently makes decisions. In this sense the second chess computer does not have a free will, since its behavior is exactly determined by the position on the board and by its past experience. But a really independent soul that makes decisions that are not based on anything is in fact being haphazard, is a random generator. This is not what is meant by free will—even in Christianity. According to this religion one should base one's actions on the dictates of one's conscience (taking into account the circumstances). Doing this, however, our behavior is comparable with that of a chess computer of the second kind, albeit that we are much more refined.

The reader may feel uneasy about this. That is so for good reasons. The fact that we may have a free will and are at the same time completely determined is related to a fundamental characteristic of our existence: we are selfless. We have no absolute control over what happens in our mind. Says Saint Augustine: "*If my mind orders my body to do something, then my body obeys so well, that one can hardly distinguish between the order and its execution. If, however, my mind orders my mind to do something, then it does not listen, even being the same mind. Why this monstrous phenomenon and for what purpose?*" Schopenhauer says something related: "*We are able to want to do something, but we cannot [force ourselves to] want to want something.*"

Having a free will means that we can make a decision based on considerations involving among other things our thinking and feeling. Being determined means that those considerations follow a fixed path. But the only way to know the outcome of those considerations and thereby of that decision is to

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live and go through the process. The outcome is of interest because even if it was determined, it was unknown before. Compare this to a computer that calculates the number π ($=3.141592 . . .$) in 1,000,000 digits. The digits are determined before the computation starts, but nevertheless the computation has to be done.

In conclusion, we are not without a free will. However, that free will is beyond our absolute control—it just follows the internal feelings and thoughts in our mind. In fact we are selfless, i.e., we do not possess these feelings or thoughts.

PROPER OPPOSITES

In the discussion about spirituality it is good to emphasize two genuine opposites: control-insight and internal-external.

Control-insight. This pair of opposites indicates two fundamentally different attitudes towards life. Very often we want to control circumstances in and around us. This is for good reasons: these circumstances determine our well-being, our degree of happiness. However, once we have enough to eat and live relatively comfortable, our desire to control may expand and makes us want things that are beyond our capacity. This results in suffering, because there will be things that we want that are outside our reach. Insight on the other hand also gives us pleasure but one that is more permanent. For the pleasure of eating a cake we must pay by not having it any more. The pleasure of understanding the theorem of Pythagoras will remain inside us and can be revived as soon as we care to think about it.

The difference between the quest for control and that for insight can also be seen in the motivations to do science. Originally science is motivated by our strong curiosity, which is the quest for insight. We want to understand the phenomena around us. Now what exactly is insight, understanding? An absolute answer why things behave the way they do cannot be given. This is known already by children that have discovered that after every answer given to them they can ask again, "Why?" Insight consists of a simplification of the situation. It consists of knowledge about parts of the situation from which properties of the situation itself can be derived. This was already discussed when we dealt with reductionism. We understand how and why the planets make a loop-shaped movement between the fixed stars. We understand what is the chemical basis of heredity.

With this understanding we may obtain considerable control of the situation around and inside us. This results in the second motivation for science. We want to be able to control things. And indeed we are reasonably able to do this as a spin-off from our obtained insight. We can go to the moon; we can

program a bacteria to produce human insulin. These are impressive examples.

Unfortunately it is the case that the public opinion and therefore also the politicians see the capacity to control as the main motivation to do science. Therefore science has to be defended by short term successes in its applications. The aim to obtain insight thereby becomes somewhat neglected.

In the same way most people are involved in controlling their circumstances in order to have happiness. Because our capacity to control has its natural limitations, in this way there will always be resulting suffering. Later we see that there is a better way. The possibility of insight in the functioning of our mind and the resulting spin off towards the lessening and eventually stopping of our suffering is the main basis for the existence of Buddhism. These will be explained by a model in §2.

Internal-external. This pair of opposites can be approached also by the words subject-object. The following is meant. Suppose we are in an unpleasant situation. Then there are essentially two different ways to try to do something about the resulting suffering: 1. to change the situation itself (external); 2. to change our consciousness of that situation, so that it is no longer perceived as unpleasant (internal).

Applied science allows us to make our surroundings more pleasant to live in. This is in accordance with the first method of external control. However, as mentioned before, control has its limits (scientific, financial, political, and ecological). Therefore it is good to know also another method to solve our suffering. This consists of an internal modification of our consciousness in such a way that the situation in which we are is no longer perceived as unpleasant. In order to do so an essential change in the way our mind functions is necessary. What kind of change this is will become clear by the model of our mind given in the next section.

The method to perform this change in our consciousness is called the path of purification. Perhaps this path does not appeal to you; perhaps it does. In any case, the information obtained this way is important for the understanding of the human mind.

Most human beings use the external method for their happiness. The method of internal control is important for the purification of our consciousness. However, when the path is completed, there is no difference between the two methods anymore. Both will be seen as tiresome manipulations. Moreover, in that state of buddhahood there will be no longer need for either form of control. Also this almost paradoxical aspect will be explained by the model in the next section.

§2. THE COVER-UP MODEL OF THE HUMAN MIND

How does the human mind function? This is no doubt the most important open problem in science. One may wonder whether in principle it is possible at all that the human mind understands itself. It has been argued in Hofstadter [1979] that on grounds of the existence of so-called universal Turing machines the perspectives are promising. But it has to be said that, in spite of progress in cognitive sciences, the quintessence of this problem remains unsolved. This essence can be formulated as follows: "What is consciousness?" In the mentioned book by Hofstadter an interesting hypothesis about the working of self-consciousness is stated. But this hypothesis is mainly about the aspect "self-"; about consciousness as such little is known yet.

In what follows I will concentrate on one particular aspect of consciousness: suffering and desire. As is probably well-known, Buddhism often refers to these. To an outside observer this may seem somewhat perverse. There is, however, a clear reason for this emphasis. By means of suffering and desire we are conditioned to do whatever evolution has made us to do; we are "programmed" by them. And to follow the metaphor of programming, it can be stated that the Buddhist path towards the end of suffering consists of the development of a new "operating system." If one has succeeded in doing this, then a difficult step will follow: switching the mind from the old to the new operating system.

We will now present the cover-up model of the human mind and its conditioning and our possible liberation from it. The model is based on experience reported in §§3,4. It is presented first for better understanding of the phenomena. The model is central to the Buddhist teaching and will be presented in four points.

(I). Depending on external circumstances and our personality we will perceive situations in which we find ourselves as pleasant or unpleasant. This feeling depends on time because the external and internal circumstances are subject to change. This often causes a problem. Even if we feel pleasant at a certain moment, the next moment this may no longer be the case, because situations in life change considerably. If we use the external method to be happy, then we constantly have to change something in a situation in order to feel satisfied. We are slaves of the circumstances in which we live.

(II). The mechanism by which we are conditioned is as follows. Within ourselves there is something that I call the (fundamental) process. Although the

process is an essential part of us, it is usually not visible. The process has three characteristics:

- (i) it is a continuously fluctuating chaos;
- (ii) it is nauseating, unbearable;
- (iii) we have absolutely no control over it.

A well-known description of the process in which the second aspect is emphasized is contained in Sartre [1938]. In the work on phobias by my father Barendregt [1982], ch. 12, the process is described under the name "it." In this work the first and third aspect of the process are being emphasized in an explanation of the working mechanism of phobias.

Although the process is continuously working within us, usually we are unaware of this fact. This is because the process is hidden, anesthetized. This anaesthesia is done by our "feeling." This feeling is present in us having a certain volume. In order to hide the process there is a certain threshold. If the volume of the feeling is below the threshold, the process becomes more or less visible and suffering results; see fig. 1. This pushes us to external or internal actions resulting in more feeling. Some well-known reactions are: eating or fighting as external ones and becoming sad, angry or depressed as internal ones. Many more possible reactions exist. As soon as the threshold of the volume of feeling is reached, the suffering disappears.

If the volume of feeling is exactly on the threshold value of hiding the process, then an unstable equilibrium results. In principle one is happy, but because of the fluctuations in the process one has to be active constantly in order to remain so. This situation is the state of desire; see fig. 2. Some well-known reactions are: eating, having sex as external ones and fantasizing as an internal one. Other possible reactions are painting, composing, planning; of course there are many more possibilities.

If the volume of feeling is above the threshold, then the process is completely hidden and happiness and inner calm result. This is the state of mystical experience: the fluctuating nausea of the process is far away and not visible; see fig. 3. Nature is stingy, however, to give us such a large volume of feeling.

The process is usually hidden. Even in the state of suffering one does not realize that the process is there: one is busy with the actions in order to change the level of feeling, and often one is even successful in this (at the price of becoming e.g., aggressive or depressive). Nevertheless, there are certain situations in which the process becomes visible. Intentionally this happens in meditation; unintentionally at a depersonalization or other forms of mental breakdowns; see fig. 4. It cannot be emphasized enough, that the process is of an extreme nauseating and unbearable quality. Our system (i.e., our body-mind combination) wants to avoid the process at any costs. This means that

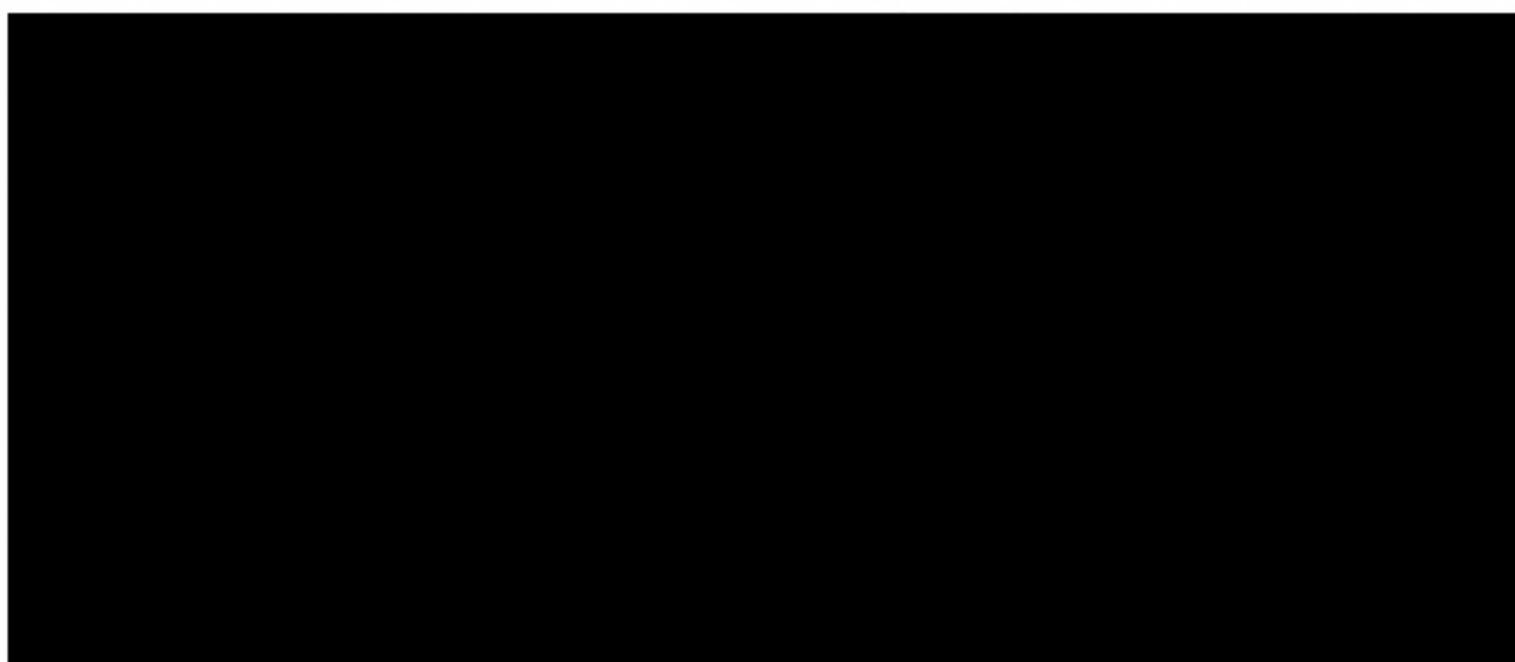


Fig. 1,2. The tangle represents the fundamental nauseating process that occurs in our consciousness but is hardly visible. (There are three smaller tangles that will be explained later.) The curved lines (at the points of the arrows) represents the level of feeling until where the process is anesthetized. In fig. 1 there is suffering because the process is partly visible (i.e., above the level; think of feeling as an opaque liquid). In fig. 2 the level of feeling is exactly at the threshold to hide the process. This results in desire. One feels pleasant, but because of the changeability of the process continuous action is necessary in order to keep it covered. The thick arrows represent the dependence of feeling on external circumstances and our volition to manipulate these.

we have to perform actions that produce feeling in order not to see the process. The existence of the process and our necessity to hide it is the driving force behind all inhumanities a human being can commit. It is the very cause of war.

It is clear that the continuous struggle to keep the volume of feeling high enough to cover the process is a form of symptomatic treatment.

(III). Fortunately, there is also a real medicine against the process. This consists of insight to be developed using mindfulness, combined with concentration and effort; see fig. 5. By means of mindfulness, concentration and effort one becomes (temporarily) protected against the horror of the process. But this protection is different from the one by feeling: using the three the process becomes visible without having the need to hide it immediately. One trains oneself in observing objectively the process: "O, this is suffering; knowing. O, this is desire; knowing." Then it may happen that insight in the functioning of the process develops; see fig. 6. This insight will have as effect that suddenly part of the process gets disentangled and then dissolves into nothingness (dis-

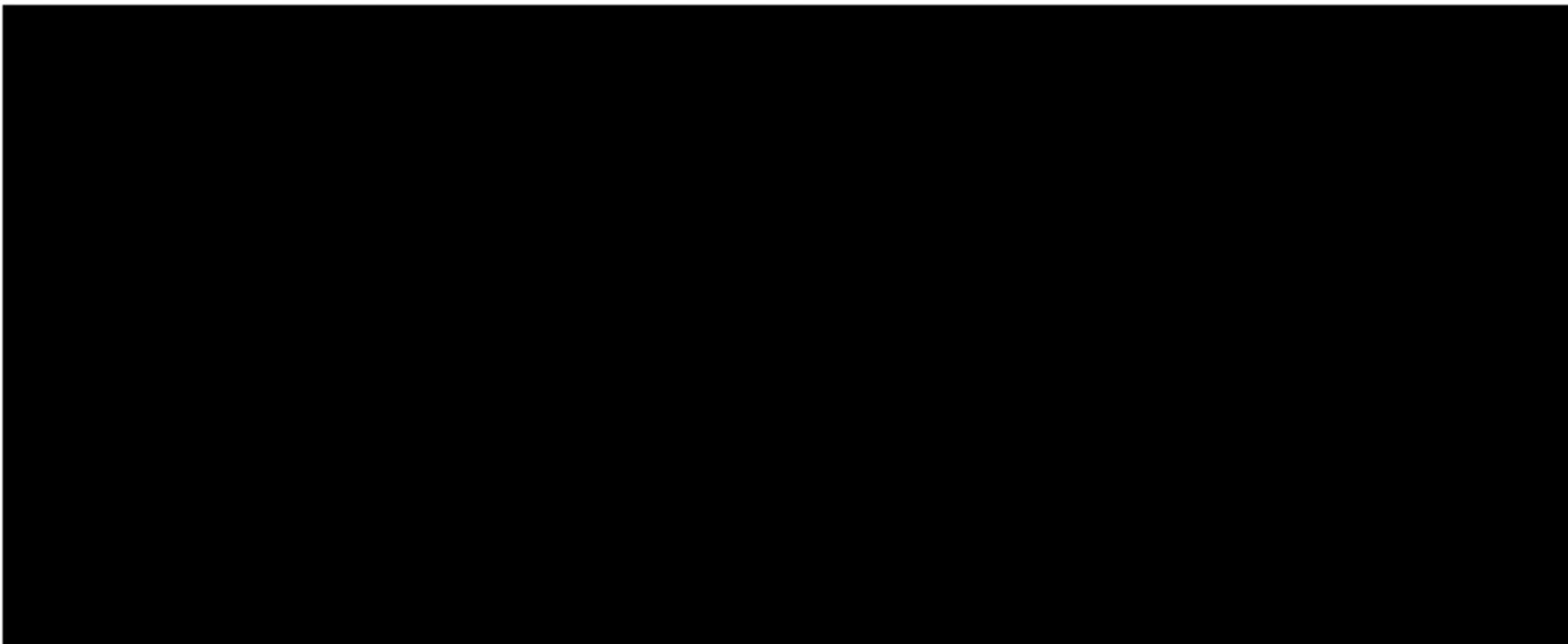


Fig. 3. *By trained concentration (in Buddhagosa [1976] more than ten chapters are devoted to the attainment of it) the volume of feeling is kept higher than strictly needed to hide the process. This results in mystical experience: inner calm and rapture. The thin arrow represents the dependence of the level of feeling on internal circumstances and our volition to maintain the high level.*
 Fig. 4. *Because it takes relatively much effort to maintain the volume of feeling represented in fig. 3, it may happen that the level suddenly drops down far below the threshold needed for the cover up. The process becomes visible in its malicious form.*

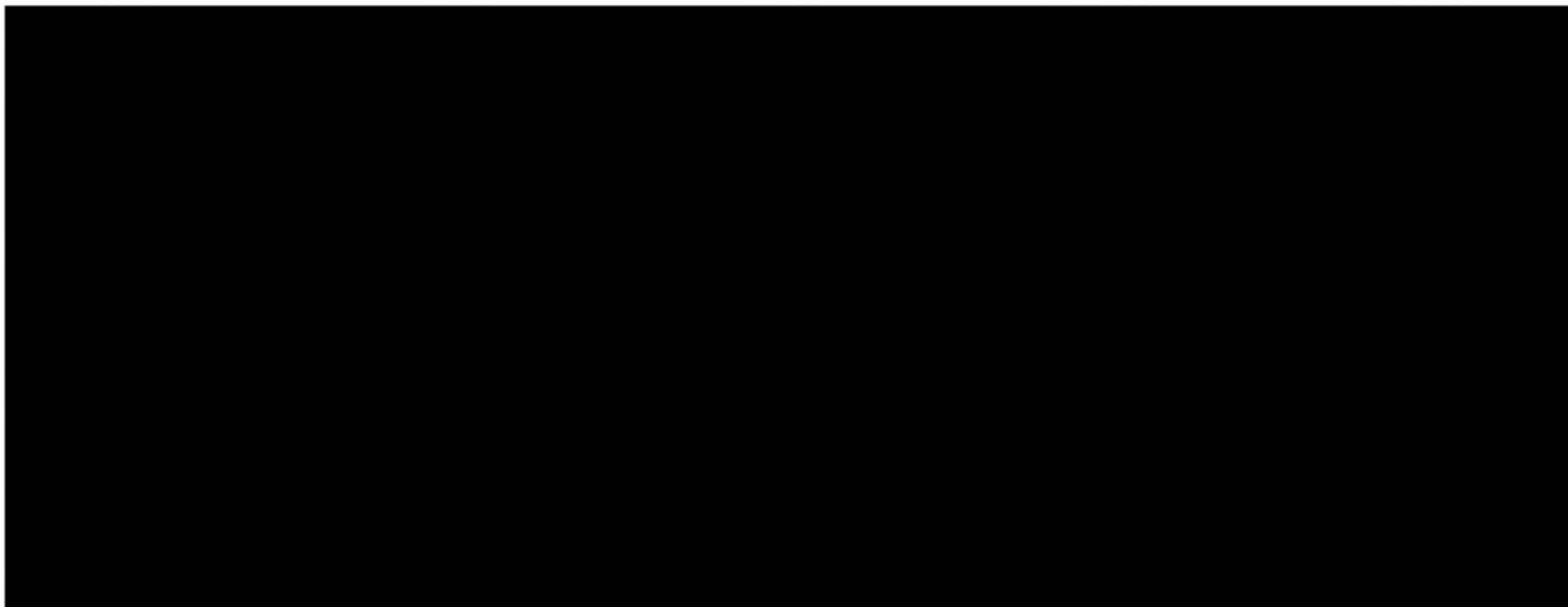


Fig. 5. *The thin arrow represents concentration on the act of mindfulness. This is necessary to keep a distance from the effects of the process in order to be able to dive into it and investigate its structure.* Fig. 6. *With insight in the structure of the process the tangled knot will be somewhat unraveled. We cannot do this at volition; it may overcome us.*

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appears; Sartre uses the made-up word *néantiser*: 'to denothing' one may translate).

(IV). By a systematic application of the method just described, one can purify the process and make it less malicious. Then—at a moment of insight combined with surrendering—it is possible that the principal knot of the chaotic tangle of the process is found and by insight in its functioning the entire process disappears completely; see figs. 7, 8. Although one will be completely aware of this important happening, one cannot choose the moment in which it occurs. It just may happen.

According to the Buddhist tradition there is not just one process to be eliminated, but four in total. These have to be disentangled one by one in a similar manner and in a fixed order; see figs. 9–12.

A description of the psychological effects of the cessation of one or more processes can be found in §4. Given enough persistence and right practice, every human being is said to be able to accomplish the cessation of the four processes. After the four are dissolved one is completely unconditioned. Then one is in the state of nirvana and has reached buddhahood.

§3. "THINGS THAT MAY HAPPEN"

We now will continue the description started out in part I of the path of purification of our consciousness as taught in classical (theravada) Buddhism. Mystical experiences may occur along the way, but they are not the final goal. Also very negative experiences may occur. Together these states of paradise

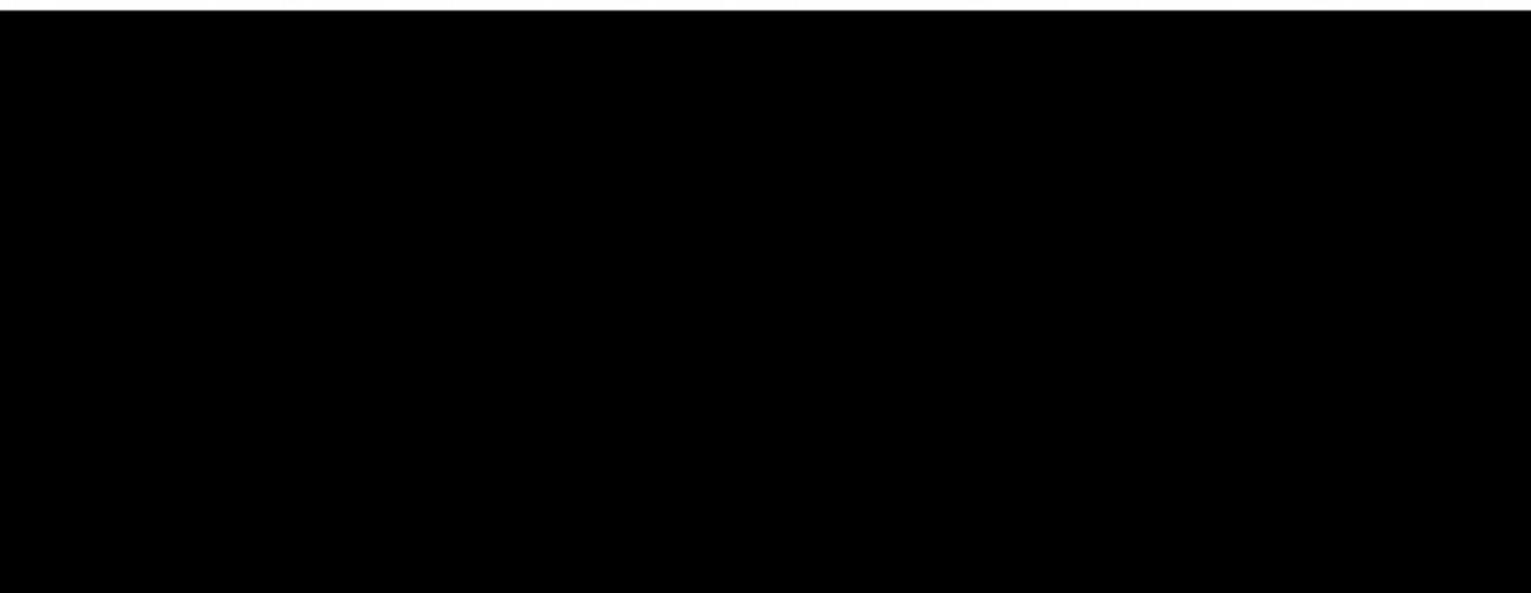


Fig. 7. Insight occurs in the essential knot of the tangle and the process starts to disintegrate extremely fast. Fig. 8. The process has disappeared. Now with a low level of feeling a mystical state can be reached. This is the so-called fruit of the path. There are three residual processes that remain to be purified.



Fig. 9. In order to do the remaining work the fruit of the path has to be given up. The second process will be allowed at the position of the eliminated first one. Then the work proceeds as in figs. 5, 6 and 7. Fig. 10. The second process has disappeared. In order to make this happen, special attention should be paid that one does not move back from the situation represented in fig. 9 to that in fig. 8. The situation in fig. 10 is essentially better.

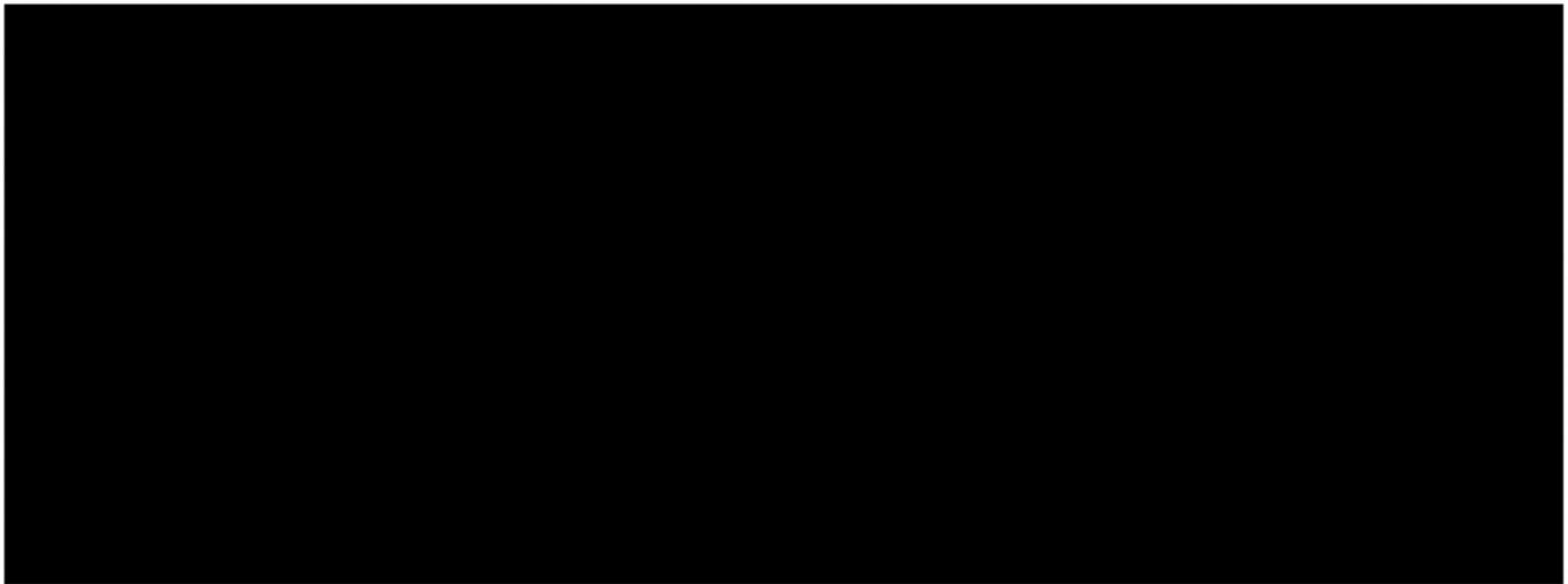


Fig. 11. Work is continued and the third process has also disappeared. Fig. 12. The fourth process has disappeared and nirvana remains. In this state the five components (see §4) of our usual consciousness are completely absent but there remains a fundamental constant awareness. It is said that this is the same for all people that have reached this state. In order to continue life a small process has to be created. Since this process is made by ourselves it can be stopped at volition.

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and hell are traditionally given the following neutral name: "things that may happen."

LABORATORY CONDITIONS

Because the work of purifying the mind is rather subtle, several prerequisites (laboratory conditions) have to be fulfilled. One has to isolate oneself temporarily in a room and spend all time to the work. One does not speak, read or write. In general one does not have contact with others, except the teacher who gives daily feedback. This is done for at least ten days. In short, one goes to a monastery for a meditation retreat. Usually several retreats are necessary in order to experience the phenomena reported below. For a detailed description of what happens in the daily routine at a meditation retreat, see Goldstein [1982]. In part I an account of the practise at several retreats is given.

One has to train oneself to notice well our sensory input. In principle one does this by having as main focus of attention the rising and falling of the abdomen caused by breathing. But if strong disturbances come from other places (like pain or itch) or from other senses one has to direct the attention to these. It is important that next to seeing, hearing, feeling, tasting and smelling also thinking is considered as a sensory activity. This view is typical of Buddhism. Like the eye that sees and the ear that hears it is the mind that thinks and it is considered as one of the senses. Indeed, thoughts are input for our consciousness. Moreover, they can be very stubborn disturbances.

Paying attention to the input of our senses is in principle not difficult. But often one forgets to do it. Therefore one needs concentration and effort that keep our attention to the most prominent phenomenon in our consciousness.

At first one does not understand what is the purpose of the exercises. Nevertheless with the right confidence one does the work. An important disturbance is the pain during sitting meditation. In ordinary life one changes position in such cases (external change). But during the exercises one does not comfort oneself by moving the body. One does not consider oneself as someone that has pain, but as someone that sees pain. In other words one dissociates from the pain, although it remains present. Pain is a disturbance for the exercises since it causes our attention to stay away from observing rising and falling. In principle one still can work well, by switching to the observation of the feeling. However, this is difficult: we do something else, namely, dislike the pain and fight against it. In an analogous way, thoughts, possibly with fear or desire as subject, can act as disturbances. The method to handle these is as follows. One observes our thoughts and states internally, "O, there is fear," or "O, there is desire." By exercising in this way with the necessary patience and calmness one will create a state of mind that is more and more beyond fear and desire.

MYSTICISM

Let us first try to specify what mysticism is. According to one definition it consists of experience that cannot be described very well by means of common language. Such experiences themselves can nevertheless be rather common. It is hard to imagine that the taste of a mango is described better than by "the taste of a mango." This description is poor compared to the actual taste. Therefore by the given definition experiencing that taste falls under mysticism. This is not very satisfactory. Another definition may be as follows. "Mysticism consists of experiences that are not common." Again this definition points in the right direction, but it is still incomplete. Sitting in a roller-coaster is for most people not a daily experience. Although the resulting mental and physical experiences are related to those occurring during the systematic purification of consciousness (and this is so not by accident, but by the chaotic nature of the process), these are not the main goal of this training. Let us venture a third definition. "Mysticism consists of experiences on the border of being and non-being, often accompanied by strong feelings of rapture." This description is adequate for our purpose.

Proceeding the path of purification, it may happen that our consciousness suddenly flows away and is replaced by a new consciousness. It is placed at a different location in our head; that is how it feels at least. The change takes place in less than one second. A very stable consciousness appears as a result from which pain and desire can be observed in an effortless manner. One is not carried away by these emotions as usually. The mind is without disturbances. In case they come, one can look and blow them away. But there is more: the entire consciousness is filled with rapture, with ecstasy. At first one is a bit restless because of the thrilling experience. Later one can look at this restlessness and this makes it disappear. Then a feeling results that is only blissful and calm (*la volupté calme* [Baudelaire]). With a Christian background one could call this experience the union with God. The Hinduists speak of "Atman is Brahman" (Self is God). With a Buddhist background one thinks that one is liberated. If one does not have a religious background, then the experience feels better than anything experienced before. In part I this state is called super-consciousness. Perhaps not very dignified a name, but that is intended.

NAUSEA

One thinks that the liberation is permanent. Indeed, one is not depending anymore on outer circumstances, it seems. Every disturbance can be eliminated at will. But it turns out later that one is still depending on something: the power

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to concentrate. After a couple of days one loses this and suddenly the volume of feeling falls down far below the threshold. Then a huge nausea appears. Its intrinsic properties are described already in §2. Again it should be repeated how strong this experience is. It is worse than dying; one becomes insane. Even if one had the impression to be a peaceful person, after this experience one realizes that one is not. In case someone would have triggered this experience of nausea, one could have killed that person if one is making the false assumption that the other person is the cause of the nausea. In the monastery one realizes that the nausea is part of our system and that we cannot blame anyone for it.

The effect of the nausea is such that one is in utter despair. At this moment it is important that there is a teacher. He advises to continue to practise. One does not believe in meditation anymore, however; one resents it. But now our thinking comes to our aid. One realizes that by exercises one has reached this state; therefore by exercises one should be able to get out again. Supported by this inner confidence practise is resumed. After many hours of extremely hard work, consciousness returns to normal.

§4. FREEDOM

Above we have claimed that homo sapiens is free. We can make a decision on grounds of some considerations. These considerations, however, are being disturbed. In §1 we have cited Saint Augustine and Schopenhauer stating something like this. But if we know ourselves sufficiently well, then we should have noticed this ourselves. The model in §2 provides an adequate explanation for these phenomena, analogous to Freud's unconscious. Part of our consciousness is hidden by our feeling. Our behavior, however, is being influenced by this hidden part. Possibly it works against our conscious will. Therefore we have inner conflicts. In Buddhism this hidden part of consciousness is called ignorance. Eventually ignorance has to be eliminated by the process of purification of the mind. Now we will continue the description of this path of purification.

ATTACHMENT TO MYSTICISM

The remembrance of the experience of super-consciousness is so strong and beautiful that one tries to have it again, while continuing the meditation practise. In some articles on spirituality one can read: "This experience is so special that I want to have it again, at any price." A good teacher of Buddhist meditation will point out that we have attachment to this experience. It is an intermediate state on the way to freedom. We should have distance from these

experiences too, otherwise it impedes our progress. "But cannot we enjoy it just for a little while?" one student asks the teacher. "It is a waste of time!" is the severe, disappointing but also fascinating answer. Also in the Christian tradition one is warned against attachment to the mystical experience. Saint John of the Cross speaks about the "gluttony for God." Attachment to mental states—even if they are very elevated ones—is called "spiritual materialism," see Trungpa [1973].

COMPONENTS OF CONSCIOUSNESS

The teacher points out that observing the phenomena has to happen in a more refined way. He presents the theory that the phenomena of our consciousness are a combination of five components: sensory input, feeling (positive, negative and neutral), perception (i.e., classification of the input), conditioning (that can be seen as an output of our body mind system, that is the way we behave) and finally awareness.¹ Of course the knowledge of the five components of our consciousness is at first only theoretical. In the practise they should be perceived directly by experience. Work continues. At a certain moment one clearly sees that the pain (caused by the sitting meditation) is not atomic but built up from pure pain (input and feeling) combined with a reaction against it (conditioning) that wants us to do something about the pain. As soon as this is seen sharply, both the pain and its counter-reaction disappear. Continuing the exercises this way one reaches a new mystical state: sublime consciousness. It is as elevated as the super-consciousness described in §3, but it hardly requires energy to maintain it. Therefore one has the hope that this state is permanent. But it is not: at a certain moment sublime consciousness disappears. Disturbances appear again and one is not able to handle these appropriately. The teacher is consulted. He advises to take a distance from all phenomena, not just pain and desire as before, but also from states like the super and sublime consciousness. Finally he says: "While continuing to practise you should have good confidence in the theory, because strange things may happen. If this is the case, continue to practise, even if you feel sick." At this point one already has experienced several unusual phenomena. Work is continued more with fascination than with worry.

¹ In order to understand better the difference between this element and input, the following example from physiology is illuminating. It is known that there are people with a special kind of blindness (blind sight). They claim that they cannot see at all. If asked, however, to point at a certain object—say a pencil—on a table, they are consistently able to do this correctly. One can say that the first four components of their consciousness function well, but the fifth does not.

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DISENTANGLING THE KNOT

Practise continues. Pain, distance; desire, distance; sublime consciousness, distance! One does not feel like dissociating from this sublime state. But being obedient one does it nevertheless. The consequences are dramatic. Sublime consciousness persists some moments. "O, sublime consciousness; knowing" the student is observing. With this "knowing" one creates a distance from it. Then suddenly one slides away into the state of nausea. "O, nausea; knowing" is the neutral observation. After naming the state of nausea like this a couple of times, one is suddenly pushed up into the state of sublime consciousness. This "sliding away" and "being pushed up" feel like experiences known in daily life. This "sliding away" may be compared to the experience we have when we receive bad news that touches us personally. The experience of "being pushed up" may be compared to an orgasm. After some exercising the student succeeds in undergoing these phenomena with equanimity. All previous meditation training is needed for this. There is a strong urge to stop this exercise. But the student keeps looking. After a while calmness develops in spite of the fierce phenomena that persist. Experience proceeds as follows:

sublime, knowing;
nausea, knowing;
sublime, knowing;
nausea, knowing;

. . . .

The process is proceeding like a ride in a roller-coaster, but without the physical or mental effects that one usually has in such a situation. This is because one has already practised enough to handle the nausea. The situation is like sitting in a fluctuating fierce fire, but the student is not at all affected by it.

All the time, however, one has to intervene a short moment in order to keep distance and not to be stuck in either the nausea or the sublime consciousness. But otherwise one is a pure observer of the phenomena.

Continuing the practise the following happens. At one moment the student forgets to make the distance—from the nausea it was—because of some distraction. In spite of this omission the phenomena go on:

nausea, knowing; sublime, knowing;
nausea, —; sublime, knowing;
nausea, knowing; sublime, knowing.

Apparently one does not need to take part; it goes by itself. The student realizes that this is better, because it requires some work to have to create all the

time a distance using this "knowing." Then he withdraws himself in order to look only. And then this happens.

nausea, —; sublime, —;
 nausea, sublime;
 nausea, sublime;
 —, —:
 —, —:

The process disintegrates extremely fast, like a piece of knitwear that unravels if one pulls the right end of wool. Also later the process would not come back. In this way the process described in §2 is completely dissolved. By contrast to the attainment of the sublime consciousness or the falling into the state of nausea the cessation of the process is not dramatic at all. It is a relief, comparable to the feeling that one has after a cold, when one is able again to breathe through the nose. It is even a very large relief. But it is not dramatic.

LEVELS OF FREEDOM

One has, however, not yet reached the end of the path of complete purification of our consciousness. This is because—according to the Buddhist tradition—there are in total four processes that should be disentangled in an analogous manner. This has to be done in a fixed order. Each of the four cessations causes an essential change in ones personality.

CESSATION OF PROCESS	CHANGE IN PERSONALITY
1	elimination of <i>insecurity, belief in self and superstition</i>
2	dilution of fear and desire
3	elimination of <i>fear and desire</i>
4	elimination of <i>conceit, sleepiness, restlessness, attachment to existence and ignorance</i>

When the four processes have been eliminated one has reached so-called nirvana.

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The tradition states that in this final state one does not have left any of the constituents of consciousness. But one keeps some kind of basic awareness that is constant and for everyone the same. If one has disentangled the four processes, then one is nevertheless able to continue life. From nirvana itself, however, this is not possible, because no perception takes place. What is needed is a little bit of concentration using which one can create an arbitrary process of consciousness. On this it is possible to base one's personality. Because this process is created by volition, it can easily be dissolved at any chosen moment in order to regain the freedom of nirvana.

§5. A PROGRAM FOR SCIENCE

In psychology one often is suspicious about information obtained through introspection. The meditation experience, however, is obtained by introspection of a trained mind. In part I it is argued that the truth of statements verified by meditative experience is as reliable as that of mathematical theorems. Indeed, mathematics also is based on intuition in a trained mind. It will be of definite value, nevertheless, if the reported phenomena can be verified by external experimental science. Possibly several other phenomena may be discovered along the way. How this should be done is totally unclear. It may keep us busy for the next century.

VALUE OF THE COVER-UP MODEL

This paper has given in a description of a model for one aspect of the human mind, based on experience obtained during Buddhist meditation. The model explains how the mind is in an impure state and that our behavior is in fact a symptomatic cover-up of this imperfection. Also the model describes how this imperfection may be purified. No explanation has been given, however, why the mind is impure and how the process of purification works. (In the monastery the monks are not allowed to think about this; it distracts from the work to be done. Back at home I do want to think about these matters.)

One may wonder what is the value of the model with its "cover-up" mechanism for suffering and desire. An alternative common sense model could be that at a moment in which unpleasant things happen to us an ad hoc process of suffering is created and similarly for desire when we are in pleasant circumstances. This common sense model has as drawback that there is no natural place in it for the possibility of purifying the mind. In this model a purified mind can be seen at best as one in which the emotions of suffering and desire do not function anymore. A rather boring view of buddhahood in which it is confused with indifference. Because it often is in view of the common sense

model that purification is interpreted, many persons are repelled by it. The cover-up model gives a better meaning to the purification of the mind in which there is no indifference but equanimity. Also there is a clear place for mysticism in this model. In the common sense model this state beyond fear and desire is difficult to interpret. Similar remarks apply to the phenomenon of nausea.

To skeptics this argument may not be convincing, because it presupposes that there is something like purification of the mind. There is, however, a well-known fact in medical science that may help to appreciate the value of the cover-up model. People react differently to pain; that is, one person may feel just a little pain whereas another person feels much pain at the same outer stimuli. In the cover-up model this can be explained by assuming that the fundamental process is of different degrees of strength in different persons. In the common sense model one has to assume that the ad hoc process of suffering has various degrees of strength in different persons. If it is true that having a low pain threshold is uniform in the sense that a person is in the same degree more sensitive than others to various kinds of pain, including psychological forms of pain, then this is some evidence for the cover-up model. Indeed, the degree of strength of the fundamental process, together with the cover-up mechanism implies some kind of uniformity.

The model of imperfection and its purification explains well an important incident in the history of Chinese Buddhism. At the time that Hung Jen, the fifth patriarch of Zen Buddhism in China, felt that he wanted to appoint his successor, he asked his disciples to write a poem expressing their understanding of the teachings. Then the head monk Shen Hsiu wrote the following poem.

*The body is like the bodhi-tree,²
the mind is like a mirror bright.
Constantly we should wipe them clean,
not allowing any dust to align.*

Monks at the monastery were impressed and expected that the head-monk would become the successor of the fifth patriarch. There was, however, a novice named Hui Neng who could not read or write. When he heard the verse of the head monk he asked a friend to write down the following poem.

*There is no body,
there is no mind.*

² The word "bodhi" means enlightenment; hence "bodhi tree" refers to the one under which Buddha is said to have reached enlightenment.

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*Since fundamentally nothing exists
where is the dust to align?*

It was Hui Neng who was chosen as sixth patriarch. How can we understand this? The head monk was describing the state of mysticism in which one has to keep working to keep the volume of feeling at level (see fig. 3). Hui Neng described the state of nirvana (fig. 12), in which no work needs to be done.

SOME CONJECTURES

Experience with the path of purification leads me to make several statements. Although I fully believe most of the statements, I will formulate them as conjectures. It will be worthwhile to look for some experimental evidence for them. In the process of doing this more information probably will be obtained about the human mind.

The first conjecture is concerned with the correctness of the principal model given in this paper.

5.1 Conjecture. *The cover-up model describes correctly the mechanism of suffering and desire.*

The next conjecture is about psycho-somatic phenomena. It almost sounds too good to be true, because one explanation is given for a variety of syndromes. Nevertheless, in the course of the path of purification very clear evidence has been obtained.

5.2 Conjecture. *The fundamental process may localize at certain places in the body and cause several psychosomatic problems.*

(i) *Torticollis can be caused by a localization of the process in the neck.* (This means that the neck is forced in an unnatural position, e.g., with the head always towards the right.)

(ii) *Ulcers can be caused by a localization of the process in the stomach.*

(iii) *Migraine can be caused by a localization in some unusual part of the brain.*

(iv) *Hyperventilation can be caused by a localization of the process in the center for control of breathing.*

(v) *Eczema can be caused by the localization of the process in the skin.*

Some phenomenological evidence for this conjecture is the following. Experiencing the nausea, it suddenly may happen that it disappears. At such a moment the mind is completely free. Careful observation of the body, however, shows that then the process is located somewhere else in the body. This localization can be at various places. If the process is left at such a loca-

tion, then the effects mentioned in the conjecture can be observed (in a mild form).

The second conjecture is about psychological effects. These are claimed to be caused by special ways of covering up the process.

5.3 Conjecture. (i) *Phobias are caused by covering up the process using fear, a strong source of feeling that is preferred to the selflessness of the process.* [This is the model of phobias of my father in Barendregt [1982], ch. 12.]

(ii) *Depressions are an efficient way to cover-up the process. Again one has to pay for it by being in an undesirable state.*

(iii) *Hypnosis can be explained as follows. During the induction of the hypnosis one has successfully made a link between behavior (the post-hypnotic order) and the cover-up of the process. An efficient way to avoid experiencing the process is to obey the post-hypnotic order.*³

These somatic and psychological effects are well-known but nevertheless not daily occurring in most persons. A very common effect of the process is described in the following conjecture.

5.4 Conjecture. *Ego, the way we see ourselves having important effects on the way we behave, is linked to a cover-up of the process by the feeling it gives to us. Therefore we are attached to our way of being. This link is even so strong, that one almost can identify the (first) process with ego. This also explains why the cessation of the first process corresponds to stopping the belief in ego as a separate entity.*

In Hofstadter [1979] a thesis is stated (on page 709) that our feeling of self is related to "strange loops." A strange loop is something that is isomorphic to a part of itself. The image we obtain in a mirror, if another one is put opposite to it, ideally forms a strange loop.

5.5 Conjecture. *The isomorphism in the strange loop that is involved in our self-consciousness is related to mindfulness.*

Some evidence for this thesis is that in the meditation practice one has sometimes the experience of "an awareness of an awareness of an awareness of an . . . ," pointing at a strange loop and its potential infinity. This is at the same time evidence for Hofstadter's thesis. The role of mindfulness is evident from the role awareness plays in this observation.

Lucas and later Penrose [1989] have claimed that it follows from Gödel's in-

³ Some evidence for this last conjecture concerning hypnosis was given in part I, §3.6.

completeness theorem that the human mind is not a computer. I disagree with the reasons they give, agreeing for example with Hofstadter's refutation of Lucas' argument. Nevertheless, I do agree with the thesis that the human mind is essentially different from a (present day) computer (including neural nets). The reason comes from meditation practice in which one can experience that there is something like nirvana that is awareness without perception or consciousness.

5.6 Conjecture. *In the eventual theory of human consciousness nirvana will play a crucial role. It will be an important step forward if nirvana can be described in terms of physics.*

The process, its unbearableness and the possible liberation from it are, so to speak, axiomatic properties of the model given in this paper. The following conjectures are concerned with the background of this model. They are presently more important than the previous one because there is more chance of verification at the present stage of science.

5.7 Conjecture. *The human mind has more than one center of control (for our thoughts and emotions), but only one of these is visible in our momentary consciousness. At different moments we may be in different centers of control. These centers are not synchronized. The fundamental process is the friction, a neural storm, caused by this asynchronism. The act of mindfulness makes a partial synchronization between the centers of control. Also, walking meditation described in part I, with its left-right symmetry, plays an important role in this synchronization. The cessation of the process means a complete synchronization of some centers of control.*

Some well-known evidence for the fact that we have more than one consciousness process, more than one mind, is the following. If we stay up late, then we become sleepy. If we stay up long enough, it may happen that suddenly we are not sleepy anymore. Although we react normally, we can feel in such a state that we are in a "different" consciousness process. Relatively early in the meditation experience one repeatedly experiences transitions to other centers of consciousness. This happens during the mystical state. During the transition one has to "cross" the fundamental process, which at this time feels like an area of sleepiness.

The following is an important consequence.

5.8 Conjecture. *The well-known phenomena of the multiple personality syndrome are quite natural aspects of the human mind.*

In "normal" people the various personalities are similar. In "pathological"

cases the various personalities are dissimilar. Whether meditation may cure some forms of the multiple personality syndrome I do not know.

A friend psychiatrist suggested the following chemical basis for the hiding of the process.

5.9 Conjecture [M. Fraenkel]. "*Feeling,*" that is used for the symptomatic hiding of the process, is caused by endorphins produced by our body-mind system.

As endorphins are similar to heroin, this hypothesis explains well why our attachments are so stubborn. Or conversely, the model explains the well-known effects of heroin.

I hope that many people will work on the subject of the human mind with all its fascinating aspects. Perhaps as a consequence meditation will become more widely known. May it be for the well being of everyone.

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