CHAPTER XXVI

ON 'CONSCIOUSNESS' AND CONSCIOUSNESS OF ABSTRACTING

But a felt 'contrary' is consciousness in germ. . . . Consciousness requires more than the mere entertainment of theory. It is the feeling of the contrast of theory, as *mere* theory, with fact, as *mere* fact. This contrast holds whether or no the theory be correct. (578) A.N. WHITEHEAD

A language, to be most useful, should be similar in its structure to the structure of the events which it is supposed to represent. The language of 'abstractions of different orders' appears to be satisfactory in point of structure. It is a *non-el* language, since it does not discriminate between 'senses' and 'mind', . It is a functional language, since it describes, by implication, what is going on in the nervous system when it reacts to stimuli. It is a language which can be made as flexible and as sharp as desired, thus making it possible to establish sharp verbal differences, of both horizontal and vertical type, between the terms 'man' and 'animal'.

The last semantic characteristic of potential sharpness is extremely important for a theory of sanity. Evidence of 1933 leads us to conclude that, under the influence of external stimuli, the most primitive and simplest forms of life were moulded, transformed, and influenced in the process of survival, and, therefore, of adjustment. In this way, more and more complex structures evolved. It should be emphasized that organisms represent *functional* units, and that an additive change in structure does not necessarily involve a *simply additive* change in function. By physico-chemical, structural, colloidal necessity the organism works as-a-whole. Being a relative whole, any additive structural factor becomes a reactive and functional factor which influences the working of the whole. This is, perhaps, best illustrated by the boy who was born without a cortex, but with no other obvious defects. He was incomparably more helpless and unadjusted than animals who have no cortex, or even no nervous system at all. Although we could speak in *additive* terms of the difference between this boy and a normal boy, as one having no cortex and the other 'plus a cortex', yet the functioning was so different as not to be expressible in a 'plus' language.

Similar remarks could be generalized to all life. We must be very careful in building sharp distinctions, since the anatomical differences alone are unreliable. If we want to have more reliable differences, we should look for *functional* differences.

We have already discovered *functional* differences that are expressed by the horizontal and by the vertical differences between the abstracting capacities of Smith and Fido. The analysis of these differences is the subject of the present chapter.

'Thought' represents a reaction of the organism-as-a-whole, produced by the working of the whole, and influencing the whole. From our daily experience, we are familiar with what we usually denote as being 'conscious'; in other words, we are aware of something, be it an object, a process, an action, a 'feeling', or an 'idea'. A reaction that is very habitual and semi-automatic is not necessarily 'conscious'. The term 'consciousness', taken separately, is not a complete symbol; it lacks content, and one of the characteristics of 'consciousness' is to have some content. Usually, the term 'consciousness' is taken as undefined and *undefinable,* because of its immediate character for every one of us. Such a situation is not desirable, as it is always semantically useful to try to define a complex term by simpler terms. We may limit the general and undefined term 'consciousness' and make it a definite symbol by the deliberate ascribing of some content to this term. For this 'consciousness of something' I take 'consciousness of abstracting' as fundamental. Perhaps the only type of meanings the term 'consciousness' has is covered by the functional term 'consciousness of abstracting', which represents a general process going on in our nervous system. Even if this is not the only type of meanings, the term 'consciousness of abstracting' appears to be of such crucial semantic importance that its introduction is necessary.

The term 'consciousness', because of its hitherto undefined and traditionally *undefinable* character, did not allow us further analysis. Neither did we have any *workable,* educational, semantic means to handle the vast field of psycho-logical processes which this incomplete symbol indicated. If we now select the term 'consciousness of abstracting' as fundamental, we not only make the last symbol complete by assigning functional content to it, but we also find means to define it more specifically in *simpler terms.* Through understanding of the processes we gain educational means of handling and influencing a large group of semantic psycho-logical reactions.

Let us analyse this new term by aid of the diagram called the Structural Differential referred to in the previous chapter. Here the object (O_h) represents a nervous abstraction of a low order. In this abstracting, some characteristics of the event were missed or not abstracted; these are indicated by the not connected lines (B'). When we abstracted from our object further, by coining a definition or ascribing 'meanings'

to the label (L), again we did not abstract 'all' the characteristics of the object into the definition; but some characteristics were left out, as indicated by the lines (B"). In other words, the number of characteristics which we ascribe to the label, by some process of 'knowing', or 'wanting', or 'needing', or 'interest'. , does *not* cover the number of characteristics the object has. The 'object' has more characteristics than we can include in the explicit or implicit definition of the label for the 'object'. Besides, the definition (implicit or explicit) of the 'object' *is not* the object itself, which always holds many surprises for us. The latter has the *'individuality of the object',* as we may call it. Every one who uses a car, or a gun, or a typewriter, or who has had a number of wives, or husbands, or children, knows that well. In spite of the fact that these objects are, to a large extent, standardized, every individual object has individual peculiarities. With modern methods of physical, chemical, and astronomical investigation, scientists find that even their special materials and equipments have also peculiar individualities which must be taken into account in the more refined researches.

Fig. 1
THE STRUCTURAL DIFFERENTIAL

If we take any ordinary object and expect to find such and such characteristics, ascribed to the objects by *definition,* we may be disappointed. As a rule, we find or can find, if our analysis is subtle enough, these peculiar individualities. The reader can easily convince himself
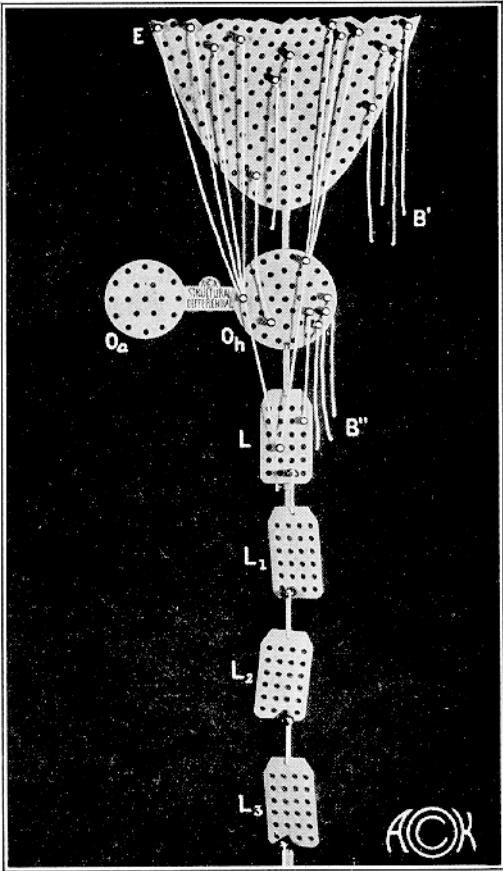
by looking over a box of matches, and by noticing the peculiar individuality of each match. But since, *by definition,* we expect that when we strike a match it should ignite, we may disregard all other characteristics as irrelevant for our purpose. A similar process is at work in other phases of life. We often live, feel happy or unhappy, *by what actually amounts to a definition,* and not by the empirical, individual facts less coloured by semantic factors. When $Smith_1$ marries $Smith_2$, they mostly do so *by a kind of definition.* They have certain notions as to what 'man', 'woman', and 'marriage' 'are' *by definition.* They actually go through the performance and find that the $Smith_1$ and his wife, $Smith_2$, have unexpected likes, dislikes, and particularities—in general, characteristic and semantic reactions *not included* in their definition of the terms 'man', 'woman', 'husband', 'wife', or 'marriage'. Characteristics 'left out' in the definitions make their appearance. 'Disappointments' accumulate, and a more or less unhappy life begins.

The above analysis applies to all phases of human life, and appears entirely general because of the structure of 'human knowledge'. Characteristics are discovered when it is *too late.* The *not knowing* or the *forgetting* of the relations explained above does the semantic havoc. On verbal, 'definitional', or doctrinal semantic grounds, we expect something else than what the experiences of life give us. The non-fulfillment of expectation produces a serious affective and semantic shock. If such shocks are repeated again and again, they disorganize the normal working of the nervous system, and often lead to pathological states. An indefinitely large number of experimental facts fully supports the above conclusions. Many of them have been supplied during the World War. Curiously enough, when the soldier *did* expect horrors, and later experienced them, he seldom became deranged 'mentally'. If he did not fully expect them, and yet had to experience them, he often broke down nervously.

The attack of hay fever at the sight of *paper roses,* referred to already, gives a similar semantic example. The attack followed from the semantic *'definition'* of 'roses', of 'hay fever', and from the situation as-a-whole, and was not due to *inspection* of the objective 'roses', or to the physico-chemical action of the 'roses'. If the patient had been blindfolded when the paper 'roses' were brought into his presence, no attack would have occurred.

We are now ready to define 'consciousness of abstracting' in *simpler terms;* namely, in terms of 'memory'. The term 'memory' is structurally a physico-chemical term. It implies that the events are interconnected,

that everything in this world influences everything else, and that happenings leave some traces somewhere.

A similar analysis can be carried on in connection with the object and the event. Briefly, the object represents structurally an abstraction of some order, does not, and cannot, include all the characteristics of the event; and so, again, we have some characteristics *left out* as indicated by the lines (B').

Here we have the possibility of making a series of most general, and yet entirely true, *negative* statements of great semantic importance; that the label *is not* the object, and that the object *is not* the event, . For the number of *m.o* characteristics which we ascribe to the label by *definition* does not cover all the characteristics we recognize in the object; and the number of characteristics which we perceive in the object is also not equal to the infinite numbers of characteristics the event has. The differences are still more profound. Not only do the numbers of *m.o* characteristics differ, but also the *character* of these abstractions differs from level to level of the successive abstractions.

We can now define 'consciousness of abstracting' as *'awareness* that in our process of abstracting we have *left out* characteristics'. Or, consciousness of abstracting can be defined as *'remembering* the *"is not",* and that some characteristics have been *left out'.* It should be noticed that in this formulation, with the aid of the Structural Differential, we have succeeded in translating a *negative* process of forgetting into a *positive* process of *remembering* the denial of identity and that characteristics are left out. Such a positive formulation makes the whole system workable and available for the semantic training and education.

The use of the Structural Differential becomes a necessity for any one who wants to receive full semantic benefit from the present work. A book is, by necessity, *verbal.* Whatever any author can say is verbal, and nothing whatsoever can be *said* which is *not verbal.* It seems entirely obvious that in life we deal with an enormous number of things and situations, 'feelings'. , which are *not verbal.* These belong to the 'objective level'. The crucial difficulty is found in the fact that whatever can be said *is not* and *cannot* be on the objective level, but belongs *only* to the verbal levels. This difference, being *inexpressible* by words, cannot be expressed by words. We must have *other means* to indicate this difference. We must show with our hand, by pointing our finger to the object, and by being silent outwardly as well as inwardly, which silence we may indicate by closing our lips with the other hand. The verbal denial of the 'is' of identity covers this point also when shown on the Differential. If we burst into speech based on the 'is' of identity, as we

usually do, we find ourselves obviously on the verbal levels indicated by the labels L, L_1, L_2, . . . L_n, but never on the objective level (O_h). On this last level, we can look, handle. , but *must be silent.* The reason that we nearly all identify the two levels is that it is impossible to train an individual in this semantic difference by *verbal means alone,* as all verbal means belong to the levels of labels and never to the objective unspeakable levels. With a visual and tactile *actual object* and labels on the Structural Differential, to point our finger at, handle. , we now have simple means to convey the tremendously important semantic difference and train in *non-identity.*

We should notice that the consciousness of abstracting, or the remembering that we abstract in different orders with omission of characteristics, depends on the denial of the 'is' of identity and is connected with limitations or 'non-allness', so characteristic of the new non-systems.

The consciousness of abstracting eliminates *automatically* identification or 'confusion of the orders of abstractions', both applying to the semantic confusion on all levels. If we are *not* conscious of abstracting, we are bound to identify or confuse the object with its finite number of characteristics, with the event, with its infinite numbers of *different* characteristics. Confusion of these levels may misguide us into semantic situations ending in unpleasant shocks. If we acquire the consciousness of abstracting, and remember that the object *is not* the event and that we have abstracted characteristics fewer than, and different from, those the event has, we should expect many unforeseen happenings to occur. Consequently, when the unexpected happens, we are saved from painful and harmful semantic shocks.

If, through lack of consciousness of abstracting, we identify or confuse words with objects and feelings, or memories and 'ideas' with experiences which belong to the un-speakable objective level, we identify higher order abstractions with lower. Since this special type of semantic identification or confusion is extremely general, it deserves a special name. I call it *objectification,* because it is generally the confusion of words or verbal issues (memories, 'ideas'. ,) with objective, un-speakable levels, such as objects, or experiences, or feelings, . If we objectify, we *forget,* or we *do not remember* that words *are not* the objects or feelings themselves, that the verbal levels are always different from the objective levels. When we identify them, we disregard the inherent differences, and so proper evaluation and full adjustment become impossible.

Similar semantic difficulties arise from the confusion of higher order abstractions; for instance, the identification of inferences with

descriptions. This may be made clearer by examples. In studying these examples, it should be remembered that the organism acts as-a-whole, and that 'emotional' factors are, therefore, always present and should not be disregarded. In this study, the reader should try to put himself '*emotionally*' in the place of the Smith we speak about; then he cannot fail to understand the serious semantic disturbances these identifications create in everybody's life.

Let us begin with a Smith who knows nothing of what has been said here, and who is *not* conscious of abstracting. For him, as well as for Fido, there is, in principle, no realization of the 'characteristics left out'. He is 'emotionally' convinced that his words entirely cover the 'object' which '*is* so and so'. He identifies his lower abstractions with characteristics left out, with higher abstractions which have all characteristics included. He ascribes to words an entirely false value and certitude which they cannot have. He does not realize that his words may have different meanings for the other fellow. He ascribes to words 'emotional' *objectivity* and value, and the verbal, *A* 'permanence', 'definiteness', 'one-value'. , to objects. When he hears something that he does not like, he does not ask 'what do you mean ?', but, under the semantic pressure of identification, he ascribes his own meanings to the other fellow's words. For him, words '*are*' 'emotionally' overloaded, objectified semantic fetishes, even as to the primitive man who believed in the 'magic of words'. Upon hearing anything strange, his *s.r* is undelayed and may appear as, 'I disagree with you', or 'I don't believe you', . There is no reason to be dramatic about any unwelcome statement. One needs definitions and interpretations of such statements, which probably are correct from the speaker's point of view, if we grant him his informations, his *undefined terms,* the structure of his language and premises which build up his *s.r.* But our Smith, innocent of the 'structure of human knowledge', has mostly a semantic belief in the one-value, absoluteness. , of things, and thinghood of words, and does not know, or does not *remember,* that words *are not* the events themselves. Words represent higher order abstractions manufactured by higher nerve centres, and objects represent lower order abstractions manufactured by lower nerve centres. Under such *identity-delusions,* he becomes an absolutist, a dogmatist, a finalist, . He seeks to establish 'ultimate truths', 'eternal verities'. , and is willing to fight for them, never knowing or remembering, otherwise forgetting, the 'characteristics left out'; never recognizing that the noises he makes *are not* the objective actualities we deal with. If somebody contradicts him, he is much disturbed. Forgetting characteristics left out, he is always 'right'. For him his statement is not

only *the* only statement possible, but he actually attributes some cosmic objective evaluation to it.

The above *description* is unsatisfactory, but cannot be much improved upon, since the situation involves *un-speakable* affective components which *are not* words. We must simply try to put ourselves in his place, and to live through his experiences when he identifies and believes without question that his words *'are'* the things they only stand for. To give the full consequences of such identification resulting in wrong evaluation, I might add most tedious *descriptions* of the interplay of situations, evaluations. , in quarrels, unhappinesses, disagreements. , leading to dramas and tragedies, as well as to many forms of 'mental' illness effectively described only in the *belles-lettres.* Thus, Smith$_1$, who is *not* conscious of abstracting, makes the statement, 'A circle is not square'. Let us suppose that Brown$_1$ contradicts him. Smith$_1$ is angered; for his *s.r,* his statement 'is' the 'plain truth', and Brown$_1$ must be a fool. He objectifies it, ascribes to it undue value. For him, it 'is' 'experience', a 'fact'. , and he bursts into speech, denouncing Brown$_1$ and showing how wrong he 'is'. From this semantic attitude, many difficulties and tragedies arise.

But if Smith$_2$ (conscious of abstracting) makes the statement, 'A circle is not square', and Brown$_2$ contradicts him, what would Smith$_2$ do ? He would smile, would not burst into speech to defend *his* statement, but would ask Brown$_2$, 'What do you mean ? I do not quite understand you'. After receiving some answer, Smith$_2$ would explain to Brown$_2$ that his statement is not anything to quarrel about, as it is verbal and is true only by *definition.* He would also grant the right of Brown$_2$ *not* to accept *his definition,* but to use another one to satisfy himself. The problem would then, naturally, arise as to what definition both could accept, or which would be generally acceptable. And the problem would then be solved by purely pragmatic considerations. Words appear as creatures of definitions, and optional; but this attitude involves important and new *s.r.*

This fact seems of tremendous semantic importance, as it provides the working foundation for a theory of 'universal agreement'. In the first part of the above example, Smith$_1$, according to the accepted standards, was 'right' ('a circle is not square'). Is he 'more right' than Brown$_1$, for whom the 'circle is square' ? Not at all. Both statements belong to the verbal level, and represent only forms of representation for *s.r inside their skin.* Either may be 'right' by some explicit or implicit 'definitions'. Are the two statements equally valid ? This *we do not know a priori*; we must investigate to find out if the noises uttered have

meanings outside of pathology, or which statement structurally covers the situation better, carries us structurally further in describing and analysing this world, . Only scientific structural analysis can give the preference to one form over another. Smith and Brown can only produce their 'definitions' according to their *s.r,* but they are *not* judges as to which 'definitions' will *ultimately* stand the test of structure.

The moment we eliminate identification we become conscious of abstracting, and permanently and instinctively remember that the object is *not* the event, that the label is *not* the object, and that a statement about a statement is *not* the first statement; thus, we reach a semantic state, where we recognize that everybody 'is right' by his own 'definitions'. But any individual or unenlightened public opinion is not the sole judge as to what 'definitions' and what language should prevail. Only structural investigation (science) can decide which appears as the structurally more similar form of representation on the verbal levels for what is going on on the un-speakable, objective levels.

When it comes to 'description of facts', the situation is not fundamentally altered. Mistakes seem always possible and often occur. Besides, the semantic impressions which 'facts' make on us are also individual, and often in conflict, as comparison of the testimonies of eye-witnesses shows. But there is no need for permanent disagreement; more structural investigation of the objective and verbal levels will provide a solution. Once such an investigation is carried far enough, we can always reach a semantic basis where all may agree, provided we do not identify, do not objectify, and do not confuse description and inference, descriptive and inferential words, .

As our analysis is carried out from the structural and *non-el* point of view, we should not miss the fact that semantic components associated with words and statements are, outside of very pathological cases, never entirely absent, and become of paramount importance. In the older days, we had no simple and effective means by which we could affect painful, misplaced, or disproportionate evaluations, meanings. , through a semantic re-education, which are supplied by the present analysis and the use of the Structural Differential. The means to eliminate identification consist of: first, an *objective* relief diagram to which we can *point our finger;* and second, a convincing explanation (pointing the finger to the labels) that the verbal levels, with their distressing and disastrous older *s.r*, *are not,* and differ entirely from, the levels of objects and events. Whatever we may say or feel, the objects and events remain on the un-speakable levels and cannot be reached by words. Under such natural structural conditions, we can only reach the objective level by

seeing, handling, actually feeling. , and, therefore, by pointing our finger to the object on the Structural Differential and being silent——all of which cannot be conveyed by words *alone.*

In experiments with the 'mentally' ill in whom the semantic disturbances were very strong, it took several months to train the patients in non-identity and in silence on the objective levels. But, as soon as this was achieved, either complete or partial relief followed.

The main disturbances in daily life, as well as in 'mental' illness, are found in the affective field. We find an internal pressure of identifications, expressed by bursting into speech, and unjustified semantic over-evaluation of words, the ascribing of objectivity to words, . In such cases, suppression or repression of words does not accomplish much, but often does *considerable harm* and must be avoided by all means. Under such conditions, the use of the relief diagram becomes a necessity in pointing to the difference between different orders of abstractions and inducing the semantically beneficial silence on the 'objective level' without repression or suppression.

With the use of the Structural Differential, we can eliminate identification, and so attain the benefits, avoiding the dangers. If any one identifies, and his *s.r* drive him into an outburst of speech, we do not repress or suppress him; we say, instead: 'At your pleasure [since it makes him feel better], but remember that your words occur on the verbal levels [showing with a gesture of the hands the hanging labels], and that they *are not* the objective level, which remains untouched and unchanged'. Such a procedure, when repeated again and again, gives him the proper semantic *evaluation of orders of abstractions, frees him from identification, yet without repression or suppression.* It teaches him, also, to enquire into alleged 'facts', and then to try to find structurally better forms of representation. If such results are not forthcoming, we may use the older forms, but by proper evaluation we do not semantically put 'belief' in these forms of representation. Such beliefs always appear as the result of identification somewhere.

The technique of training is simple. We live on the 'objective' or lower order of abstraction levels, where we must see, feel, touch, *perform.* , but *never* speak. In training, we must use our hands, . It is very useful, after the Structural Differential has been repeatedly explained, stressing, in particular, the rejection of the 'is' of identity, not to interrupt the other fellow. Let him speak, but wave the hand, indicating the verbal levels; then point the finger to the objective level, and with the other hand, close your own lips, to show that on the objective level one can only be silent. When performed repeatedly, this pantomime has a

most beneficial, semantic, pacifying effect upon the 'over-emotionalized' identification-conditions. The neurological mechanism of this action is not fully known, but some aspects are quite clear.

The more elaborate a nervous system becomes, the further some parts of the brain are removed from immediate experience. Nerve currents, having finite velocity, eventually have longer and more numerous paths to travel; different possibilities and complications arise, resulting in 'delayed action'. It is known that the thalamus (roughly) appears connected with affective and 'emotional' life, and that the cortex, farther removed and isolated from the external world, has the effect of inducing this 'delay in action'. In unbalanced and 'emotional' 'thinking', which is so prevalent, the thalamus seems overworked, the cortex seems not worked enough. The results take on the form of a low kind of animalistic, primitive, or infantile behaviour, often of a pathological character in a supposedly civilized adult. It appears that the 'silence on objective levels' introduces this 'delayed action', unloading the thalamic material on the cortex. This psychophysiological method is very simple, scientific, and entirely general. The standard 'mental' therapy of today applies also a *method of re-education* of *s.r,* as if relieving the thalamus, and putting more of the nerve currents through the cortex, or eventually furnishing the cortex with different material, so that the thalamic material returning from the cortex could be properly influenced.

If we succeed in such a semantic re-education, the difficulties vanish. The older experimental data show that in many instances we have succeeded, and that in many we have failed. The successful cases show that we actually know the essential semantic points involved; the failures show that we do not know enough, and that our older theories are not sufficiently general. At present, only the more pronounced and morbid semantic disturbances come to the attention of physicians, and very little is done by way of *preventive* measures. Besides the pronounced disturbances in daily life, we see an enormous number of semantic disturbances which we disregard, and call 'peculiarities'. In the majority of cases, these 'peculiarities' are undesirable, and, under unfavorable conditions, may lead to more serious consequences of a morbid character. They usually involve a great deal of unhappiness for all concerned, and unhappiness appears as a sign of some semantic maladjustment somewhere, and so may be destructive to 'mental' and nervous health.

In advanced 'mental' illnesses, such as usually come to the attention of psychiatrists, there are certain psycho-logical symptoms which are generally present. The symptoms of interest to us in this work are called 'delusions', 'illusions', and 'hallucinations'. All of them involve the

semantic identification or *confusions of the orders of abstractions,* the evaluation of lower orders of abstraction as higher, or higher as lower. It was explained already that some components of identification are invariably present there, and so identification may be considered as an elementary type of semantic disturbances from which all the other states differ only in intensity.

The main point is to find psychophysiological preventive means whereby this identification can be forestalled or eliminated. To date, experience and analysis show that all forms of identification may be successfully eliminated by training in *visualization,* if this semantic state can be produced. For this purpose the Structural Differential is uniquely useful and necessary. With its help we train all centres. The lower centres are involved, as we see, feel, hear. ; the higher centres are equally involved, as we 'remember', 'understand'. ; *with the result that all centres work together without conflict.* The 'consciousness of abstracting' is inculcated, replacing vicious *s.r* of confusion of orders of abstractions and identification.

This harmonious working of all centres on their proper levels has extremely far-reaching, practical consequences in 'mental' and physical hygiene. We become co-ordinated, adjusted, and difficulties which might otherwise occur in the future are eliminated in a preventive way. It must be remembered that, at present, it is impossible to foresee to how great an extent the elimination of identification on all levels will have a beneficial effect. At this stage we know even experimentally that the benefits are very large, but we may expect that they will become still more numerous when more experimenting has been done. Delusions, illusions, and hallucinations represent manifestations which occur in practically all 'mental' difficulties, and they only represent a semantic identification of orders of abstractions of different degrees of intensity. When this confusion is eliminated, we may expect general changes in the symptoms. But as the correspondence is probably not *one-to-one,* it is impossible to foretell theoretically what improvements may be expected in pronounced illness. In the slighter disturbances, which affect us in daily life, the results are much easier to foresee, and are *always* beneficial.

To how great an extent the consciousness of abstracting benefits semantically *the whole organism,* I may illustrate by one of my own experiences. Once I was travelling on a ship. A gentleman visited my cabin, and, seeing the Structural Differential, asked questions about it. After a short explanation, he asked about practical applications.

My guest was sitting on my berth; I was sitting on a small folding chair. I got up, went to the door, then pretended that I was coming in,

and, at my suggestion, he said, 'Please have a seat'. I remained standing while explaining how, if I were not 'conscious of abstracting', to me his word 'seat' would be identified with the chair (objectification) and my *s.r* would be such that I would sit down with great confidence. If the chair were to collapse I would have, besides the bump, an affective shock, 'fright'. , which might do harm to my nervous system. But if I were conscious of abstracting, my *s.r* would be different. I would remember that the *word,* the *label* 'seat' is *not* the thing on which I am supposed to sit. I would remember that I am to sit on this individual, unique, un-speakable object, which might be strong or weak, . Accordingly, I would sit carefully. In case the chair should collapse, and I should hurt myself physically, I would still have been saved an affective nervous shock.

During all these explanations I was handling the little chair and shaking it. I did not notice that the legs were falling out, and that the chair was becoming unfit for use. Then, when I actually sat on the relic, it gave way under me. However, I did *not fall* on the floor. I caught myself in the air, so to say, and saved myself from a painful experience. It is important to notice that such physical readiness requires a very elaborate, nervous, unconscious co-ordination, which was accomplished by the semantic state of *non-identification* or *consciousness of abstracting.* When such a consciousness of abstracting is acquired, it works instinctively and automatically and does *not* require continual effort. Its operation involves a fraction of a second's *delay in action,* but this small delay is not harmful in practice; on the contrary, it has very important psycho-logical and neurological 'delayed action' effects.

It seems that 'silence' on the objective levels involves this psychophysiological delay. No matter how small, it serves to unload the thalamic material on the cortex. In a number of clinical cases, Dr. Philip S. Graven has demonstrated that the moment such a delay can actually be produced in the patient, he either improves or is entirely relieved. The precise neurological mechanism of this process is not known, but there is no doubt that this 'delayed action' has many very beneficial effects upon the whole working of the nervous system. It somehow balances harmful *s.r,* and also somehow stimulates the higher nervous centres to more *physiological* control over the lower centres.

A very vital point in this connection should be noticed. That this 'delayed action' is beneficial is acknowledged by the majority of normally developed adults in the form of delay in action and finds its expression in such statements as 'think twice', 'keep your head', 'hold your horses', 'keep cool', 'steady', 'wait a minute'. , and such functional

recipes as 'when angry, count ten', . In daily life, such wisdom is acquired either by painful experience, or is taught to children in an *A* language, which, as practice shows, is rarely effective because of its inadequacy. It is seldom realized that the mechanism of these functional observations and familiar advices have very powerful and workable underlying *neurological processes,* which can be *reached and directly affected by psychophysiological,* ordinal, *non-el* methods in connection with *the structure of the language we use.* Thus, under an infantile, *A*, and prevailing system we use and teach our children a language involving the 'is' of identity, and so we must confuse orders of abstractions, preparing for ourselves and the children the harmful semantic predispositions for 'bursting into speech', instead of 'wait a minute', which, neurologically, means abusing our thalamus and keeping our cortex 'unemployed'. In a $\overline{A}$ ∞-valued system we reject the 'is' of identity; we cannot confuse orders of abstractions; we cannot identify words with the un-speakable objective levels or inferences with descriptions, and we cannot identify the different abstractions of different individuals, . This semantic state of proper evaluation results in discrimination between the different orders of abstractions; an automatic delay is introduced—the cortex is switched completely into the nervous circuit. The semantic foundation is laid for 'higher mentality' and 'emotional balance'.

We have already had occasion to mention the mechanism of projection in connection with identification, as a semantic state of affective ascribing of lower centre characteristics to higher order abstractions and vice versa, and in connection with the introverted or extroverted attitudes. Likewise, we have already reached the conclusion that a well-adjusted and, therefore, well-balanced individual should be neither of the extremes, but a balanced extroverted introvert. By training with the Differential this important semantic result may be brought about. By training with the 'object' on its level, we become extroverted, and we learn to observe; this results in semantic freedom from 'preconceived ideas', such as we have when we start with the evaluation, label first and object next, instead of the natural order, object first and label next. By passing to higher order abstractions and evaluating the successive ranks of labels, we train in introversion. The result, as a whole, is that we may achieve the desirable and balanced semantic state of the extroverted introvert.

That in the training with the Differential we use all available nerve centres is beneficial, because the lower centres are in closer connection with the vegetative nervous system than are the others.