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THE AFFECTIVE NATURE OF ILLUSION AND HALLUCINATION.

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INTRODUCTION.

THE terms 'Illusory experience' and 'Hallucination' have been used so specifically by students of psychiatry that their wider implications have been submerged; in consequence we are prone to forget that both illusion and hallucination enter most intimately into the fabric of normal mental life.

In the course of ordinary conversation, or in moments of reverie, the acts of illusory experiencing and of hallucinating are playing a creative part. They do not occur merely as excrescences upon the surface of the mental stream like foam—the product of friction between the stream and the external air, but belong integrally to that stream, cast up from deeper mental layers, and adding something to the dynamic of the main current, urging it forward with an added power of interpreting both past and present. External relations have, in our mind, a definite place in the system of hallucination-production. A physical analogy will help us. Picture a gas that is held in solution in water. Under ordinary temperature and pressure there will be a certain amount of the gas dissolved and there will be an equilibrium under these given conditions between dissolved and undissolved gas, the dissolved gas being to some extent in a state of ionic equilibrium with the ionic elements of the solvent. Subject the system to pressure by forcing more gas into the solvent and a new state of equilibrium will be reached. If now the pressure is released gas will come out of solution rising to the surface as bubbles until the new normal equilibrium is reached with a standard solution of the gas.

In the mind the pressure of external circumstances keeps in solution a large amount of mental material which under other circumstances will escape. If the external world changes its pressure upon the subject the overloading

of the mind is expressed in the production of hallucination and illusion. This is no true analogy, since the forces governing mental activity are far more complicated than such a physical analogy would suggest. But to some extent we can state the relationship of organism to its environment, of mind to the external world, as in the nature of a balanced action, but one of three dimensions, as in a gas formula of the Gay-Lussac type, where the disturbing influence of temperature—or in mental terms of our analogy, affect—will disturb the equilibrium of volume-pressure, calling for a new equilibrium or an escape into a new phase. The mind, like a two-headed Janus, looks backwards into itself to interpret the data of sense and forward into the data of sense for the realisation or satisfaction of conative trends or wishes.

So-called academic psychology has been deeply concerned with the subject of the construction of our world of external perception. It has discovered formally that without part experiences there would be no appreciation of the data of the senses, and that without the 'drives' of instinctual needs the external world would not be crowded with such objects of interest as we actually find in it. The trinity of cognition, feeling and conation gives meaning to the external world, and if the external world meets us halfway, as Ward has expressed it, it is only because we are part of that world or make ourselves part of it. In this way the choir of Heaven is the echo of our wishes and the furniture of earth serves our practical needs.

Illusory and hallucinatory experiences cannot be entirely alien to this system. Subjectivity insinuates itself into the objective world, battenning upon it, as it were, and it is because of this reciprocal permeation—this absorption of the one world by the other—that the mind appears to us in its creative and disintegrative aspects.

As far as our direct perception of the external world is concerned, although affectivity plays its part, it is by no means the dominant partner, the elder brother, as it were, of the trinity of cognition, feeling, and conation; it merely supplies the mood colouring with which an object is assimilated to experience or with which situations are met. It is the colour or physiological tone which is felt as a *cœnæsthesia* before the specific conative trend is narrowed down to the moment of the act. When an organism so narrows down its point of contact with reality, it acts fully and wholly in conformity with its environment; it lives in the stoic sense harmoniously with nature, that is, at that moment the organism and environment become almost merged into one another. Conative trends, however, are not always satisfied. Certainly in man they are always suffering qualification and 'sidetracking.' Psychoanalytic approaches to the mental life, amply demonstrated this fact. Conative trends come into conflict one with another, and the subject finds as *modus vivendi* other means of satisfying those 'urges' which are inhibited in the aims. Regression is one of them, a method of satisfaction that is found in some form or another in all the aberrations of mind and in all the minor disturbances of character.

On the other hand, social interpretation in its widest sense from family to the community stands as censor in varying degrees of complexity (ego-ideal, parental image—God—Society, social mechanism, sometimes projected further on to natural processes, *e.g.*, lightning, electricity, poison). This censorship is expressed objectively in the same way as an ego-ideal is externalised or objectivised as a projection in the external world—the hallucinatory experience. Thus hallucinatory experience serves to express the subjective attitude to an unresolved conative trend at some level of experience, or the subjective fear of one of the inhibitory forces, whatever its disguise, in an objective way. By this process of objectivising the subject delivers itself of the responsibility of being itself the inhibitor of its own desires, or the creator of its own world of illusion. Affectivity or mood colouring is the peculiar quality of all such projective experiencing.

We shall show later by illustration of our own cases and those of others that there are two broad types of hallucinatory experience. At this point, in the light of the above general considerations, these types will be merely defined. We may divide hallucinations into (*a*) hedoniphoric hallucinations, *i.e.*, those which yield positive subjective states of satisfaction; and (*b*) nociphoric hallucinations (*νοσο-φόρος*—bringing distress), *i.e.*, those which bring about subjective states of distress with fear or terror as their accompanying mood colouring. Although both these forms are governed by repressive motives the former are more markedly so than the latter. The hedonic type is most characteristic of childhood hallucinations, which play a part in the normal growth of the young mind. They express a mere untrammelled fancy. The latter already shew the influence of censorship. It will be argued later that such a distinction may prove of prognostic as well as of diagnostic value.

It is within the experience of everyone that sense data are frequently misinterpreted. Each one of us has from time to time, and for brief moments only seen, persons where there are only trees or shadows, or heard voices where there have only been sounds with no proper human character in them. In some cases not without foundation these illusory experiences have been attributed to fleeting or even permanent disturbance of sensory function or of those cortical areas of the brain which register particular data of sense. Pfeiffer describes a case of a schizophrenic woman who would conjure up and draw the illusion produced by closing the eyes, or pressing upon the globe of the eye. The results obtained were obviously related to the retinal patterns produced by the coursing of the corpuscles through the retinal capillaries. The latter drawings shew how these were 'worked up' into grotesque faces upon the basis of the schizophrenic fancies of the patient's mind.

Fournay quotes at length a case of lilliputian hallucinations coming on with the development of a cataract in an old man (these hallucinations were hedoniphoric in type). Gronberg deals with the extraordinary case of a patient suffering from hemianopia following bronchiectasis. This patient

complained of hallucinations of hedonic character which disappeared when glasses were provided with five diopters over the hemianopic area. Henschen quotes a similar case of hallucinosis following hemianopia. The hemianopia in this case was on the left but the hallucinations appeared on the right. Tomaszewski describes a case of hemianopia with hallucinations which was not relieved by deprivation of light. This, however, was probably a case of hemilateral hallucination which one can claim as being of central origin.

In cranial injuries and particularly in tumours of the temporosphenoidal region hallucinations of a variety of forms have been noticed by many observers (Bogaert, Foster Kennedy, Dupouy, Christoffel). Salomon is definitely of the opinion that hallucinations particularly of the lilliputian variety are organically determined and suggests a theory of the error of projection, *i.e.*, that the irritation is retinal and the objects projected are retinal in size and not synthesised into the cortical interpretation of visual magnitudes. Clérambault also adopts the organic attitude towards hallucinations and says that they must have their site of origin in those places which are reckoned amongst the highest, *i.e.*, where the representation of the self is situated. He also says that mental automatism, *i.e.*, the state of being automatically governed by processes apparently outside self control, is governed by basal nuclear changes. "L'association des hallucinations s'explique par des causes organiques et non par l'ideogénèse."

The data of sensory epilepsy are rich in cases of the organic correlates of its hallucinosis. Obanio's case is a complicated one and of theoretical importance. The patient complained of a hallucination of seeing his mirror image appearing to him. This was followed by an olfactory hallucination of the smell of methyl salicylate. During the attacks he felt impelled to move forward rapidly and his face became deadly pale. In a case of our own the full epileptic attack was preceded by an overpowering smell of perfume of the most cloying variety which made all his limbs tremble with a feeling of passion. This patient had a gunshot wound of the right temporo-parietal region.

Laignel-Lavastine has discussed a case of hallucinosis of lilliputian variety following fractured vault with commotio cerebri. Nouët quotes a similar case. The literature of hallucination abounds with cases of toxic delirium producing projection of images into the external world (Lelong, Obanio, Bouyer, Dupouy, Fleming.)

It must initially be admitted that whatever be our method of describing the mind-body relationship, alterations in the state of the brain have a profound effect upon mental synthesis and determine the liberation of the phenomena with which we have dealt. According to Ceillier this modification gives rise to mental automatism or in Janet's terms "une affaiblissement de la 'tension psychologique.'" But what we are obliged to consider from the point of view of mental dynamics is this :—If organic lesions produce two effects, *viz.*, absence of phenomena or breaking down of integration, it must follow that if the mental

disturbance produced is associated with organic change then one of two things must happen: (1) Mental deprivation, or (2) removal of inhibitory processes allowing for the escape or assertion of those processes hitherto checked by such inhibitions, *i.e.*, release of lower centres which become autonomous, *e.g.*, the mass reflex below a completely transected cord, or rigidity after decerebration. Hallucinations cannot follow from the first, for deprivation of a mechanism could not produce such a positive experience as a projected image. If from the second, then they must result from the breakdown of inhibitory forces which when in action make up the integrity of the whole central nervous system. It therefore follows that the loosening of inhibition has allowed the escape of processes hitherto integrated in the whole personality, or at least inhibited from full expression. If the appearance of the hallucinations were purely one of escape they would be structureless and chaotic—having no functional purpose whatsoever and being completely unsystematised. That some such arise we have no doubt—pure sensory hallucinations or illusory experiences sometimes are of this nature. But even superficial investigation of hallucinatory experiences shows that they are functional, are the product of conflicting forces, and to this extent have a positive quality. They are in themselves new to the subject, that is they are not sensory vestiges but are worked-up products of mental activity. The purely neurological view of Clérambault and others is therefore completely untenable.

The release of inhibition may thus be regarded as the liberation of mental elements which at one time were organised integrally within the personality. But in so far as hallucinations are organised experiences and not merely structureless and chaotic fragments the process of hallucination formation is not merely one of liberation. That fragmentary illusions and hallucinations exist there is no doubt and where they do exist we may presuppose either a profound degree of mental deterioration or the existence of local irritation of cortical areas which arises from time to time from a variety of causes. Recognition of the fragmentary nature and constancy of such hallucinations experience is strong evidence of epileptogenic rather than psychogenic origin, even where psychical elements have been added with the spread of the irritation from the excitable area to associated areas or to emotionally associated elements. Organisation of the projected experience, the sense of this externality and the mood colouring of the experience itself, is strong evidence of the psychogenic character. In the whole range of psychiatry there are no mental peculiarities more instructive to the understanding of the nature of hallucination than so-called Gulliverian hallucinations. Hallucinations of this type have been discussed most fully in the literature in the lilliputian form, but what we may designate brobdnagian hallucinations also occur, with a different affective tone. Sometimes, as in a case of our own, these two forms alternate in one and the same patient.

The lilliputian hallucination may be generally described as the projection of a world of mannikins varying in size from a few inches to a foot or more.

They are usually gaily coloured and apart from their size perfectly human in all respects. They frequently appear clothed in fantastic garb suggesting the land of Fé—or more exactly the fairy world of our childish imagination. In many cases, as in the above quoted example of the old man with the cataract, they answer to the patient's wishes, and in his imagination he does what he likes with them. The feeling tone which accompanies their appearance is usually described as pleasurable; sometimes the patient will look forward to their appearance as the bright spot in the passing hours. In Obanio's case of veronal poisoning the affective colouring varied with the mood of the patient—her lilliputians were threatening when she was depressed and gay when she was expansive. Bouyer cites an interesting case of lilliputian hallucination and distinguishes such appearances from a true micropsia, which he regards as an epileptic phenomenon. That wider psychological processes are involved even in micropsia is shewn by one of his own cases in which the micropsia was associated with a feeling of largeness.

Where the patient complains of the terror inspired by the hallucinations we usually find that they assume enormous dimensions. Another of Bouyer's cases had the alternation of small and large figures. The former were usually pleasant-coloured and stereoscopic, the latter were large—usually animal in form, grey in colour, and inspired terror. The association of colour with the feeling tone of hallucinations has been dealt with by Christoffel, who, although of the opinion that black and white hallucinations are organic in origin, goes so far along the psychological road as to suggest that the black variety denotes masculinity and fear, and the white, femininity and a pleasurable feeling tone. Either such hallucinatory experiences belong to the category of epileptic aura, in which case they are more likely to be formless or at least fragmentary, or if manifestly not so they must be predominately psychological.

In Mignard's case of oneiric delirium the gigantic figures produced terror.

We must cite more fully our own experiences with the case of a young married woman who started to have a feeling of unreality a few days after the birth of her first and only child. This was associated with the illusory experience of everything appearing to her as very large. Her husband appeared enormous at the bedside, as did the nurses. She felt her surroundings too enormous for her and the feeling produced was one of terror and hopelessness of being left in an unreal world. Since then, she has periods of loss of the sense of reality when things still look enormous, even her hands working at the table seem to her to be a distance away and enormous in size. The mirror image is magnified and horrible in its strangeness. Other persons appear gigantic, while the pigeons in the garden have grown to the size of swans. Sometimes in addition to these illusory experiences she hallucinates patches of purple on her hands—"just like Lady Macbeth," she would add. At other times the purple patches appear anywhere in external space and fill her with loathing and fear. During periods of pleasant feeling-tone she pictures herself

as surrounded by small things and persons, and sometimes she will see herself as a little girl playing with dolls. When these infantile recollections or images appear to her the hallucination of largeness will somehow invade the appearance of the objects amidst which she has been in her fancy playing, and then, if she happened to be playing under a table as was her wont in childhood, the large legs of her father would appear walking round the table, or the skirt of her stepmother would swish by her childish refuge under the table. The appearance of this latter person would evoke the hallucination of the purple patches. It would take us far to deal with the rich detail of this particular case, which illustrates very well the affective colouring of hallucinations and also the alternating quality of these hallucinations from hedoniphoric to nociphoric.

In childhood there are two groups of complexes en rapport with the size of persons seen or imagined. The one corresponds with the fear inspired by the adult and the punishment which infringements of adult prohibitions impose or which the child imagines they have power to impose; and the other, the joyful sense of security obtained by living in a reduced universe. Mignard and Bouyer support this view, and the whole of psychoanalytic experience urges us to the same conclusion. To regress to the infantile level of experience for satisfaction is the prerogative of each one of us, but with the appearance of the hedonic tone of infantile satisfaction we must be prepared to revivify also the infantile sense of guilt and the persons from whom punishment is to be received. Bleuler is of the opinion that two types of hallucinations must be distinguished. One he says "are the result of the false interpretation of dysæsthesia, interpretations resembling those which are at the base of illusions; the others, representations associated with the elements of perceptions, that is to say sensory engrams, and with the relationship with localisation in the external world. Only the latter depend in any intimate way upon conscious tendencies of the patient." We believe, however, that for psychological purposes—particularly for psychopathology—it is unnecessary, nay, almost impossible, to make such separation. The distinction between primary æsthesia and perceptual experience is after all only an abstraction of the psychological laboratory. In cases of definite sensory disturbance it is not unlikely that the misinterpretation stops there, in the sensory apparatus. At a given moment in a state of slackened accommodation one might see the floating corpuscles in our retinal capillories and momentarily assert that we have seen birds, but the return of muscular tone to the ocular apparatus renders the corpuscle invisible. We know exactly how far our experience has been illusory. But the very fact of having thought at all that we had seen a bird is evidence of cortical activity, *i.e.*, of perception, however misguided. In schizophrenia Bleuler says the two types are found fused. Not that they have fused, but the abstraction of the two in these cases is useless, because in such persons the immediate data of sense (or such of these as are noted) are instantly taken into

the psychical system of the patient without reference to their relevance or sensory cohesion, and made to feed the fantasy of the subject. Pfeiffer's case already cited illustrates the ease with which, given affective zest, the retinal patterns are worked up into fantastic images.

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