British Journal of Psychiatry (1991), **159** (suppl. 14), 6–13

Delusions as "Wrong Beliefs": A Conceptual History

G. E. BERRIOS

It was a common view among 19th century historians and clinicians that the study of delusions was the study of insanity itself (Ball & Ritti, 1881). At the beginning of the 20th century, Jaspers rendered this insight into a cliché (Jaspers, 1963). The nature of the link between delusion and insanity, however, has continued to confuse scholars, particularly those writing in the English language (Ireland, 1885; Arthur, 1964; Moor & Tucker, 1979; Winters & Neale, 1983). German (Huber & Gross, 1977), French (Ey, 1950) and Spanish (Cabaleiro Goas, 1966) writers have fared better; unfortunately, much of their work remains inaccessible to English-speaking psychiatrists. This is one of the reasons why, in Anglo-Saxon psychiatry, it has been suggested that the 'definitive' view on delusions started with Jaspers and the Heidelberg school (Hoenig, 1968). This suggestion is misleading (Berrios, 1991), for by 1912, when Chaslin published his great work on descriptive psychopathology, all the distinctions nowadays attributed to Jaspers had already been made. Indeed, the rare efforts made to escape from the 'pathological belief' view were ignored (Southard, 1916).

The view on delusions that Jaspers (1963) borrowed from the 19th century is a familiar one:

(a) It envisaged delusions as symptoms, i.e. as indications of disease,
(b) It provided definitional criteria extracted from a theoretical analysis of so-called 'form' and 'content',
(c) It conceptualised delusions as 'beliefs' (ideas or mental contents), and hence as susceptible to reality-testing,
(d) It suggested sources and mechanisms for delusions which included the subject's character, past history, circumstances during acquisition of the delusion, and brain state,
(e) It used form, content, and mechanisms to classify delusions and ascertain their clinical value, i.e. to make the claim that different types of delusions signify different types of illnesses.

Far from commencing with Jaspers, the process by means of which this 'received view' came to be formed started about two centuries earlier. It, however, crystallised during the 19th century, and to this period this paper is dedicated.

Such has been the hold of the 'received view' that it is often forgotten that delusions are, like the rest of symptoms in descriptive psychopathology, only theoretical constructs (Berrios, 1984). This means that, if found faulty, uninformative or limiting, they may be changed or replaced. For reasons which are interesting in themselves, however, an impasse has been reached in this respect. On the one hand, perceptive scholars agree that the heuristic capacity of the 'received view' is limited. For example, the so-called delusional 'form' gives little information on brain sites to which delusions might be related (Cummings, 1985; Garety *et al*, 1988) and the so-called 'content' fares no better with regard to suggesting psychological processes, motives and reasons underlying delusional behaviour (Faure, 1971; Musalek *et al*, 1989; Winter & Neale, 1983). On the other hand, there is reluctance to undertake a drastic revision of the concept; indeed, writers never go beyond offering minor variations upon the 'pathological' belief view (Timmerman, 1963; Smith, 1968; Melges & Freeman, 1975; Moor & Tucker, 1979; Kendler *et al*, 1983; Hemsley & Garety 1986; Spitzer, 1990).

Delusions are mostly speech acts (although they may, occasionally, be expressed in non-linguistic behaviour) characterised by great heterogeneity of form, purported content, and course. The classical criteria of unshakeability and imperviousness to reason are not overzealously applied in clinical practice where evidential confrontation is, in fact, often found to erode conviction. Indeed, bizarreness of content and accompanying symptoms seem to be the commonest diagnostic criteria. The 'received view' states that delusions are semantically pregnant speech acts, and hence can be classed as 'wrong' or 'pathological' beliefs. This view feels intuitively right. Delusions sound like any other declarative speech act, and it is plausible to assume that they must also be information-conveying, i.e. that they state something about the world or the self. Since the 'received view' was formed before the 20th century, it is legitimate to assume that it is based on views belonging to this period. Such conceptual bases include an obsolete theory of language, the epistemology of introspection

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

sponsored by classical psychology, and views of intentionality that did not allow for the existence of 'empty' speech acts. Progress has since occurred in all three areas, but little effort has been made to update the conceptual structure of delusion: indeed, it may well be the case that such updating could precipitate its disintegration.

The view that delusions are beliefs encourages, in turn, their analysis in terms of intellectual, emotional and volitional components. Each of these perspectives was once considered as exclusive, resulting in various unilateral accounts of delusion. Furthermore, theoretical preferences and analytical modes have been closely linked to national or conceptual traditions (e.g. British empiricism) and to the semantic history of the various languages involved (i.e. the connotations of apparently equivalent terms such as delusion, *délire*, *delirio* or *Wahn*). But it has become clear that these terms cast different semantic shadows in the minds of their native speakers, and that the use of cross-linguistic operational definitions does little to alleviate this difficulty. Thus, while the French term *délire* includes ideational, emotional and volitional connotations, the English delusion has been, from the start, an intellectualistic concept. This difference itself has a noble history: it resulted from the fact that, in French psychiatry, the conceptual divorce between délire (as delusion) and delirium (as an organic category) took longer to occur, and hence the same word (délire) was used to name both. To this difficulty yet another general problem must be added, to wit, that few historians have so far bothered to differentiate between the history of the words, concepts, and behavioural phenomena involved (Berrios, 1981).

So far, six points have been made with regard to the 'received view':

(a) that it is based on the assumption that the delusional speech act is pregnant with information
(b) it was formed during the 19th century, and not created by Jaspers
(c) it came about when the final separation took place of the concepts of insanity, organic delirium, and delusion
(d) it provides complex criteria for the classification of delusions in terms of form, content, origins, mechanisms, etc.
(e) it is caught in the complex problem of untranslatable linguistic differences, and
(f) it was the best model that the 19th century could develop. The question now is whether it simply needs updating (in terms of 20th century philosophical psychology and neurobiology) or replacement.

There is space here only to flesh out some of these points. What follows is a summary of a larger work on the subject (Berrios, in preparation).

Before the 19th century

The process whereby the 'received view' was formed started during the 17th century with the work of Thomas Hobbes (Peters, 1967; Hobbes, 1968 (first published 1651)), whose contribution to the analysis of delusions has been neglected, and that of John Locke (Locke, 1959 (first published 1690); Aaron, 1965) whose work is well known. During the 17th century, the concept of insanity was based on that of delusion: to be insane was to have delusions and vice versa. Both Hobbes and Locke set out to clarify this equivalence. Basically, their problem was to explain how, given that all knowledge comes from experience, some (delusional) utterances may contain wrong or bizarre contents about self or world. This problem was particularly pressing for John Locke, who posited that ideas of reflection, (i.e. combinations of sensible ideas) were uninformative. Delusions had to be either sensible ideas or reflective ideas; Locke chose to class them with the latter, and stated that in the insane, the reasoning faculty was all right, and that delusions are wrong because their premises are wrong. Locke never explained how wrong premises were acquired in the first place.

During the 18th century, his views were given a speculative neurobiological basis. For example, Hartley (1834 (first published 1749)) suggested that when the vibrations caused by brain lesions matched the frequencies of vibrations normally associated with real perceptions, the subject might experience hallucinations or delusions. Physicians with an interest in mental disorder applied this model to medicine (e.g. Battie, 1758).

So, the model inherited by the 19th century was as follows: to be insane was to have delusions (this is called the intellectualist view of insanity) (Berrios, 1985); delusions resulted from failures (caused by physical reasons) in the apparatus that served to acquire experiences. The system designed to process information was in order.

Delusions as wrong beliefs

The view that delusions are 'wrong beliefs', was first formulated during the 19th century. So, it is dependent upon contemporary definitions of belief. (A history of belief during this period is, however, beyond the scope of this paper.) From the middle of the 19th century, the predominant British view was that put forward by Alexander Bain (1859), who defined beliefs as mental states which included

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

a volitional (willed) component. He suggested that the essence of belief was, in fact, the tendency by the believer to act out his belief. This volitional element was incorporated by Bucknill & Tuke (1858) into their own definition of delusion. In his later years, however, Bain did away with the volitional component (Quinton, 1967). The zenith of the intellectualist view of belief can be found in the work of Price (1934). I shall presently use Price's definition to test the current view of delusion.

Some preliminary conceptual work is, however, required. The claim that a delusion is a 'wrong' belief, can be interpreted from the point of view of its form and content. In the first case, it is assumed that delusions are misshapen structures, i.e. do not conform to conceptual blueprints; in the second case it is assumed that the 'wrongness' effects the delusional 'content', i.e. it is contrary to reality. The 'form' hypothesis is tested by using a model of normal belief; the 'content' interpretation is tested by demonstrating that contents are false. Confronted with this choice, Jaspers (1963) opted for the latter: he was convinced that delusions were 'structurally sound' beliefs whose 'content' was discrepant with reality. The latter was due to their pathological (morbid) origin. By reasserting this 19th century view, he effectively led the descriptive psychopathology of delusions down a blind alley. It is clear from perusing current literature that researchers persist in viewing delusions as real 'ideas', as cognitive morsels of information about the world or self, which are upheld for 'morbid' reasons and unsupported by evidence.

We must now test the hypothesis that, from the structural point of view, delusions are, in fact, beliefs. Price (1934) distinguished four elements that comprise a belief (P):

(a) entertaining P, together with one or more alternative propositions Q and R
(b) knowing a fact or set of facts (F), which is relevant to P, Q or R
(c) knowing that F makes P more likely than Q or R, i.e. having more evidence for P than for Q or R, and
(d) assenting to P; which in turn includes (i) the preferring of P to Q and R, (ii) the feeling a certain degree of confidence with regard to P.

Price's criteria are clear and elegant enough, but it is clear that no current textbook or empirical definition of delusion can be set in terms of these four criteria. First of all, clinical observation shows that it is rarely the case that entertaining a delusional belief P is accompanied by the simultaneous entertaining of rival propositions Q or R. Secondly, the set of facts (F) supporting the delusions is regularly absent, particularly so in the so-called primary delusions. Thirdly, no corresponding allocation of evidence is made by the patient in respect of P, Q or R. In fact assenting to P is the only criterion that is regularly met. But even here, clinical observation shows that the nature of the assenting in the insane believer is different from that in the sane believer. This difference, known since the 19th century, relates to what can be called a 'reality' coefficient': i.e. a normal subject believing P does so within certain probability constraints, which are determined by evidential strength, personality, emotional investment, etc. None of these factors is individually allowed to push the probability value to 1. Evidential strength is always assessed in terms of 'reasonable doubt' (i.e. a sort of 'pinch of salt' criterion), and emotional investment is normally kept at bay so that it does not unduly affect the probability values. Clinical observation shows that this probabilistic attitude may be impaired in the psychotic subject. However bizarre the content of speech acts might be, clinicians would not be happy to call them 'delusions', if at the same time they are upheld with certain coyness, and are accompanied by a correct probabilistic assessment of their reality.

So, it can be concluded that delusions are, from the structural point of view, so unlike 'normal beliefs' (incidentally, a similar conclusion is reached if other operational definitions of belief are used) that it must be asked why we persist in calling them beliefs at all. Indeed, no heuristic pay-off seems apparent. Properly described, delusions are empty speech acts that disguise themselves as beliefs. To use Austin's (1962) felicitous term they are but 'masqueraders'. So, although delusions purport to be real statements, and hence convey information, they may turn out to be epistemologically *manqué*. Their so-called content, like that of hallucinations, contains little information about the world, in spite of their often bombastic claims. They do have a content of sorts, but this is detached from any evidential basis. From this point of view it is a meaningless claim likely to be random in origin. The only information that it might carry relates to addresses for neurobiological events. But, given the amount of psychosocial noise in which they envelop themselves, even in this respect they may turn out to be unhelpful.

Delusions and pre-delusional experiences

The fact that, so far, analysis of the form and content of crystallised delusions has given no clues as to their brain localisation (Cummings, 1985) suggests that

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

formed delusions are uninformative, and that the researcher might be well advised to pay attention to other events, such as those preceding the crystallisation of the delusion. Since the 19th century, alienists have pondered over the clinical relevance of experiences (not often reported by patients) occurring *before* they are finally taken over by the 'wrong belief'. These experiences, which have been variously called 'delusional mood' (Hagen, 1870), 'perplexity' (Störring, 1939), 'trema' (Conrad, 1958), 'delusión viva' (Llopis, 1969), last from seconds to weeks, and are often ineffable, i.e. patients do not have the words or experiential notions to describe them. Indeed, psychiatrists themselves do not seem to have the right clinical categories to classify and understand them. It is suggested in this paper that, on account of their 'raw' quality, these experiences may be better indicators than the delusions themselves (which are likely to be much distorted by psychosocial noise) of the brain sites involved in their pathological origin.

Unfortunately, the empirical analysis of these experiences has proved difficult. Because they are often fleeting and strange, and are likely to occur during states of subtle cognitive disorganisation (Llopis, 1946; Ey, 1954), pre-delusional experiences are not analysable in the here and now. For the same reason they may not be memorable enough and hence escape retrospective study. This explains why current information on the nature of these states comes from single case studies or anecdotal reports. It is highly likely that experiences superficially so different as delusional mood, perplexity or trema are, in fact, describing the same phenomenon; the only difference resulting from the perspective from which they have been analysed (e.g. emotional, behavioural or intellectual). As Bleuler (1906) once suggested, it might even be the case that these experiences are all 'affective' in nature. In this regard, Oepen *et al* (1989) have recently indicated that delusions may be related to limbic dysfunction on the non-dominant hemisphere. Should this be the case, the old distinction between primary and secondary delusions may, after all, be unwarranted, as all delusions may turn out to be 'secondary' to affective changes (whether the latter be fleeting or longer lasting).

The view that delusions are 'abnormal belief systems' has naturally led to the suggestion that probabilistic models (such as Bayesian inference) (Iversen, 1984) may be used to explain the manner of their origin or persistence (Hemsley & Garety, 1986). These authors have based their analysis on a probabilistic account of normal belief put forward by Fischhoff & Beyth-Marom (1983) who also suggest that inferential failures may originate at each stage of the Bayesian procedure. The application of this model to delusions is not very helpful. Apart from the general point that an assumption of rationality (Gigerenzer *et al*, 1988) is not warranted in the case of psychotic subjects, and of the specific point made above that delusions may not be beliefs at all (and hence not a form of probabilistic knowledge), two other difficulties beset this approach: one relates to the assessment of *a priori* probabilities (in the case of delusional beliefs), and the other to the determination of what counts as *a posteriori* evidence. In fact, Hemsley & Garety (1986) show that failures at each stage of the inferential procedure lead to 'phenomenological' situations resembling delusional 'beliefs'. It is unclear, however, whether these constitute so far unrecognised 'types' of delusions, and whether they are signposts for different brain sites. Finally, there is some evidence that, after all, 'normal' subjects do not often observe Bayesian inferential rules either (Nisbett *et al*, 1983). So, a major overlap between deluded and normal subjects is to be expected. Discrimination between these two groups is likely to require the inclusion of variables external to the Bayesian model.

The 19th century

It was said above that the 19th century inherited a model which considered delusions and insanity to be equivalent. Furthermore, delusions were assumed ultimately to result from failures in the bodily systems involved in the gathering of experience. Nineteenth-century writers interpreted this view as meaning that delusions were existentially parasitical upon hallucinations and/or other pathological sensory or perceptual events. By the 1820s, hallucinations and delusions also began to be conceptually separated (Berrios, 1982). John Locke (1959) had distinguished phenomenologically, but not conceptually, between the two symptoms, indeed, in terms of his epistemological views, there was no reason for him to do otherwise. Locke posited that all information (including that carried by delusions) originates from the external world. Whether the content of the delusion was overtly 'sensorial' or 'ideational' mattered nought.

British empiricism predominated in Europe, including France, until the end of the 18th century. During the early 1800s, however, major conceptual changes took place in French philosophical psychology of perception (Garnier, 1852), which helps to explain the historical fact that the concept of delusion changed in this country first. One such background change was the acceptance of faculty psychology (in turn, reflecting the increasing influence of the Scottish philosophy of common sense) which soon was to displace Lockean associationism. Another

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

change concerned the separation of knowledge and belief. In Locke, as in Hume, there had been no real difference between these two notions, the strength of the belief being based on the sensory quality of the input. Indeed, for Hume all empirical knowledge was based on belief. But during the 19th century, knowledge and belief followed diverging paths. Knowledge became entrained to scientific certainty, and hence required redefinition in terms of newly found evidential canons; belief, on the other hand, became subjectivised, and redefined in terms of probabilistic knowledge and mental attitudes.

The re-definition of delusions, hallucinations and illusions that took place during this period reflects these important philosophical changes. Delusions became *conceptions* which resulted from pathological changes in the intellectual functions; hallucinations were from pathological changes in the perceptual system (Paulus, 1941); illusions remained ambiguously poised between the perceptual and intellectual spheres (Esquirol, 1838). They were partially perceptual because the subject reported a sensory content, but it was accepted that in some cases perceptual systems did not seem to be dysfunctional, and hence errors had to result from cognitive misconceptions (Esquirol, 1838). Delusional contents hardly met any of the epistemological canons of science and could no longer be considered as a form of knowledge (as they had been in previous centuries). By default, delusions became redefined as beliefs. This change (described by some as resulting from the 'medicalisation of madness') was part of a wider process that led to the epistemological degradation of all forms of psychotic subjective experiences. At the very end of the century, Freud attempted to stem this trend by suggesting that symptoms were, after all, informative with regard to the self.

As hinted at above, linguistic differences were important. The French term 'délire', for example, indistinctly referred to the symptom 'delusion' and to the state 'organic delirium'. In German, the term *Wahn* also referred both to delusion and to insanity in general. Since the 17th century, however, the English word insanity has been used to refer only to a cognitive state. These international differences bedeviled 19th century English translators, particularly of French texts (see, for example, the English version of Pinel's '*A Treatise on Insanity*' (1806) where délire is repeatedly rendered as delirium).

To summarise what has been said so far: the view that delusion is a subtype of belief started during the 19th century and was a consequence of the conceptual separation between knowledge and belief. It can be safely assumed that this view (still current) enshrines, as in a time capsule, 19th-century definitions of belief.

The 20th century

By the end of the 19th century, the concept of delusion as a morbid belief had become well established. So, questions began to be asked concerning its genesis, mechanisms, and types. Organic and psychological mechanisms became popular, for example, the 'seizural' hypothesis developed after 1880 in the wake of Tamburini's work on hallucinations (Berrios, 1990), and the chemico-modular view of Luys and the French school in which phosphates played an important role (1876). Yet another was the Jacksonian hypothesis according to which delusions were expressions of normal and adaptative brain mechanisms released by the destruction of higher centres (Berrios, 1985*a*). Jackson even suggested that one of the factors involved in the production of delusions might be personality and past history (Jackson, 1894). Ribot, Janet, Freud, Mourgue, and Ey followed this lead (Berrios, 1991*a*). By the beginning of the 20th century, Wernicke (1906) and Chaslin (1912) had distinguished between primary and secondary delusions, the latter being misinterpretations of primary morbid phenomena, such as hallucinations or mood disorders.

There was also much discussion on the contents of delusions. This is the period when a number of insanities were created on the basis of differences in delusional content (Sérieux & Capgras, 1909). From nihilistic and parasitical to persecutory, erotomanic, grandiose and hypochondriacal, delusions were catalogued according to content, and the unwarranted assumption was made that each signified a different disease. This continued well into the 20th century, with states such as the ones described by Capgras, Fregoli, and others (Christodoulou, 1986) some of which, thankfully, have by now been forgotten.

Just before World War I, Karl Jaspers (1963 (first published 1913)) published the first edition of his book, and what he said sounded new to those who had a little knowledge of the 19th century. In fact, the only new concept in his model (new in that it is not present in 19th century *psychiatric* writings) is that of 'comprehensibility' which Jaspers borrowed from Wilhelm Dilthey (Hodges, 1952; Martin-Santos, 1955; Walker, 1988). It is clear, however, that the assessment of comprehensibility depends on the state of progress of psychological theory: delusions incomprehensible today may not be so tomorrow. Between Jaspers and Schneider, as Gerhardt Schmidt (1940) showed in his classical review, no drastic change took place in the concept of delusion. The

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

accumulation of clinical reports, however, lent some credence to Kretschmer's (1918) view (already suggested by J. H. Jackson in 1894) that personality factors may play a role in the generation and persistence of delusions.

This lack of progress was one of the reasons that led to the decision that delusions should be the central theme of the 1950 First World Congress of Psychiatry (Morel, 1950; Ey *et al*, 1952). This meeting, held in Paris, was attended by many great men: Mayer-Gross, Guiraud, Morselli, Rümke, Delgado, Ey, Gruhle, Minkowsky, Stransky, and Baruk. To overcome translational difficulties, Honorio Delgado (from Peru) made the unsuccessful suggestion that the English term 'delusion' be accepted as international currency. Gruhle, then a grand old man, reasserted the very definition that, since *Hagen* has been a commanding view in German psychiatry: "delusion is an interpretation without reason, an intuition without cause, a mental attitude without basis. It represents neither sublimated desires nor repressed wishes but is a sign of cerebral dysfunction. It is not secondary to any other phenomenon and has no relationship to the patient's constitution" (Ey *et al*, 1952, pp. 112–113).

The Paris meeting, however, did not generate new ideas on the problem of delusion (Morel, 1950). Based on the work of Monakow & Mourgue (1928), Giraud presented his 'biological model', according to which delusions were the result of a failure of 'primordial psychological activity ('atteinte de l'activité psychique primordial') distorted and masked by human cognitive and affective superstructures' (p. 37). The primordial activity itself was a composite of psychological functions which included the feeling of existence, of nutrition, of reproduction, of vigilance, and of growth. These 'pulsions' were organised by the self that adapted their satisfaction to reality according to logical rules. These functions were localised throughout the central nervous system. Focal or diffuse pathological changes in the latter might then cause selective or global failures ('une anomalie partielle ou globale du dynamisme psychique primordial'). This, in turn, might cause a collapse in the logical organisation of the self (p. 40).

Mayor-Gross stated that the choice of delusions as theme for the Congress was 'appropriate', for at the time there was a "relatively low ebb of interest in the psychopathology of delusions" (Morel, 1950, p. 59). He noticed the fact that the conventional definitional criteria were not very useful in practice and identified the two ways in which the difficulty had been solved: "one can call a delusion pathological or, as Bumke put it, 'an error of morbid origin'; or one can insist that delusions do not differ from other human beliefs in principle, that no line of demarcation exists. As Bleuler, whose views have so widely influenced psychopathological thinking all over the world, has pointed out, delusional ideas correspond to, and are directed by, the patient's affects and emotions" (pp. 60–61).

G. E. Morselli (Morel, 1950) attempted a review of the neurobiological bases of some delusional states and did not go beyond listing some toxic and metabolic states. H. C. Rümke undertook a superb analysis of the symptom delusion which he defined as an 'artificial abstraction' (p. 182) from the phenomenological point of view. His contribution was, perhaps, the most important in that Rümke showed the uselessness of defining delusions as 'beliefs' and also the weakness of the conventional definitional criteria.

Final comments

The task of writing on the history of delusions is a difficult one. In Western culture the term delusion (and equivalent words in other languages) and its related concepts and behaviour are intimately linked to the notion of insanity itself. The 20th century has contributed little to the shaping of delusions. Most of what is current in the description and understanding of this complex phenomenon originated during the 19th century.

The conclusions which are outlined below can be made.

(a) Before the 19th century, the concepts of insanity and of organic delirium definitionally depended on the presence of delusions.

(b) Delusion, illusion, and hallucination were not differentiated as separate phenomena. The philosophical psychology available during these earlier periods did not require such separation.

(c) Three major conceptual changes, all of which occurred during the 19th century, contributed to the shaping of the new concept of delusion:

(i) the development of the notion of 'symptom' as an elementary marker of mental disorder, and of the so-called anatomoclinical model of disease (on which nothing has been said in this paper) (see Berrios, 1988)
(ii) changes in philosophical psychology leading to the decline of British empiricism and associationism and the growth of faculty psychology
(iii) the conceptual divorce between knowledge and belief
(iv) the growth of constitutional and personality theories that allowed for the interpretation of delusions as personal or biographical events.

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

(d) Delusion became a morbid belief. The morbidity factor itself was studied at individual level in organic, psychological or constitutional terms. The content of the delusion became more important than its form, and subtypes were identified which themselves were considered as different diseases. Content was also used to identify congruencies or incongruencies between the delusion and other personal events. The notion of 'comprehensibility', originally used by Dilthey as a conceptual instrument in historical research, was borrowed by Jaspers and applied to delusions. Incomprehensible delusions were taken to signify primary events relating to the diagnosis of schizophrenia.

(e) Because delusions were considered as morbid beliefs, a number of operational criteria were developed; these included conviction, unshakeability, bizarreness, cultural dislocation, and lack of insight (nothing has been said in this paper on the history of each criterion). These criteria were never successful in the task of separating delusions from overvalued ideas, superstitions and other forms of tightly held 'belief'. Clinicans also puzzled over the nature of the relationship between delusions and their behavioural consequences, i.e. on the issue of congruity. This problem has not yet been resolved and no account is available to explain the common phenomenon of fluctuating congruency.

(f) Empirical findings have been persistently reported since the 19th century showing that delusions are heterogeneous in terms of both content and form. So 'dimensions' have been suggested to capture the shape of delusions in a hypothetical geometric space which includes features such as insight, onset, course, dissolution, conviction, imperviousness to external pressure, emotional and volitional accompaniments, and behavioural consequences (Kendler *et al*, 1983; Garety & Hemsley, 1987). Covariance does not seem to be a feature of these dimensions, and pattern recognition techniques extract rather anodyne super-variables. Likewise, the clusters obtained seem bereft of clinical or neurobiological meaning.

This dimensional variability has been considered by some to challenge the all-or-none model of delusions. The latter is, however, a figment of the researcher's imagination, and few experienced clinicians have ever upheld such a narrow view of delusions. The rejection of the all-or-none model has led to the unwarranted claim that a 'continuum' might then exist between overvalued ideas, obsessions and delusions. This very same view caused much confusion among 19th century alienists and was abandoned after 1870.

(g) Delusions are likely to be empty speech acts, whose informational content refers to neither world nor self. They are not the symbolic expression of anything. Its 'content' is but a random fragment of information 'trapped' in the very moment the delusion becomes crystallised. The commonality of certain themes can be explained by the fact that informational fragments with high frequency value also have a higher probability of being 'trapped'.

It is suggested here that the pre-delusional state is far more informative, particularly from the neurobiological point of view. This state has been, however, both theoretically and empirically neglected. Factors explaining this neglect include the bewitching effect of 'formed' delusions, the fact that they are easily available for study, the evanescent nature of the pre-delusional experiences, the fact that they occur in the context of subtle disorders of cognition and hence their recollection may be compromised, and finally, that no adequate techniques have yet been developed for their capture.

References

AARON, R. (1965) *John Locke*. Oxford: Clarendon Press.

ARTHUR, A. Z. (1964) Theories and explanations of delusions: a review. *American Journal of Psychiatry*, **121**, 105–115.

AUSTIN, J. L. (1962) *How To Do Things With Words*. Oxford: Clarendon Press.

BALL, B. & RITTI, A. (1881) Délire. In *Dictionnaire Encyclopédique des Sciences Médicales*, Vol. 26 (eds A. Dechambre & L. Lereboullet), pp. 315–408. Paris: Masson.

BAIN, A. (1859) *The Emotions and the Will*. London: John W. Parker.

BATTIE, W. (1758) *A Treatise on Madness*. London: Whiston & White.

BERRIOS, G. E. (1981) Delirium and confusion in the 19th century. *British Journal of Psychiatry*, **139**, 439–449.

—— (1982) Tactile hallucinations: conceptual and historical aspects. *Journal of Neurology, Neurosurgery & Psychiatry*, **45**, 285–293.

—— (1984) Descriptive psychopathology: conceptual and historical aspects. *Psychological Medicine*, **14**, 303–313.

—— (1985) The psychopathology of affectivity: conceptual and historical aspects. *Psychological Medicine*, **15**, 745–758.

—— (1985*a*) Positive and negative symptoms and Jackson. *Archives of General Psychiatry*, **42**, 95–97.

—— (1988) Historical background to abnormal psychology. In *Adult Abnormal Psychology* (eds E. Miller & P. J. Cooper), pp. 26–51. Edinburgh: Churchill Livingstone.

—— (1990) A theory of hallucinations. *History of Psychiatry*, **1**, 145–150.

—— (1991) British psychopathology: a conceptual history. In *150 Years of British Psychiatry, 1841–1991* (eds G. E. Berrios & H. Freeman), pp. 232–244. London: Gaskell.

—— (1991*a*) Negative and positive signals: a conceptual history. In *Negative versus Positive Schizophrenia* (eds A. Marneros N. C. Andreason & M. T. Tsuang), pp. 8–27. Berlin: Springer.

BLEULER, E. (1906) *Affectivität, Suggestibilität, Paranoia*. Halle: Carl Marhold.

BUCKNILL, J. & TUKE, D. H. (1858) *A Manual of Psychological Medicine*. London: John Churchill.

CABALEIRO GOAS, M. (1966) La psicopatología de los delirios. In *Temas psiquiátricos*, pp. 957–1012. Madrid: Paz Montalvo.

CHASLIN, PH. (1912) *Eléments de Sémiologie et Clinique Mentales*. Paris: Asselin & Houzeau.

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press

CHRISTODOULOU, G. N. (ed.) (1986) *The Delusional Misidentification Syndromes*. Basel: Karger.
CONRAD, K. (1958) *Die beginnende Schizophrenie*. Stuttgart: Thieme.
CUMMINGS, J. L. (1985) Organic delusions. *British Journal of Psychiatry*, **146**, 184–197.
ESQUIROL, E. (1838) *Des Maladies Mentales* (2 vols). Paris: Baillière.
EY, H. (1950) *Estudios Sobre los Delirios*. Madrid: Paz Montalvo.
——— (1954) Structure et déstructuration de la conscience. In *Études Psychiatriques* (ed. H. Ey), pp. 653–760. Paris: Desclée de Bouwer.
———, MARTY, P. & DUBLINEAU, J. (1952) *Psychopathologie Générale. Comptes Rendus des Séances. Premier Congrès Mondial de Psychiatrie* (Vol. 1). Paris: Hermann.
FAURE, H. (1971) *Les Appartenances du Délirant*. Paris: Presses Universitaires de France.
FISCHHOFF, B. & BEYTH-MAROM, R. (1983) Hypothesis evaluation from a Bayesian perspective. *Psychological Review*, **90**, 239–260.
GARETY, P. A. & HEMSLEY, D. R. (1987) Characteristics of delusional experience. *European Archives of Psychiatry and Neurological Sciences*, **236**, 294–298.
———, EVERITT, B. S. & HEMSLEY, D. R. (1988) The characteristics of delusions: a cluster analysis of deluded subjects. *European Archives of Psychiatry and Neurological Sciences*, **237**, 112–114.
GARNIER, A. (1852) *Traité des Facultés de L'ame* (3 Vols). Paris: Hachette.
GIGERENZER, G., SWIJTINK, Z., PORTER, T., *et al* (1988) *The Empire of Chance*. Cambridge: Cambridge University Press.
HAGEN, F. W. (1870) *Studien auf dem Gebiet der ärztlichen Seelenkunde*. Erlangen: Besold.
HARTLEY, D. (1834) *Observations on Man, his Frame, his Duty, and his Expectations* (6th edn). London: Tegg & Son.
HEMSLEY, D. R. & GARETY, P. A. (1986) The formation of maintenance of delusions: a Bayesian analysis. *British Journal of Psychiatry*, **149**, 51–56.
HOBBES, T. (1968) *Leviathan*. London: Penguin Books.
HOENIG, J. (1968) The clinical usefulness of the phenomenology of delusions. *International Journal of Psychiatry*, **6**, 41–45.
HODGES, H. A. (1952) *The Philosophy of Wilhelm Dilthey*. Connecticut: Greenwood.
HUBER, G. & GROSS, G. (1977) *Wahn*. Stuttgart: Enke.
IRELAND, W. W. (1885) On fixed ideas. In *The Blot upon the Brain*, pp. 184–200. Edinburgh: Bell and Bradfoot.
IVERSON, G. R. (1984) *Bayesian Statistical Inference*. London: Sage.
JACKSON, J. H. (1894) The factors of insanities. *Medical Press & Circular*, *ii*, 615–626.
JASPERS, K. (1963) *General Psychopathology* (transl. by J. Hoenig and M. Hamilton). Manchester: Manchester University Press.
KENDLER, K., GLAZER, W. M. & MORGENSTERN, H. (1983) Dimensions of delusional experience. *American Journal of Psychiatry*, **140**, 466–469.
KRETSCHMER, E. (1918) *Der sensitive Beziehungswahn*. Berlin: Springer.
LLOPIS, B. (1946) *La Psicosis Pelagrosa*. Barcelona: Editorial Científico-Médica.
——— (1969) Sobre la Delusion y la Paranoia. In *Afectividad, Sugestibilidad, Paranoia* (ed. E. Bleuler) (translated by B. Llopis) Madrid: Morata.
LOCKE, J. (1959) *An Essay Concerning Human Understanding* (collated and annotated by A. C. Fraser). New York: Dover.
LUYS, J. (1876) *Le Cerveau*. Paris: Baillière.
MARTIN-SANTOS, L. (1955) *Dilthey, Jaspers y la Comprensión del Enfermo Mental*. Madrid: Paz Montalvo.
MELGES, F. T. & FREEMAN, A. M. (1975) Persecutory delusions: a cybernetic model. *American Journal of Psychiatry*, **132**, 1038–1044.
MONAKOW, C. & MOURGUE, R. (1928) *Introduction Biologique à l'étude de la Neurologie et de la Psychopathologie*. Paris: Alcan.
MOOR, J. H. & TUCKER, G. J. (1979) Delusions: analysis and criteria. *Comprehensive Psychiatry*, **20**, 388–393.
MOREL, F. (ed.) (1950) *Psychopathologie des délires*. Paris: Hermann.
MUSALEK, M., BERNER, P. & KATSCHNIG, H. (1989) Delusional theme, sex and age. *Psychopathology*, **22**, 260–267.
NISBETT, R. E., KRANTZ, D. H. JEPSON, C., *et al* (1983) The use of statistical heuristics in everyday inductive reasoning. *Psychological Review*. **90**, 339–363.
OEPEN, G., HARRINGTON, A., SPITZER, M., *et al* (1989) "Feelings" of conviction: on the relation of affect and thought disorder. In *Psychopathology and Philosophy* (eds M. Spitzer, F. A. Uehlein & G. Oepen), pp. 43–55. Berlin: Springer.
PAULUS, J. (1941) *Le Problème de L'hallucination et L'évolution de la Psychologie d'Esquirol à Pierre Janet*. Paris: Les Belles Lettres.
PETERS, R. (1967) *Hobbes*. London: Peregrine Books.
PINEL, PH. (1806) *A Treatise on Insanity (translated by D. D. Davis)*. Sheffield: W. Todd.
PRICE, H. H. (1934) Some considerations about belief. *Proceedings of the Aristotelian Society*, **35**, 229–252.
QUINTON, A. (1967) Knowledge and belief. In *The Encyclopedia of Philosophy* (Vol. 3) (ed. P. Edwards), pp. 345–352. New York: MacMillan.
SCHMIDT, G. (1940) Der Wahn im deutschprachigen Schrifttum der letzten 25 Jahre (1914–1939). *Zentralblatt für die gesamte Neurologie und Psychiatrie*, **97**, 113–143.
SÉRIEUX, P. & CAPGRAS, J. (1909) *Les folies raisonnantes. Le délire d'interprétation*. Paris: Alcan.
SMITH, A. C. (1968) Notes on difficulties in the definition of delusion. *British Journal of Medical Psychology*, **41**, 255–259.
SPITZER, M. (1990) On defining delusions. *Comprehensive Psychiatry*, **31**, 377–397.
SOUTHARD, E. E. (1916) On the application of grammatical categories to the analysis of delusions. *Philosophical Review*, **25**, 425–455.
STÖRRING, G. (1939) *Wessen und Bedeutung des Symptoms der Ratlosigkeit by psychischen Erkrankungen*. Leipzig: Barth.
TIMMERMANN, E. (1963) The description of delusional ideas. *Acta Psychiatrica Scandinavica*, **39**, 324–334.
WALKER, C. (1988) Philosophical concepts and practice: the legacy of Karl Jaspers' psychopathology. *Current Opinion in Psychiatry*, **1**, 624–629.
WERNICKE, C. (1906) *Grundriß der Psychiatrie in klinischen Vorlesungen*. Leipzig: Thieme.
WINTERS, K. C. & NEALE, J. M. (1983) Delusions and delusional thinking in psychotics: a review of the literature. *Clinical Psychology Review*, **3**, 227–253.

G. E. Berrios, MA(Oxon), MD, FRCPsych, FBPsS, *Department of Psychiatry, University of Cambridge, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QQ*

https://doi.org/10.1192/S0007125000296414 Published online by Cambridge University Press