Karl Jaspers and the Genesis of Delusions in Schizophrenia

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In his *General Psychopathology*, Karl Jaspers identifies two stages in the genesis of delusions in schizophrenia. The first is a set of primary subjective experiences, which he encompasses under the rubric of “delusional atmosphere,” building upon F.W. Hagen’s construct of “delusional mood.” The second is the patient’s “working through” those experiences, sometimes “calling for the full strength of an intelligent personality,” which leads to delusional ideas. The content of delusions—Jaspers adds—“strikes one as a symbol for something quite different,” “is certainly not meant literally and is quite differently experienced from similar content in the case of a person we can fully understand.” “It is certainly possible to wonder whether the patients have found any content adequate for their actual experience.”

In this issue of the journal, Mishara and Fusar-Poli propose that Kapur’s model of “aberrant salience” may represent a “bridge” between a revised version of the dopamine hypothesis of schizophrenia and Jaspers’ construct of delusional atmosphere. Abnormal striatal dopamine firing would lead to an aberrant assignment of salience to neutral stimuli and consequently to the emergence of delusional mood.

One could argue, though, that the overlap between the experiences reported by Kapur in his seminal paper and those described by Jaspers under the heading of delusional atmosphere is only partial. Common elements are the patients’ experience that “something in the world around them is changing, leaving them somewhat confused and looking for an explanation” and their feeling that “there is some overwhelming significance in this” or that certain objects or persons “signify something,” although initially “nothing definite.”

However, absent in Jaspers’ description of delusional atmosphere is Kapur’s emphasis on the increased intensity of perception (“my senses were sharpened,” “sights and sounds possessed a keenness that I never experienced before,” “my senses seemed alive … things seemed clearcut,” “my capacities for aesthetic appreciation and heightened sensory receptiveness … were very keen at this time”). Experiences of this kind are included by Jaspers in another section of *General Psychopathology* (“changes in intensity of perception”). In delusional atmosphere, the intensity of perception is not modified (“perception is unaltered in itself,” “perception itself remains normal and unchanged,” “sensory richness is not essentially changed”) and the change in the environment is experienced as quite subtle (“there is some change which envelops everything with a subtle, pervasive, and strangely uncertain light”).

Furthermore, not prominent in Kapur’s account of aberrant salience, but emphasized by Jaspers in his description of delusional atmosphere, is the “affective” component of the experiences: objects, persons, and events appear “eerie, horrifying”; patients feel that “there is something suspicious afoot”; “a distrustful, uncomfortable, uncanny tension invades them”; they “suffer terribly,” because—Jaspers argues quoting Hagen—“no dread is worse than that of danger unknown.” Not surprisingly, the final outcome of delusional atmosphere is often represented by convictions of being persecuted, attacked, or conspired against, which might be more difficult to explain if the primary experience were just of an exaggerated salience of percepts.

So, there is some overlap between Kapur’s description of aberrant salience and Jaspers’ account of delusional atmosphere, and the common elements may indeed point to an abnormal striatal dopamine firing. But there are also other elements in Jaspers’ description—the “strangely uncertain light” enveloping everything, the feeling that there is “something suspicious afoot,” the “distrustful, uncanny tension”—that seem to point to an abnormal dopamine firing at the level of limbic areas such as the amygdala and the hippocampus, whose involvement in ultra high-risk states and in first-episode schizophrenia has been actually reported by several neuroimaging studies.

Obviously, Jaspers’ construct of delusional atmosphere remains of great relevance to psychopathological and neuroscientific research. However, several assumptions he makes concerning that set of experiences, or patients’ “working through” them, have been recently questioned.

First, the experiences encompassed under the heading of delusional atmosphere may not be as “psychologically irreducible” and “phenomenologically final” as Jaspers assumes. In recent phenomenological literature, those
experiences are in fact often regarded as the outcome of a more remote and gradually evolving impairment of the awareness of self and the world.\textsuperscript{11} So, rather than representing “a break in the normal life-curve,”\textsuperscript{11} they may be rooted in a faulty developmental process.

Second, Jaspers’ assumption that the patient develops his delusional ideas, on the basis of primary abnormal experiences, through cognitive processes that are essentially normal is quite controversial. There are indeed some models supporting that view,\textsuperscript{12} but several others suggest that a defect of probabilistic reasoning (eg, a tendency to “jump to conclusions”) is also involved.\textsuperscript{13} It has been also hypothesized that an impairment in predictive learning may underlie both pathological experiences and abnormal beliefs: a “global failure of anticipation” may produce a “sense of unexpectedness,”\textsuperscript{14} which could drive the development of delusions “through establishment of predictive associations that, whilst maladaptive, represent attempts to render the world more predictable.”\textsuperscript{15} It has been also argued that patients with schizophrenia may not “express beliefs at all, but use what we might call the language of belief to express the bizarre and disorienting nature of their experience.”\textsuperscript{16} Patients may “state that something is true to their experience … which they know not to be true simpliciter.”\textsuperscript{17}

Third, that the experiences subsumed under the heading of delusional atmosphere are indeed “quite alien” and “beyond our understanding”\textsuperscript{11} has been put in question. It has been stated that “the sense of ‘finding oneself in the world’ shifts in a range of different and often subtle ways, not just in psychiatric illness but throughout the course of everyday life,” and that “less extreme” manifestations of that “kind of existential feeling” may be “not so far removed from everyday experience as they might seem.”\textsuperscript{14} Some people may be able to cope with milder forms of those experiences, not develop a delusion and never come to the attention of mental health services.\textsuperscript{18}

How common the primary experiences described by Jaspers are in patients with schizophrenia, how specific they are for that disorder, and whether they are amenable to a systematic assessment, even if retrospective, are all issues open to research. The degree of overlap between such experiences and those currently reported in ultra high-risk states or prodromal stages of psychosis, and assessed through standardized psychometric scales,\textsuperscript{19} also remains to be explored.

Finally, in the light of the above discussion, it should be acknowledged that the definition of delusion provided by the DSM-III and its successors is less straightforward than it may seem, since several of its elements—that delusions are always beliefs (vs metaphorical utterances),\textsuperscript{16} that they are always based on an incorrect inference (vs being based on an unimpaired inferential process applied to anomalous experiences),\textsuperscript{1,12} and that this inference always regards external reality (vs, in some cases, patients’ inner mental life)\textsuperscript{20}—have been put in question.

References