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Acting on Delusions. II: The Phenomenological Correlates of Acting on Delusions

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The aim of the study was to identify the phenomenological characteristics of those delusions which are associated with action. The sample consisted of 79 patients admitted to a general psychiatric ward, each of whom described at least one delusional belief. The variables studied included the phenomenology of the delusions, and behaviour. Two behavioural ratings were used, one derived from the subjects' own description of their behaviour and the other from information provided by informants. There was no association between delusional phenomenology and acting on a delusion when the subjects' behaviour was described by informants. When action was described by the subjects themselves, acting was associated with: being aware of evidence which supported the belief and with having actively sought out such evidence; a tendency to reduce the conviction with which a belief was held when that belief was challenged; and with feeling sad, frightened or anxious as a consequence of the delusion.

The previous paper (this issue) reported some of the links between delusional beliefs and behaviour. That consistent associations are difficult to find between behaviour and different types of delusions is not surprising. Categories such as 'persecutory' and 'religious' are not mutually exclusive and provide little information with regard to the overall significance of the belief for the patient.

Little has been written on the phenomenological correlates of delusions which are associated with action, and such literature as does exist pertains mostly to violence. Thus Hafner & Boker (1973) found a correlation between the degree of systematisation of a delusional belief and the likelihood of its being acted upon in a violent manner. The importance of affect in determining behaviour in the context of psychosis was recorded by Bleuler (1924); more recently Shore (1979) has argued that flattening of affect allows schizophrenic people to injure themselves as a consequence of their delusions. Roback & Abramowitz (1979) found behavioural adjustment to correlate with insight in psychosis but the measures of behaviour were general, the delusions unrecorded, and the implications for delusional action unclear.

The present study is an attempt to investigate the links between delusional beliefs and action through a more detailed phenomenological assessment of the beliefs than has previously been described.

Method

The sample was based on that described in the previous paper, which consisted of 83 psychotic in-patients with at least one delusion according to PSE criteria.

The variables studied consisted of aspects of the phenomenology of delusions and measures of behaviour. Delusions were identified using the PSE; where more than one delusion was present, the subject was asked to state which was most important to him/her, and this was termed the 'principal' belief. The subject was then asked a series of questions relating to the phenomenology of this belief. These questions are contained in the Maudsley Assessment of Delusions Schedule (MADS) (see previous paper, Appendix 1). The subject was questioned regarding behaviour consequent on the principal belief in the past month, and further information was obtained from informants.

Subjects were asked how sure they were about the truth of their delusional belief, and their responses were rated from zero ('doubt it') to four ('absolutely certain').

Subjects were asked why they continued to believe their delusional beliefs. They were asked whether internal events (such as mood changes) or external events had occurred at any time since the idea first came to them, or in the last week. Finally, they were asked whether they actively sought information to confirm or refute their belief.

Subjects were asked whether the delusional belief in question made them feel elated, unhappy, frightened, anxious or angry.

Preoccupation was rated on a scale of 0 to 4 according to the criteria used in the PSE.

Systematisation was rated on a scale from 0 to 3 according to the criteria used in the PSE.

Subjects were also asked whether they felt that others shared their belief, what would have to happen to make them think that they were wrong, whether they regarded themselves as unwell, and whether taking medication or seeing a psychiatrist had helped in any way. Finally, subjects were presented with a 'hypothetical contradiction' to their delusional belief. Thus a patient who believed that other people controlled his actions using radio waves was told by the interviewer that there was no mechanism whereby

this could happen. The subject's responses were scored according to whether he ignored the contradiction or denied its relevance, accommodated it into his delusional system ("But you're only saying that because they want you to"), lessened his conviction in his belief, or abandoned his belief completely.

As reported in Paper I, a latent class analysis of subjects' responses had generated three groups of patients: those who acted not at all or very little on their delusions; those who acted aggressively, and those who acted in a defensive manner.

Pronounced formal thought disorder limited the amount of information which could be obtained in a few cases. With regard to affect and insight, data were available for 79 subjects. With regard to the other phenomenological variables, data were available for 78 subjects.

Statistical analysis

This was conducted by the authors using the SPSS/PC + version 3.0 (1989). Statistical associations were tested using the χ^2 statistic. Where cell sizes rendered this unreliable, the association was confirmed by an exact test using the EGRET (1990) programme.

Results

When behaviour was rated by informants, no statistically significant associations were found between aspects of delusional phenomenology and action. In assessing the phenomenological correlates of action when that action was defined by the patient, the sample was divided using the latent class analysis described above. Patients who failed to act on their delusions or who acted very little ('non-actors') were compared with those who acted in an aggressive or defensive manner ('actors').

When the levels of conviction of actors and non-actors were compared, no statistically significant differences were found.

When patients were asked why they believed their delusions, 42 described evidence from external events (36 failed to do so) and 15 described evidence in the form of internal events such as mood changes or hallucinations (63 failed to do so). There was no statistically significant association between describing external or internal evidence in isolation and acting on a delusion. When subjects were asked whether either type of evidence existed, an association was found with acting on the delusion as shown in Table 1. When subjects were asked whether either type of evidence had been apparent in the past week a similar association was found ($\chi^2 = 9.17$, d.f. = 1, $P < 0.003$). When subjects were asked whether they sought out evidence to confirm or refute their belief, an association was again found with acting on that delusion (Table 1).

When subjects were asked whether their delusional belief made them feel elated or angry, no associations were found with acting on that delusional belief. Associations were found with feeling frightened (Table 1) and feeling sad ($\chi^2 = 6.44$, $P < 0.02$). Feeling anxious was also associated with action ($\chi^2 = 8.62$, $P < 0.004$) but the covariance with feeling frightened was high.

Table 1
Associations between the ability to identify evidence (internal or external) supporting the delusional belief and with acting on the delusion

	No. (%) of actors	No. (%) of non-actors
Ability to identify evidence supporting belief		
present	23 (100)	46 (83.6)
absent	0 (0)	9 (16.4)
total	23 (100)	55 (100)
	$\chi^2 = 4.25$, $P < 0.04$	
Seeking information to confirm or refute belief		
search made	13 (56.5)	9 (16.4)
no search made	10 (43.5)	46 (83.6)
total	23 (100)	55 (100)
	$\chi^2 = 12.92$, $P < 0.001$	
Feeling frightened as a result of the belief		
feel frightened	19 (82.6)	26 (46.4)
does not feel frightened	4 (17.4)	30 (53.6)
total	23 (100)	56 (100)
	$\chi^2 = 8.71$, $P < 0.004$	
Reaction to hypothetical contradiction		
ignores contradiction	9 (39.1)	45 (80.4)
accommodates into system	1 (4.3)	0 (0)
changes conviction	12 (52.2)	8 (14.3)
dismisses delusion	1 (4.3)	3 (5.4)
total	23 (99.9)	56 (100.1)
	$\chi^2 = 15.77$, d.f. = 3, $P < 0.002$	

No associations were found between preoccupation with, or systematisation of, a delusional belief and the likelihood of that belief being acted upon.

No association was found between any of the general measures of insight used and the likelihood of the patient's delusional belief being acted upon. When subjects were presented with a hypothetical contradiction to their delusional belief, an association was found between their answers and the likelihood of them acting on that delusion (Table 1).

Non-significant trends towards an association with action were noted for some items relating to insight ("Are you psychologically unwell . . .?", "Do you think that medication might help you?") but not for others ("Do you think that seeing a psychiatrist might help you . . .?", "How far do you think others share your belief?").

Further statistical analysis

As part of the testing of the MADS all subjects were reinterviewed three to five days after the collection of the data presented above. The same questions were asked concerning the phenomenology of the principal belief. The data from this second interview were analysed to test for associations with delusional action as defined above. The

associations with action were maintained for the affective features ($P < 0.02$ for feeling sad, $P < 0.01$ for feeling frightened, and $P < 0.02$ for feeling anxious). With regard to the response to a hypothetical contradiction, a similar trend was noted to that shown in Table 1, but this failed to reach statistical significance. With regard to the ability to identify information supporting the delusional belief and actively seeking such information, the associations with acting were not maintained.

An attempt was made to compare the two groups of 'actors' identified by latent class analysis, namely, those who acted predominantly aggressively and those whose actions were generally defensive. The numbers were small (14 and 9) and no significant differences were noted between the two groups.

In Paper I we suggested that delusions of persecution are associated with action while delusions of catastrophe show an inverse association. The associations noted above were tested for delusions of persecution alone and for all other delusions. Small numbers prevented the same process from being followed for delusions of catastrophe. For delusions of persecution ($n = 24$), the associations noted above generally were maintained with the exception that feeling sad as a consequence of a delusion was no longer associated with action. For all other delusions ($n = 55$ for affect and insight, $n = 54$ for all other variables) the associations were again generally maintained with two exceptions: feeling frightened as a consequence of a belief and the ability to identify information supporting the belief were no longer associated with action. The association with being able to identify evidence apparent in the past week was maintained, as were the other associations noted above.

Discussion

When the testimony of informants was used to define action, there was no association between aspects of delusional phenomenology and the likelihood of that delusion being acted upon. This contrasts with the positive findings noted when action is defined by the subject him/herself. The discrepancy has been discussed in Paper I.

When the definition of action is based on the subject's own description of his/her behaviour, an ability to identify evidence, in particular evidence in the past week, which supports the belief is associated with action. Seeking information to confirm or refute a delusional belief is strongly associated. Emotional consequences of the belief, such that subjects describe feeling sad, frightened or anxious, show a similar association, as does losing one's conviction in the face of a hypothetical contradiction. Aspects of phenomenology not associated with action in this study were conviction, preoccupation, systematisation, and insight, as well as the emotional consequences of anger and elation.

Action is a more likely consequence of a delusional belief if the subject can identify evidence in support of that belief; this finding is not simply a reflection of intellectual function (Paper I). It is consistent with the view of McGinn (1979) that action is based on a combination of desires and beliefs and triggered by 'noticings', internal or external cues which precipitate action. The findings of the study suggest that these 'noticings' are a far from passive experience; action is rendered much more likely where a subject actively seeks evidence to confirm or refute a belief. The findings also raise the possibility that some acting on delusional beliefs may be the result of the subject testing beliefs in an attempt to confirm or refute them. This interpretation would in turn be supported by the finding (see below) that acting on a delusion is more likely when the subject is able to countenance evidence which contradicts that belief.

The finding that emotions such as unhappiness, fear and anxiety, when found as a consequence of a delusion, are associated with action is consistent with Bleuler's view (1924) that action is largely a consequence of affectivity. The willingness of patients who act on their delusions to countenance hypothetical contradiction of their delusional beliefs is perhaps surprising; it might have been expected that patients who ignored contradiction would be more likely to act. It is consistent, however, with the findings that conviction and systematisation are not associated with action and with the suggestion that action is more likely when beliefs are questioned and evidence is sought to confirm or refute them.

Previous studies have found an association between the ability to countenance a hypothetical contradiction and recovery from delusions. Brett-Jones (1987) found this in subjects being treated with psychotropic medication; Chadwick & Lowe (1990) found that drug-resistant subjects who were able to countenance a contradiction to their delusional beliefs responded better to cognitive behavioural therapy than those who were not so able. They also found that noticing actual evidence contradicting the belief was associated with recovery. We have found that a positive response to a hypothetical contradiction is associated with acting on delusional beliefs. These findings raise the possibility that acting on delusional beliefs, particularly where that action is designed to test out the validity of the belief, is itself related to recovery; this issue is worth further investigation.

That the associations between the ability to identify information supporting a delusional belief and acting on that belief were not maintained when the subjects were reinterviewed three to five days

later may suggest that the questions used to elicit this information were unreliable. The inter-rater reliability was good, however, and the findings are consistent with each other. It is more likely that the ability to identify information supporting a delusional belief is a genuine but transient element of the phenomenology. The affective connotations of a belief, on the other hand, would seem to be more stable over time. It is possible that an affect-laden delusional belief is acted upon only when the subject perceives certain information which seems to bear out that belief; again, this is consistent with the theoretical work of McGinn (1979).

There remains the question of the degree to which these associations are independent of phenomenological categories based on content of the delusion, categories examined in Paper I. When persecutory content was controlled for, the associations described above were maintained. The results suggest that the associations we have described are independent of phenomenological categories based on content. One exception may concern feeling frightened as a result of a delusion, which is associated with action for delusions of persecution but not for other delusions.

Of the negative findings, the effect of conviction has already been mentioned. The lack of an association between action and elation may shed some light on the apparent low incidence of violence in manic patients (Schipkowensky, 1968). The lack of an association between systematisation and insight and action might be considered surprising in view of previous findings (Hafner & Boker, 1973; Roback & Abramowitz, 1979). Methodological differences make direct comparisons with these studies difficult. Hafner & Boker's study was limited to offender patients, and Roback & Abramowitz used only general measures of behaviour and did not attempt to measure behaviour arising as a consequence of specific delusional beliefs.

Recent writing on the subject of insight has included the description of phenomenological 'dimensions' (David, 1990). The non-significant trends which we report suggest that some of these dimensions (e.g. ability to recognise illness) are more strongly associated with action than others (e.g. the ability to relabel as abnormal unusual mental events).

Further research could usefully test associations between delusions and actions based upon them in a prospective study. Research on larger patient populations may also be able to identify phenomenological differences in the delusional beliefs of aggressive and defensive 'actors'.

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