

Social and Personality Variables Related to the Origin of Auditory Hallucinations

Adolfo J. Cangas*¹, José M. García-Montes*, Manuel López de Lemus** and Juan J. Olivencia***

*Universidad de Almería. **Hospital Torrecárdenas, Almería. ***Universidad de Huelva.

ABSTRACT

Hallucinations represent one of the most interesting and relevant symptoms in Psychopathology today. Although mainly associated with psychotic disorders, they are also present in an important range of psychiatric disturbances (affective disorders, post-traumatic stress, dementia, drug additions, etc.). This article emphasizes that social and personality aspects are basic to understanding this phenomenon. A large part of the studies carried out in recent years have dealt more with underlying biological and cognitive aspects of the phenomenon. However, the social situation in which these individuals live, the sociocultural context in which they move and the different personality styles which are what, to a great extent, determine the function that the hallucinations have in the life of these patients, must also be understood. This analysis focuses mainly on the auditory hallucinations normally present in schizophrenia.

Key words: hallucinations, voices, personality, social variables.

RESUMEN

Variables sociales y de personalidad relacionadas con el origen de las alucinaciones auditivas. Las alucinaciones representan hoy en día uno de los síntomas más llamativos y relevantes de la Psicopatología. Así, aunque principalmente se asocian a los trastornos psicóticos, también están presentes en una gama amplia de alteraciones psiquiátricas (trastornos del estado de ánimo, estrés postraumático, demencias, toxicomanías, etc.). En el presente trabajo se destaca que los aspectos sociales y de personalidad son fundamentales a la hora de entender este fenómeno. Gran parte de los estudios llevados a cabo en los últimos años han incidido más en los aspectos biológicos y cognitivos subyacentes a este fenómeno. Sin embargo, también es relevante entender la situación social en la que se encuentran estos individuos, el contexto sociocultural en el que se mueven y los diferentes estilos de personalidad que son los que determinan, en gran medida, la función que las alucinaciones cobran en la vida de estos pacientes. El presente análisis se centra fundamentalmente en las voces auditivas presentes habitualmente en la esquizofrenia.

Palabras clave: Alucinaciones, voces, personalidad, variables sociales.

1. Reprints may be obtained from the first author: Departamento de Personalidad, Evaluación y Tratamiento Psicológicos, Facultad de Humanidades, Universidad de Almería, 04120 Almería, España. E-mail: ajcangas@ual.es. This study was partially supported by a research Project granted by the Ministerio de Ciencia y Tecnología to the first author.

Hallucinations today represent an important phenomenon in Psychopathology, because of their connection to severe disorders, such as schizophrenia, and also because this type of behaviour is sometimes so spectacular.

This type of experience is not only associated with clinical disorders, but is also found in non-clinical subjects (Barret & Etheridge, 1992; van Os, Hanssen, Bijl & Ravelli, 2000; Johns & van Os, 2001; Ohayon, 2000; Posey & Losh, 1983; Strauss, 1969). In fact, a continuum in this type of experience between normality and psychopathology may be said to exist. However, this does not mean, for example, that their consequences or repercussions on individuals are equivalent. Certainly, they are usually much more stressful when associated with psychopathological disorders (Leudar, 2001). So, although phenomenologically, the subject's behaviour may be the same, its function or consequences are different and this is an essential element to keep in mind. It must also be remembered that many of the studies carried out are based only on the evaluation of the individuals by a questionnaire or interview that may overvalue these experiences because, among other reasons, the same items do not have the same meaning for different subjects. Thus, questions such as, "I have been troubled by hearing voices in my head", "On occasions, I have seen a persons face in front of me when no-one was in fact there", "I often hear a voice speaking my thoughts aloud", etc., may be understood in quite different manners by, for instance, a person with a schizophrenic disorder and a person with no psychological disorder, although both respond that they have undergone this type of experience (in the first case, the person with a psychotic disorder is probably referring to true hallucinations while, in the second, he may have seen more than one type of illusion). In sum, it cannot be affirmed that this type of experience is the same in different persons. In fact, the intensity, content, frequency, etc., of the hallucinations can be very different in persons with the same diagnosis (Slade & Bentall, 1988) and, therefore, it could be said that differences in persons with different disorders are even greater (and also among those in whom they are absent). In any case, study of hallucinations in persons without mental disorders could be a very fruitful way to approach this subject without having to recur only to the clinical population (Verdoux & van Os, 202). Similarly, for example, investigating hallucinations in affective disorders can provide us with much information on hallucinations in psychotic disorders (in fact, patients with affective disorders should be used as the control group in many studies of schizophrenia since they have many characteristics in common).

Before beginning to analyse the variables involved in this type of behaviour, we shall comment briefly on what is understood by hallucination. The etymological origin of the term is somewhat fuzzy (Leudar & Thomas, 2000; Luque & Villagrán, 2000; Sarbin & Juhasz, 1967; Slade & Bentall, 1988). For some hallucination comes from the Greek verb *alluso*, which refers to the spirit having strayed. It could also come from the term *ad lucem* (into the light, reflecting the proximity of hallucination to illumination). Corominas (1973) points out that it comes from *allucinator*, *allucinaris*, which would have been used for the first time by Cicero in the sense of erring, self-deceit, making a mistake, that is, definitely straying from the straight road of reason. What seems to have more of a consensus is that the author that gave it its present meaning for psychiatry was Esquirol in the 19th century, for whom "A man who has the inward conviction of

a presently perceived sensation at a moment when no external object capable of arousing this sensation is within the field of his senses, is in a state of hallucination. He is a visionary” (Esquirol, 1938, translated by James, 1995, p.70). But the definition that has most influenced this phenomenon, still persisting in our times, is that attributed to Ball (1890) who considered that hallucinations are “Perception without an object”. This is the acceptance that is maintained, by, for example, the DSM when it defines them as a “a sensory perception that has the compelling sense of reality of a true perception but that occurs without external stimulation of the relevant sensory organ” (APA, 2000).

This definition basically emphasizes two points. On one hand, that hallucinations occur in the absence of an appropriate stimulus (which differentiates them from illusions) and, on the other, they have the intensity of a real perception. A third characteristic could be added, such as the fact that this experience cannot usually be voluntarily controlled (Slade & Bentall, 1988).

Although it is also possible to propose that hallucinations do not have so much to do with some disturbance of perception or deficit in a sensory organ, but rather with an “intimate conviction” concerning the reality of an object; it would be more a false belief, appreciation or judgment of reality. This approach already had followers at the beginning of the psychiatric tradition of hallucinations and has two main arguments in its favour. The first is the relationship between hallucinations, delusions and mood; thus habitually in clinical practice, these phenomena are very much related and, in fact, when one improves it usually causes the other aspects to diminish considerably (Husting & Hafner, 1990; Weiss & Weiss, 1998). In psychopathology, hallucinations often also form part of a more elaborate delusion. Furthermore, hallucinations cannot be removed from the particular context or circumstances in which the person is found (García & Pérez, 2003). And, especially in psychopathological cases, when an individual has a hallucination, his life may easily be altered on various different levels. Therefore, a molar vision of the person (where the intellect is a basic part) is more relevant and it would be of less value to focus on a more molecular position, such as simply considering the hallucinations as an anomalous functioning of perception. This second meaning, might be of more interest for “elemental” hallucinations, such as those that are caused in toxic or neurological cases, but not so much so in the rest of psychological disorders.

HALLUCINATIONS IN PSYCHOPATHOLOGY

In spite of the importance of hallucinations in the psychiatric diagnosis of various syndromes, this does not mean that they are specific to any disorder. Perhaps the best known disorder –or the one in which it has the most incidence– is schizophrenia, but hallucinations can also occur in other disturbances such as organic diseases, substance use disorders, affective disorders, post-traumatic stress, personality disorders, etc. (Altman, Collins & Mundy, 1997; Dhossche, Ferdinand, van der Ende, Hofstra & Verhulst, 2002; Romme & Escher, 1996; Ohayon, 2000; Tien, 1991).

However, it is also true that the way they are manifested in the different clinical symptom descriptions is different. Thus, for example, hallucinations produced by abuse or abstinence of certain substances are usually visual –generally in the form of animals

and more or less terrifying content. However, in schizophrenia or in mood disorders (such as depression) they are usually auditory. In affective disturbances, the way they appear usually depends precisely on the mood (so in depression they usually have a guilty, punishing content); while in schizophrenia although these voices may also be present (the more schizophrenia and depression share similar characteristics the more similar this experience may be), they may also be commands, be mystical or delirious, etc. Furthermore, in schizophrenia these voices are more frequently heard in third person, that is “voices that talk to each other” more than in second person.

Hallucinations today constitute a basic criteria for the diagnosis of schizophrenia. So much so, that certain types of hallucinations (related to those that Kurt Schneider called first-rank –basically, hearing voices speaking your thoughts out loud; hearing two or more voices arguing or having a discussion about you in the third person; hearing one or more voice carrying on a running commentary about your thoughts or actions- are basic for diagnosing this type of disorders. However, this current relevance in psychotic disorders has not always been that way. At the beginning of the century hallucinations were more secondary symptoms in schizophrenia, other aspects of this disturbance such as ambivalence, affective and associative disturbances (thought) and autism, being more important (Bleuler, 1911).

It was in recent decades when they began to have greater relevance for it, basically for two reasons. The first because of the need of using a reliable psychopathological diagnostic and, in this sense, this type of behaviour is rather easy to identify and also attention-getting. In the second place, because of the effectiveness of the antipsychotic medication in reducing or eliminating this type of symptom. Therefore, since there is a type of drug that acts on this behaviour, it has been easier for it to be consolidated in current diagnostics systems.

ORIGIN OF AUDITORY HALLUCINATIONS

As already noted, although this type of experience appears phenomenologically in various disorders, the way and the significance that it has can differ from one disturbance to another, thereby giving it different semantics.

The same is true of hallucinations in persons without mental disorders. Through various procedures, such as hypnosis, social isolation, social ambiguity, instructions, etc., a person may behave in a manner similar to a person who has hallucinations. However, although the experience is apparently similar (he says that he hears, sees, feels, etc. some stimulus that does not exist) the consequences that are derived from it may be very different. For example, the voices that a schizophrenic hears have a very significant repercussion on the life of that person (they repeatedly make him feel fear, anxiety, stress, etc.). However, in a person under hypnosis who is asked to hear something that does not exist, first the experience is circumscribed to that context (outside of the hypnosis, that person does not continue to “hear” those voices –unless he was expressly asked to by the hypnotist) but, above all, they are not going to have the same emotional repercussion. The person hypnotized –unless he had a prior psychopathological disorder– when the session is over is continues with a “normal” life (as before the hypnosis);

however, the person with a disorder will continue being prey to his difficulties (increased or not by the hallucinations).

By this we mean that in and of itself, the hallucinatory experience does not mean anything if it is excluded from the context and from the person that experiences them. Social and personality variables in the individual that favour or initiate this type of experience must therefore be taken into account (Figure 1).

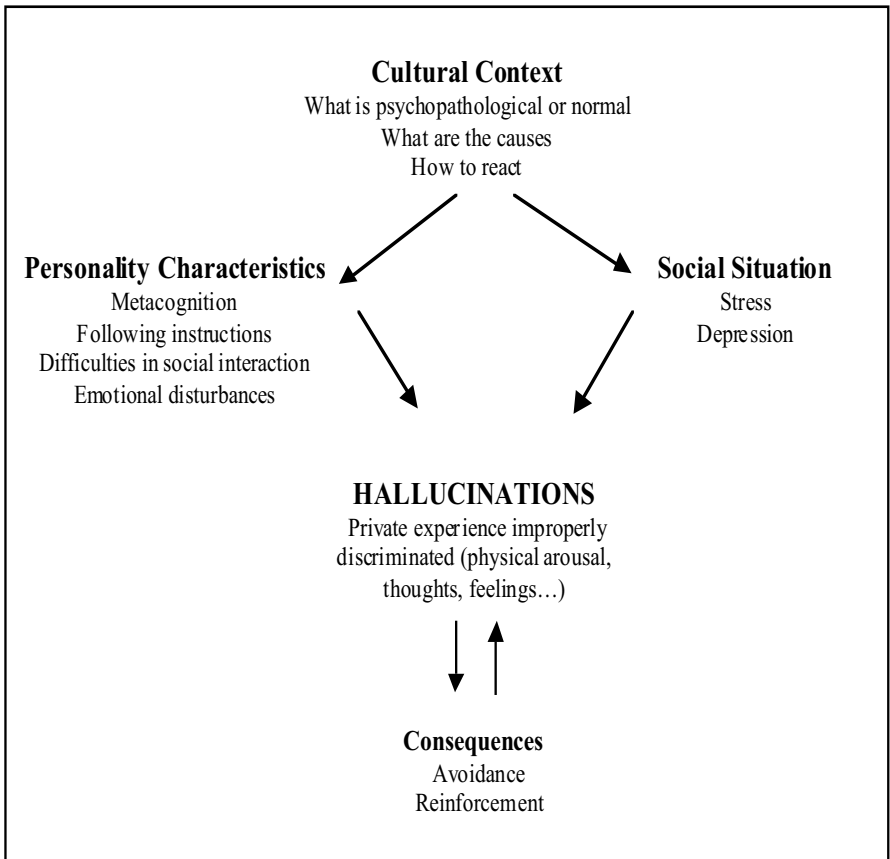


Figure 1. Psychological variables related to the origin of auditory hallucinations

In the first place, it must be kept in mind that hallucinations are very influenced by the cultural context in which they occur. For example, in the Middle Ages hallucinations were more related to visions, such as mystic experiences, that could be perfectly adapted to the cultural norms of that period. Furthermore, the majority of them were not related to psychopathological disturbances (Krol & Bacrach, 1982; Sarbin & Juihasz, 1967).

However, today these experiences are basically associated with psychopathological problems in which auditory hallucinations in the form of voices, linked precisely with the habitual problems of social interaction of these individuals, predominate (Rojcewicz & Rojcewicz, 1997).

Culture, in this sense, can affect this type of experience on many levels. For example, determining the type of experience produced, what the subjects attribute their origin to and even the treatment they consider appropriate. Thus, for example, in Western culture, patients usually relate hallucinations to some type of brain damage, to the effect of stress, to some traumatic childhood experience or simply consider it a symptom of schizophrenia. However, in Arabian countries they are usually attributed to the influence of some demon, a magic ceremony or simply pretending to hear voices. Coping strategies used by these persons, like the therapeutic measures that they consider relevant, are also different (greater belief in the efficacy of medical or psychological intervention in Western countries, while in Arabian countries they would more likely pass for a religious "intervention") (Wahass & Kent, 1997a,b). In any case, the religious influence in our society cannot be obviated either. Perhaps the influence of medicine throughout the modern age has been accentuated more and more, but this does not mean that supernatural or parapsychological beliefs (also frequent in this type of patients) have disappeared. Moreover, even in our society it is considered normal for a person to "talk" to God (he is said to be praying). However, if it is God who speaks to the person, then he is probably considered to have a psychopathological disorder. Thus, culture determines what kind of experience can be considered "normal" or not, although dealing with seeing, hearing or feeling things that do not exist and how they are reacted to.

For Al-Issa (1977, 1995) one central aspect in our Western culture is the differentiation that is made between reality and fantasy. That is to say, only when we are children are we allowed to "confuse" these two aspects, but as our personality develops we are expected to behave more and more realistically. In the psychopathological sphere, this means that when a person has certain private images, sensations or experiences that are not considered habitual, it causes an intense emotional reaction in the individual, who is easily led to ask "Am I going crazy?", which increases his anxiety from them (and in turn can mean that the hallucinations occur more often, upon trying uselessly to eliminate or avoid them). However in other cultures that are more permissive in these respects, it is easier for them to not cause the same emotional and behavioural reaction.

Thus, the sociocultural frame is the broader context that moulds both the way certain sensations are experienced and the reaction to them and the consideration or not of psychopathologies. However, this does not necessarily mean that all individuals that behave the same way in the same situation (just as all persons are, up to a certain point, different from each other). So different personal and social variables peculiar to each individual, which in the end determine the occurrence and the way this type of phenomenon is experienced, must be analysed.

In so far as the personality is concerned, we do not consider it a biologically determined entity, but rather that it is formed by the varied interaction and history of

the individual. This would include both cognitive and behavioural as well as emotional elements (Harrington, Fink & Dougher, 2001; Luciano, Gómez & Valdivia, 2002).

A first important facet in the personality of individuals are their beliefs. Specifically, in the case of hallucinations, a very important variable seems to be what is called metacognition or the beliefs that individuals have about their own thoughts. In this sense, one type of common metacognition in patients with hallucinations, or tendency toward them, is negative beliefs about the controllability of their thoughts and the corresponding danger (uncontrol) (e.g., "When I start worrying, I can't stop"). Metacognition related to positive thoughts about worry also predominate (for example, "I need to worry in order to stay organised"; low confidence cognitive (e.g., "I have a poor memory"); beliefs about superstition and responsibility related to own thoughts (superstition, punishment and responsibility) (e.g., "if I couldn't control a thought that worries me and then whatever I thought about happens, it's my fault") and high scores in cognitive self-consciousness (for example, "I pay close attention to the way my mind works" (Baker & Morrison, 1998; Lobban, Haddock, Kinderman & Wells, 2002; Morrison & Wells, 2003; Morrison, Wells & Northard, 2000).

Furthermore, since in quite a few cases hallucinations cause unpleasant sensations, it is common for individuals to try to avoid them or control them by covering their ears, singing, etc. or by different thought control techniques. In this case, the person with hallucinations or tendency toward them usually employs strategies based on punishment and reappraisal (Morrison, Wells & Northard, 2000).

The tendency toward a more or less instructional or acquiescent follow-up by the individual should also be kept in mind (Kot & Serper, 2002). Thus, direct instructions that an individual receives for a certain kind of behaviour may be sufficient for him to do it. Here it should be noted that experiencing a sensation that does not exist (hallucination) is not too complicated if one so proposes. It is not just having imagery vividness (such as some studies note, although there are contradictory data in this regard, Aleman, Böcker & de Haan, 2001; Barret, 1993; Morrison, Beck, Glentworth, Dunn, Reid, Larkin & Williams, 2002) but rather, that own involvement in the activity (paying attention to any sensorial change as slight as this may seem, observing other persons with similar behaviour, making certain attributions, trying to cooperate with the researcher, etc.) can in itself induce this type of experience. This is observed in laboratory studies using ambiguous material (whether white noise, perceptive phenomena with a minimum threshold, etc.), where the individual can experience sensations that do not exist when he is asked to point out or expect some type of signal exposed at a minimum threshold –or that is not presented– (as for example, the studies carried out with the signal detection theory or with sensory conditioning (for example, Li, Chen, Yang, Chen & Tsay, 2002; Kot & Serper, 2002). As with experiments in which the subjects are simply asked to "listen" to a song that in reality is not played for them, observing that an important proportion of the participants said they had heard the song during the experiment (Barber & Calverly, 1964; Merckelbach & van de Ven, 2001).

In such cases, it is easy for these persons to have a certain tendency to follow instructions from others (particularly in an experimental situation with ambiguous information, in which they try to meet the demands of the researcher...). That is why,

when they are asked to listen to something that does not exist, it is not hard for them to state that they heard it (be more or less aware of this mistake). In this context, it should be born in mind that “seeing” or “hearing” does not mean the presence of the thing seen –or heard– (Skinner, 1953). There are many variables that involve an individual’s stating that he has perceived a certain stimulus, this not being only a perceptual question, but also motivational, contextual, etc.

The usual perceptive experiences that the individual may interpret erroneously can occur more easily in individuals with difficulties with their social relationships, are socially isolated or have emotional disorders. In this sense, many studies find that a schizotypal personality (with magical thoughts, extravagant behaviour, emotional difficulties) is the predecessor in many cases of schizophrenia. Therefore, although not all persons diagnosed with a schizotypal personality disorder end up developing schizophrenia, the majority of those who are could previously have been diagnosed as having a schizotypal personality disorder.

While exact diagnosis of a schizotypal personality disorder is unnecessary, it has also been observed that individuals with difficulties in social interaction are more likely to show this type of behaviour. Emotional disturbances related to neuroticism or emotional instability are also usually present (Barret & Eheridge, 1994; López, Paino, Martínez, Inda & Lemos, 1996; Ramanathan, 1986; Young, Bentall, Slade & Dewey, 1986).

In this sense, Barret & Etheridge (1994) find two main dimensions of personality related to verbal hallucinations, as evaluated by the *Millon Clinical Multiaxial Inventory I* (Millon, 1983). On one hand, persons with hallucinations would be more depressed, anxious and unsatisfied with their lives. They would see themselves as misunderstood and unappreciated, with leads to feelings of isolation and rejection by others. On the other, in a second, social dimension, hallucinators might be described as more passive and submissive than non-hallucinators. They may be more afraid of social conflict because they see themselves as relatively powerless and incompetent.

These personality styles or characteristics take on more relevance precisely when the individual finds himself in adverse social situations, where it is more difficult for him to adapt or the strategies for confronting them used are not usually as effective. In the literature on psychology, this has been related to different triggers. So it is usually observed that hallucinations are more likely to occur (or occur more intensely) during periods of stress or depression. Romme & Escher (1996), indicate six specific types of common situations at the beginning of hallucinations:

1. Intolerable or unsatisfactory situations (divorce, loss of job, etc.) Voices are usually more critical and give orders (that would be spoken by others).
2. Recent traumas (e.g., death of a loved one, especially in *unexpected* situations such as suicide of a close friend or relative).
3. Conflictive aspirations (unfulfilled goals). In this case voices may also try to help.
4. Threats (for example, under torture). By far the most frequent is when one is not responsible for the repercussions of an action, not so much

when the decision is imposed.

5. Childhood traumas (the voices comply with the function of protecting against fearful memories).
6. Negation of emotions or undesirable aspects.

Other examples would be when the person is in a large group (more than two or three) or when he is isolated. In the first case the patient easily fears being criticized or humiliated, while in the second case, being alone favours the presence of thoughts (distorted in the hallucinations) that try to compensate for a “normal conversation” (Delespaul, de Vries & van Os, 2002).

In more recent studies, it has been found that persons with high scores in predisposition to hallucinations also have high levels of anxiety (Morrison, Wells & Nothard, 2002), and an increase in average anxiety during the first stage of a hallucinatory episode (Delespaul, de Vries & Van Os, 2002).

This would point to the fact that anxiety disorders and hallucinatory experiences may indeed have many elements in common (Morrison, 1998). Moreover, for van Os, Verdoux, Maurice-Tison, Gay, Liraund, Salamon & Bourgeois (1999) anxiety and depression would be intermediate states in a continuum that would go from normal to schizophrenic. It would also support studies that consider that hallucinations could reduce cognitive dissonance present when they begin (Delespaul, deVries & van Os, 2002; Morrison, Haddock & Tarrier, 1995). They would therefore have a function of adapting to the adversities of the individual.

It is here, in this context, where self-generated behaviour (in the form of thought, sensations, feelings, etc.) are erroneously discriminated, that is, attributed to the language of a third person, when in reality, it is they themselves who produce them in what would be the hallucinatory process (Bentall, 1990).

Hallucinations would correspond to thoughts or feelings that, instead of being expressed externally in the form of talking to others, are “heard” internally. This experience is similar to when a person spends a long time in isolation, and has conversations with others although he is alone. It has also been proposed that hallucinations are an inner speech or subvocalisation, which is interfered with, for example, when singing a song or any other type of verbal activity (Gould, 1950; Margo, Hemsley & Slade, 1981). With modern neuro-imaging (functional and structural) and electrophysiological techniques, in spite of various methodological limitations, areas related to language are observed to be activated in hallucinations, both with regard to perception of external language and its production in motor areas responsible for subvocal activity (Font, Parallada, Fernandez-Egea, Bernardo & Lomeña, 2003; Stephane, Barton & Boutros, 2001).

This experience can provoke different reactions in the subject. For example it can relieve tension in a decision or a memory, can make him feel more valuable, can help make a decision, etc. Some hallucinations seem to provide “company” for the subject, a feeling of understanding, of decision, etc., that under the circumstances in which he finds himself may be important (Knudson & Coyle, 1999; Miller, O’Connor & DiPasquale, 1993). Therefore, hallucinations would be negatively reinforced by the relief that they provide in certain adverse experiences. On the other hand, hallucinations

caused by attention from others or changes they cause in intimates, can also be positively reinforced although this, sometimes, is not so easily detectable (Layng & Andronis, 1984).

However, the majority of hallucinations are associated with adverse affects (which are easily recognized by the individuals, such as difficulties in their relationships with peers, tension, poor self-esteem, etc.). Therefore, in such cases the persons usually try to eliminate them or avoid them (although often without much success, apart from the effects of the medication).

Therefore, from all the above, it may be concluded that hallucinations have to do with the life of the individual, are “human” voices with a sense linked to the different tribulations and circumstances in which he is immersed (Rojcewicz & Rojcewicz, 1997). Thus, although great advances have been made in their biological and cognitive analysis, in no case may an exhaustive analysis of this phenomenon neglect social and personality changes present in the individuals; indeed, they would be central to their making “sense”.

IMPLICATIONS FOR PSYCHOLOGICAL INTERVENTION

The kind of therapeutic strategies that would then be effective for controlling or eliminating this type of behaviour may now be proposed. Classically, different operant techniques such as extinction, time-out, aversion stimulation, thought stopping, token reinforcement, satiation, etc. have been used. It has also been attempted to reduce the anxiety associated with hallucinations by, for example, systematic desensitisation. However, one difficulty in many cases is poor generalization and maintenance of improvement (Acosta, 1990).

Cognitive therapy has insisted on changing the thoughts or beliefs that are associated with the hallucinations through collaborative empiricism focused on challenging interpretations and voice content (Chadwick, Birchwood & Trower, 1996; Chadwick, Sambrooke, Rasch & Davies, 2000; Haddock, Tarrier, Spaulding, Yusupoff, Kinney & McCarthy, 1998; Morrison & Renton, 2001; Weiss & Weiss, 1998).

However, in spite of the different techniques and approaches from which psychological intervention has been proposed, Slade & Bentall (1988) consider that treatment has focused on three points: reducing anxiety, focusing attention on the hallucinations themselves and distraction or counter-stimulation.

One strategy (not excessively exploited in clinical practice), that we believe may be more useful, consists of (instead of trying to deliberately change or control the beliefs or sensations associated with the hallucinations) their acceptance and a commitment to action (on the facets that the patients consider –and these must be sought– valuable in their lives). This attempts not so much to eliminate them as to change their function (Bach & Hayes, 2002).

It is also necessary to analyse the person and his context to really treat this type of behaviour. Therapy should be generalized, focusing on different contextual aspects, before impinging directly on treatment to avoid this type of experience. It would thus be recommendable to favour such aspects as (Bach & Hayes, 2002; Benjamin, 1989;

Harrop & Trower, 2001):

1. Promote relief of stress associated with hallucinations before focusing on them directly
2. Accepting the hallucinatory experience as one more event in the life of the individual, but without the negative considerations associated with it.
3. Promote more satisfactory social alternatives, that is, action related to values or goals important to the individual.

Psychotherapy would thus favour (at the same time that it discriminates behaviour more correctly) better social integration, aspirations or goals, values, interaction, etc., of the individual, thereby promoting more adaptive behaviour.

REFERENCES

- Acosta, S. (1990). Auditory hallucinations and delusional thinking: a review and critique of outcome studies. *Behavioral Residential Treatment*, 5, 189-206.
- Aleman, A., Böcker, K.B.E. & de Haan, E.H.F. (2001). Hallucinatory predisposition and vividness of auditory imagery: self-report and behavioral indices. *Perceptual and Motor Skills*, 93, 268-274.
- Al-Issa, I. (1977). Social and cultural aspects of hallucinations. *Psychological Bulletin*, 84, 167-176.
- Al-Issa, I. (1995). The illusion of reality or the reality of illusion: Hallucinations and culture. *British Journal of Psychiatry*, 166, 368-373.
- Altman, H., Collins, M. & Mundy, P. (1997). Subclinical hallucinations and delusions in nonpsychotic adolescents. *Journal of Child Psychology and Psychiatry*, 38, 413-420.
- American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th edn. revised) (DSM-IV-TR). Washington, DC: APA.
- Bach, P. & Hayes, S.C. (2002). The use of Acceptance and Commitment Therapy to prevent rehospitalization of Psychotic patients: a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 70, 1129-1139.
- Ball, B. (1890). *Leçons sur les Maladies Mentales*, 2nd ed. Paris: Asselin et Houzeau.
- Bleuler, E. (1911/1966). *Dementia Praecox or the Group of Schizophrenias*. New York: International Universities Press.
- Baker, C. & Morrison, A.P. (1998). Metacognition, intrusive thoughts and auditory hallucinations. *Psychological Medicine*, 28, 1199-1208.
- Barber, T.X. & Calverley, D.S. (1964). An experimental study of "hypnotic" (auditory and visual) hallucinations. *Journal of Abnormal and Social Psychology*, 68, 13-20.
- Barret, T.R. (1993). Verbal hallucinations in normals. II: self-reported imagery vividness. *Personality and Individual Difference*, 15, 61-67.
- Barret, T.R. & Etheridge, J.B. (1992). Verbal hallucinations in normals. I: people who hear "voices". *Applied Cognitive Psychology*, 6, 379-387.
- Barret, T.R. & Etheridge, J.B. (1994). Verbal hallucinations in normals. III: dysfunctional personality

correlates. *Personality and Individual Difference*, 16, 57-62.

- Benjamin, L.S. (1989). Is chronicity a function of the relationship between the person and the auditory hallucination? *Psychological Bulletin*, 105, 291-3120.
- Bentall, R.P. (1990). The illusion of reality: A review and integration of psychological research on hallucinations. *Psychological Bulletin*, 107, 82-95.
- Chadwick, P., Birchwood, M. and Trower, P. (1996). *Cognitive Therapy for Delusions, Voices and Paranoia*. New York: Wiley.
- Chadwick, P., Sambrooke, S., Rasch, S. & Davies, E. (2000). Challenging the omnipotence of voices: group cognitive behavior therapy for voices. *Behaviour Research and Therapy*, 38, 993-1003.
- Corominas, J. (1973). *Breve Diccionario Etimológico de la Lengua Castellana*. Madrid: Gredos.
- Delespaul, P., deVries, M. & van Os, J. (2002). Determinants of occurrence and recovery from hallucinations in daily life. *Social Psychiatry and Psychiatric Epidemiology*, 37, 97-104.
- Dhossche, D., Ferninand, R., van der Ende, J., Hofstra, M.B. & Verhulst, F. (2002). Diagnostic outcome of self-reported hallucinations in a community sample of adolescents. *Psychological Medicine*, 32, 619-627.
- Esquirol, J.E. (1938). *Des Maladies Mentales Considérées sous les Rapports Médicaux, Hygiéniques et Médico-légaux*. Paris: Bailliére.
- Font, M., Paradella, E., Fernández-Egea, E., Bernardo, M. & Lomeña, F. (2003). Neuroimagen funcional de las alucinaciones auditivas en la esquizofrenia. *Actas Españolas de Psiquiatría*, 31, 3-9.
- Gould, L.N. (1950). Verbal hallucinations as automatic speech. *American Journal of Psychiatry*, 107, 110-119.
- García, J.M. & Pérez, M. (2003). Reivindicación de la persona en la esquizofrenia. *Revista Internacional de Psicología Clínica y de la Salud/International Journal of Clinical and Health Psychology*, 3, 107-122.
- Haddock, G., Tarrrier, N., Spaulding, W., Yusupoff, L., Kinney, C. & McCarthy, E. (1998). Individual cognitive-behavior therapy in the treatment of hallucinations and delusions. *Clinical Psychology Review*, 18, 821-823.
- Harrington, J.A., Fink, B.C. & Dougher, M.J. (2001). Into de lion's den: incorporating personality and evolutionary psychology to expand clinical behavior analysis. *International Journal of Psychology and Psychological Therapy*, 1, 175-189.
- Harrop, C. & Trower, P. (2001). Why does schizophrenia develop at late adolescence? *Clinical Psychological Review*, 21, 241-265.
- Husting, H.H. & Hafner, R.J. (1990). Persistent auditory hallucinations and their relationship to delusions and mood. *Journal of Nervous and Mental Disease*, 178, 264-267.
- James, T. (1995). *Dream, Creativity and Madness in Nineteenth-Century France*. Oxford: Clarendon Press.
- Johns, L.C. & van Os, J. (2001). The continuity of psychotic experiences in the general population. *Clinical Psychology Review*, 21, 1125-1141.
- Knudson, B. & Coyle, A. (1999). Coping strategies for auditory hallucinations: a review. *Counselling Psychology Quarterly*, 12, 25-38.
- Kot, T. & Serper, M. (2002). Increased susceptibility to auditory conditioning in hallucinating schizophrenic patients: a preliminary investigation. *Journal of Nervous and Mental Disease*, 190, 282-288.
- Kroll, J. & Bachrach, B. (1982). Visions and psychopathology in the Middle Ages. *Journal of Nervous*

and *Mental Disease*, 170, 41-49.

- Layng, T.V. & Andronis, T. (1984). Toward a functional analysis of delusional speech and hallucinatory behavior. *The Behavior Analyst*, 7, 139-156.
- Leudar, I. (2001). Is hearing voices a sign of mental illness? *The psychologist*, 14, 256-259.
- Leudar, I. & Thomas, P. (2000). *Voices of Reason, Voices of Insanity*. London: Routledge.
- Li, C.R., Chen, M., Yang, Y., Chen, M. & Tsay, P. (2002). Altered performance of schizophrenia patients in an auditory detection and discrimination task: exploring the 'self-monitoring' model of hallucination. *Schizophrenia Research*, 55, 115-128.
- Lobban, F., Haddock, G., Kinderman, P. & Wells, A. (2002). The role of metacognitive beliefs in auditory hallucinations. *Personality and Individual Differences*, 32, 1351-1363.
- López, A.M., Paíno, M.M., Martínez, P.C., Inda, M. & Lemos, S. (1996). Alucinaciones en población normal: influencia de la imaginación y de la personalidad. *Psicothema*, 8, 269-278.
- Luciano, M.C., Gómez, I. & Valdivia, S. (2002). Consideraciones sobre el desarrollo de la personalidad desde un marco funcional-contextual. *International Journal of Psychology and Psychological Therapy*, 2, 173-197.
- Luque, R. & Villagrán, J.M. (2000). Alucinaciones y otras pseudopercepciones. En R.Luque y J.M. Villagrán (eds.). *Psicopatología descriptiva: nuevas tendencias* (pp. 295-335). Madrid: Trotta.
- Margo, A., Hemsley, D.R. & Slade, P.D. (1981). The effects of varying auditory input on schizophrenic hallucinations. *British Journal of Psychiatry*, 139, 122-127.
- Merckelbach, H. & van de Ven, V. (2001). Another White Christmas: fantasy proneness and reports of hallucinatory experiences in undergraduate students. *Journal of Behavior Therapy and Experimental Psychiatry*, 32, 137-144.
- Miller, L.J., O'Connor, E. & DiPasquale, B.A. (1993). Patients' attitudes toward hallucinations. *American Journal of Psychiatry*, 150, 584-588.
- Millon, T. (1983). *Millon Clinical Multiaxial Inventory*. Minneapolis: Interpretative Scoring Systems.
- Morrison, A.P. (1998). A cognitive analysis of auditory hallucinations: are voices to schizophrenia what bodily sensations are to panic? *Behavioural and Cognitive Psychotherapy*, 26, 289-302.
- Morrison, A.P., Beck, A.T., Glentworth, D., Dunn, H., Reid, G.S., Larkin, W. y Williams, S. (2002). Imagery and psychotic symptoms: a preliminary investigation. *Behaviour Research and Therapy*, 40, 1053-1062.
- Morrison, A.P., Haddock, G., & Tarrier, N. (1995). Intrusive thoughts and auditory hallucinations: a cognitive approach. *Behavioural and Cognitive Psychotherapy*, 23, 265-280.
- Morrison, A.P. & Renton, J.C. (2001). Cognitive therapy for auditory hallucinations: a theory-based approach. *Cognitive and Behavioral Practice*, 8, 147-160.
- Morrison, A.P. & Wells, A. (2003). A comparison of metacognitions in patients with hallucinations, delusions, panic disorder, and no-patient controls. *Behaviour Research and Therapy*, 41, 251-256.
- Morrison, A.P., Wells, A. & Nothard, S. (2000). Cognitive factors in predisposition to auditory and visual hallucinations. *British Journal of Clinical Psychology*, 39, 67-78.
- Morrison, A.P., Wells, A. & Nothard, S. (2002). Cognitive and emotional predictors of predisposition to hallucinations in non-patients. *British Journal of Clinical Psychology*, 41, 259-270.
- Ohayon, M.M. (2000). Prevalence of hallucinations and their pathological associations in the general population. *Psychiatry Research*, 97, 153-164.
- Posey, T.B. & Losh, M.E. (1983). Auditory hallucinations of hearing voices in 375 normal subjects.

Imagination, Cognition and Personality, 2, 99-113.

- Ramanathan, A. (1986). An exploratory study on the relation between neuroticism and certain aspects of auditory hallucinations in schizophrenics. *Indian Journal of Psychiatry*, 28, 69-72.
- Rojcewicz, S. & Rojcewicz, R. (1997). The "human" voices in hallucinations. *Journal of Phenomenological Psychology*, 28, 1-41.
- Romme, M.A. & Escher, S. (1996). Hearing Voices. *Schizophrenia Bulletin*, 15, 109-216.
- Sarbin, T.R. & Juhasz, J.B. (1967). The historical background of the concept of hallucination. *Journal of the History of the Behavioral Sciences*, 3, 339-358.
- Skinner, B.F. (1953). *Science and Human Behavior*. New York: Free Press.
- Slade, P.D. & Bentall, R.P. (1988). *Sensory deception: A scientific analysis of hallucination*. Baltimore: The Johns Hopkins University.
- Stephane, M., Barton, S. & Boutros, N.N. (2001). Auditory verbal hallucinations and dysfunction of the neural substrates of speech. *Schizophrenia Research*, 50, 61-78.
- Strauss, J.S. (1969). Hallucinations and delusions as points on continua functions. *Archives of General Psychiatry*, 21, 581-586.
- Tien, A. (1991). Distributions of hallucinations in the population. *Social Psychiatry and Psychiatric Epidemiology*, 26, 287-292.
- Van Os, J., Hanssen, M., Bijl, R.V. & Ravelli, A. (2000). Strauss (1969) revisited: A psychosis continuum in the normal population? *Schizophrenia Research*, 25, 11-20.
- van Os, J., Verdoux, H., Maurice-Tison, S., Gay, B., Liraund, F., Salamon, R. & Bourgeois, M. (1999). Self-reported psychosis-like symptoms and the continuum of psychosis. *Social Psychiatry and Psychiatric Epidemiology*, 34, 459-463.
- Verdoux, H. & van Os, J. (2002). Psychotic symptoms in non-clinical populations and the continuum of psychosis. *Schizophrenia Research*, 54, 59-65.
- Wahass, S. & Kent, G. (1997a). Coping with auditory hallucinations: A cross-cultural comparison between western (British) and non-western (Saudi Arabian) patients. *Journal of Nervous and Mental Disease*, 185, 664-668.
- Wahass, S. & Kent, G. (1997b). A comparison of public attitudes in Britain and Saudi Arabian towards auditory hallucinations. *International Journal of Social Psychiatry*, 43, 175-183.
- Weiss, K.M. & Weiss, K.M. (1998). Treatment of auditory hallucinations: what to do when pharmacotherapy is inadequate. *Psychiatric Rehabilitation Skills*, 2, 188-205.
- Young, H.F., Bentall, R.P., Slade, P.D. & Dewey, M.E. (1986). Disposition towards hallucination, gender and IQ scores. *Personality and Individual Differences*, 7, 247-249.

Received July 12, 2003

Final acceptance October 10, 2003