

Relation Between Command Hallucinations and Dangerous Behavior

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This article presents an updated review of studies on the relation between command hallucinations and dangerous behavior. The author reviewed all studies published between 1966 and 1997 according to MEDLINE and between 1974 and 1997 according to PSYCLIT. Forty-one studies were found, of which 82.9 percent dealt with the relation between command hallucinations and dangerous behavior. Of these studies, 32.3 percent were controlled, and they were grouped into three partially overlapping classes: those concerned with violent behavior, those concerned with suicidal behavior, and those concerned with mediating variables. Most of these studies agreed on the non-existence of an immediate relation between command hallucinations and dangerous (violent or suicidal) behavior. Even though the studies were divided about the existence of a relation between severity/dangerousness of command content and compliance with the commands, there was agreement about the existence of a direct relation between compliance with commands and both benevolence and familiarity of commanding voice. It seems that the research and knowledge available to date on this subject is both scant and methodologically weak. Future study should probably concentrate on mediating factors, such as appraisal and coping attitudes and behaviors.

Commanding (i.e., imperative) auditory hallucinations are commonly regarded as deserving of special attention in the management of mentally disordered persons. This is perhaps because these phenomena are quite common, with the available evidence suggesting that roughly one-third of hallucinating patients experience them.¹ Most probably, it is also due to the

fact that command hallucinations are thought to carry a heightened risk of dangerousness, both to self and others; yet, it is not so clear what evidence supports this common clinical knowledge. Indeed, it is a historical fact that one of the first studies published on this matter suggested that command hallucinations did not bear any such risk, although admittedly this was supported merely by a case series.² A decade ago, a review of this subject within a forensic context stated that clinical literature on the role of command hallucinations in producing dangerous behavior is sparse and fragmented.¹ It seems

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that this subject has not been systematically and comprehensively reviewed since that time. The objective of the present study is to provide an updated review of the clinical literature on the relation between command hallucinations and dangerous (i.e., suicidal and physically assaultive) behavior, concentrating on controlled studies of this possible relationship.

Method

A computerized literature search was conducted using the information compilations of MEDLINE, encompassing the years 1966 to (the end of) 1997, and PSYCLIT, encompassing the years 1974 to (the end of) 1997. Six combinations of key words were searched for: command hallucinations, commanding hallucinations, commanding voices, command voices, imperative hallucinations, imperative voices. Because of considerable differences among surveyed articles in methodology and parameters studied, a meta-analysis was not performed. In addition, it is acknowledged that even a thorough computerized journal search cannot be comprehensive, primarily because it misses pertinent work in books³; yet, such work in the field of study surveyed here seems to consist of reviews rather than controlled studies and thus is not central to the concern of the present review.

Results

The MEDLINE and PSYCLIT search of all six combinations of key words, as mentioned above, produced 41 different articles, 33 (80.5%) of them dating from

the last decade (1987 to 1997). The majority were concerned with mental disorders, mainly schizophrenia, with only five (12.2%) articles dealing exclusively with general medical conditions such as otosclerosis and hypothyroidism. Thirty-four (82.9%) articles dealt with the relation between command hallucinations and dangerous behavior toward self or others; of these, 11 (32.3%) were controlled, at least concerning the testing of this relation, and consisted of two case control and nine cross-sectional designs. Studies that did not deal directly with the relation between command hallucinations and dangerous behavior, even though indirectly touching on this issue and methodologically sound,⁴ are not reviewed in detail here.

The 11 controlled studies dealing with the relation between command hallucinations and dangerousness can be grouped into three partially overlapping classes: studies testing for a relation between command hallucinations and violent behavior, studies testing for a relation between command hallucinations and suicidal behavior, and studies testing other variables for their possible role in mediating a relation between command hallucinations and dangerous behavior (both violent and suicidal). These studies are presented individually in Table 1.

Of the seven studies testing for a relation between command hallucinations and violent behavior, one suggested the existence of an inverse relation⁵ and six supported the non-existence of any relation.⁶⁻¹¹ All of the three studies testing for a relation between command hallucinations and suicidal behavior supported

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Table 1
Eleven Controlled Studies Published Between 1966 and 1997 on the Relation Between Command Hallucinations and Dangerous Behavior

Study	Primary Research Question	Sample Size	Main Data Source	Principal Diagnosis	Major Confounders	Key Findings
Hellerstein <i>et al.</i> , 1987 (6)	Outcome (violence and suicide)	58	Records	Varied	Hospital time	No relation
Shore <i>et al.</i> , 1989 (7)	Outcome (violence)	31	Records	Varied	Gender	No relation
Junginger, 1990 (14)	Mediation	20	Interviews	Varied	Undetermined	Voice familiarity
Rogers <i>et al.</i> , 1990 (8)	Outcome (violence)	25	Interviews	Psychosis	Gender, age	No relation
Thompson <i>et al.</i> , 1992 (5)	Outcome (violence)	34	Records	Psychosis	Age	Inverse relation
Chadwick <i>et al.</i> , 1994 (12)	Mediation	26	Interviews	Schizophrenia	Undetermined	Voice severity + benevolence
Junginger, 1995 (13)	Mediation	52	Interviews	Varied	Undetermined	Voice severity + familiarity
Zisook <i>et al.</i> , 1995 (9)	Outcome (violence and suicide)	46	Interviews	Schizophrenia	None	No relation
Kasper <i>et al.</i> , 1996 (10)	Outcome (violence and suicide)	27	Interviews	Varied	None	No relation
Beck-Sander <i>et al.</i> , 1997 (15)	Mediation	35	Interviews	Schizophrenia	Chronicity	Voice benevolence
Cheung <i>et al.</i> , 1997 (11)	Outcome (violence)	31	Interviews	Schizophrenia	None	No relation

the non-existence of such a relationship.^{6, 9, 10} Of the four studies testing for mediating variables (of which only mediators tested for in more than one study are mentioned here), two supported the existence of an inverse relation between perceived severity/dangerousness of command content and compliance with those commands,^{12, 13} and one supported the non-existence of any such relation.¹⁴ Of these four studies, two tested for the impact of familiarity with commanding voice, resulting in both studies supporting the existence of a direct relation between familiarity with commanding voice and compliance with the commands.^{13, 14} Two other studies tested for the impact of

perceived benevolence of commanding voice, resulting in both studies supporting the existence of a direct relation between perceived benevolence of commanding voice and compliance with the commands.^{12, 15}

Discussion

This updated review of the clinical literature on the relation between command hallucinations and dangerous behavior (to self or to others), using a computerized search, revealed a dearth of research on this subject, even in the last decade (which, admittedly, manifested a four-fold increase in such research as compared with all previous research). This is

especially true for controlled studies, of which 11 were found. Methodologically, all of these studies suffered from less than optimal designs, as not even one was prospective, samples were small (ranging from 20 to 58 subjects) and most (i.e., 7) were clinically heterogeneous, and confounding was mostly blatantly present or undetermined. Most of these studies agreed on the non-existence of a relation between command hallucinations and dangerous behavior to self or to others, with one exception supporting an inverse relation between command hallucinations and violent behavior. The studies testing for variables mediating between command hallucinations and dangerous behavior were divided about the existence of a relation between perceived severity/dangerousness of command content and compliance with those commands, while there was agreement on the existence of a direct relation between compliance with commands and both benevolence and familiarity of commanding voice.

It seems that the research and knowledge available to date on the relation between command hallucinations and dangerous behavior is both scant and methodologically weak. One conjecture that is supported by the present review is that this relationship is complex, perhaps established mainly via certain mediating factors such as perceived benevolence and familiarity of the commanding voices. Research in the near future should probably concentrate on testing for such mediating variables, preferably within a theoretical framework such as the stress-appraisal transactional perspective,¹⁶ which provides a means for understand-

ing individuals' behavior in accordance with their appraisal of their experience—such as a benevolence or familiarity appraisal of a command hallucination. This approach may especially advance the study of the cognitive and affective factors determining patients' attitudes and coping behaviors *vis à vis* their command hallucinations (and perhaps other symptoms).

A pertinent suggestion may be to test for the impact of chronicity of command hallucinations on compliance with the commands and consequently on dangerous behavior, depending on the (dangerous) content of the commands. A plausible conjecture within this line of inquiry would be that, other things being equal, chronic command hallucinations are less complied with than acute command hallucinations, which may thus be more dangerous (when consisting of dangerous content). The rationale for this idea is drawn from an analogy with vascular occlusions, because chronic vascular constrictions enable the gradual development of collateral vascularization, thus producing a mechanism that may cope adaptively with eventual complete occlusion. This mechanism usually attenuates the consequences of vascular events, which may harbor catastrophe, especially if they are the result of acute vascular occlusion. In the same spirit, chronic command hallucinations might enable the gradual development of attitudes and behaviors that reduce compliance with the commands, thus producing mechanisms that may cope adaptively with eventual dangerous command hallucinations. This process could attenuate the consequences of such

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hallucinations, which may harbor catastrophe, perhaps more so if they are the result of acute command hallucinations (which may, by the element of surprise, overwhelm and overpower adaptive appraisal and coping resources).

Further along the line, such coping behaviors may be elicited and studied, perhaps also implemented and even improved upon. This research program is in keeping with contemporary psychiatric research, which gives considerable weight to the study of variables mediating the relations between symptoms and outcome.¹⁷ Be that as it may, the relation between command hallucinations and dangerous behavior is in need of much further study.

References

1. Rogers R, Nussbaum D, Gillis JR: Command hallucinations and criminality: a clinical quandary. *Bull Am Acad Psychiatry Law* 16: 251-8, 1988
2. Goodwin DW, Alderson P, Rosenthal R: Clinical significance of hallucinations in psychiatric disorders: a study of 116 hallucinatory patients. *Arch Gen Psychiatry* 24:76-80, 1971
3. McNeil D: Hallucinations and violence, in *Violence and Mental Disorder: Developments in Risk Assessment*. Edited by Monahan J, Steadman HJ. Chicago: Chicago University Press, 1994
4. Wong M, Fenwick P, Fenton G, Lumsden J, Maisey M, Stevens J: Repetitive and non-repetitive violent offending behaviour in male patients in a maximum security mental hospital—clinical and neuroimaging findings. *Med Sci Law* 37:150-60, 1997
5. Thompson JS, Stuart GL, Holden CE: Command hallucinations and legal insanity. *Forensic Rep* 5:29-43, 1992
6. Hellerstein D, Frosch W, Koenigsberg HW: The clinical significance of command hallucinations. *Am J Psychiatry* 144:219-21, 1987
7. Shore D, Filson CR, Johnson WE, *et al*: Murder and assault arrests of White House cases: clinical and demographic correlates of violence subsequent to civil commitment. *Am J Psychiatry* 146:645-51, 1989
8. Rogers R, Gillis JR, Turner RE, Frise-Smith T: The clinical presentation of command hallucinations in a forensic population. *Am J Psychiatry* 147:1304-7, 1990
9. Zisook S, Byrd D, Kuck J, Jeste DV: Command hallucinations in outpatients with schizophrenia. *J Clin Psychiatry* 56:462-5, 1995
10. Kasper ME, Rogers R, Adams PA: Dangerousness and command hallucinations: an investigation of psychotic inpatients. *Bull Am Acad Psychiatry Law* 24:219-24, 1996
11. Cheung P, Schweitzer I, Crowley K, Tuckwell V: Violence in schizophrenia: role of hallucinations and delusions. *Schizophr Res* 26:181-90, 1997
12. Chadwick P, Birchwood M: The omnipotence of voices: a cognitive approach to auditory hallucinations. *Br J Psychiatry* 164:190-201, 1994
13. Junginger J: Command hallucinations and the prediction of dangerousness. *Psychiatr Ser* 46: 911-14, 1995
14. Junginger J: Predicting compliance with command hallucinations. *Am J Psychiatry* 147: 245-7, 1990
15. Beck-Sander A, Birchwood M, Chadwick P: Acting on command hallucinations: a cognitive approach. *Br J Clin Psychology* 36:139-48, 1997
16. Lazarus RS, Folkman S: *Stress, Appraisal, and Coping*. New York: Springer, 1984
17. Farhall J, Gehrke M: Coping with hallucinations: exploring stress and coping framework. *Br J Clin Psychol* 36:259-61, 1997