

The fiftieth anniversary of the article that shook up psychiatry

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Summary

In January 2023, the fiftieth anniversary passes of David Rosenhan's article *On being sane in insane places* appearing in the prestigious journal "Science". This publication has become one of the most influential psychiatric papers of the second half of the 20th century, achieving 1,276 citations up to mid-2022. In the article, eight healthy persons are described, who came to psychiatric hospitals in the USA, reporting auditory hallucinations. They were all admitted, mainly with suspected schizophrenia, and ordered pharmacological treatment. Their stay ranged from 7–52 (mean 19) days, even though after the admission they did not confirm the symptoms. The article spotlighted an unjustified diagnosis of mental illness, resulting in psychiatric hospitalization in unfavorable conditions. Its consequences were manifold. It augmented the process of psychiatric deinstitutionalization and provided food for anti-psychiatric movements and humanistic psychiatry. However, it did accelerate the inception of an objective system of psychiatric diagnosis in the form of the 3rd edition of the Diagnostic and Statistical Manual (DSM-III), released in 1980.

Susannah Cahalan's book *The great pretender*, published in 2019, undermines the reliability of the article. Based on many interviews and Rosenhan's notes, she pointed out many faults of the experiment. She was not able to retrospectively confirm the identities of the majority of participants, nor to receive the essential information from "Science". On the fiftieth anniversary of the article, its cognitive value for an objective diagnosis of mental illness and the role of psychiatric hospitalization as well as the negative consequences in the form of a drastic reduction of psychiatric beds in the USA are emphasized.

Key words: psychiatric diagnosis, David Rosenhan, schizophrenia

Introduction

In the January 1973 issue of the prestigious journal "Science", an article by the American psychologist, David Rosenhan, appeared, titled "On being sane in insane places" [1]. The main message was an impossibility of the objective diagnosis of

mental illness resulting in an overhasty one in a healthy person, necessitating a stay in unfavorable conditions of a psychiatric ward. The publication has become one of the most influential psychiatric papers of the second part of the 20th century and has had manifold consequences. On the fiftieth anniversary of this article which shook up psychiatry, it would be interesting to attempt to discuss its diverse repercussions seen from a perspective of the half-century.

David Rosenhan

The author of the article, David Rosenhan, was born on 22 November 1929, in Jersey City, New Jersey. His father, Joseph Rosenhan, was born in 1895 in Poland and immigrated to the USA. Therefore, undoubtedly, David Rosenham had Polish “roots”. He received a degree of Bachelor of Arts in 1951 at Yeshiva College, New York, and next a master’s degree in economics in 1953, and a doctorate in psychology in 1958, at Columbia University in New York. For three years, he lectured at various universities of the American East Coast, such as Swarthmore College, Princeton University, Haverford College, and the University of Pennsylvania. In 1971, he became employed as a professor of psychology and law at Stanford University, where he had been working until 1998. Since then, he was functioning as a professor emeritus of the University until he died in 2012. In 2002, he suffered a massive brain stroke which disabled any sort of his further activity.

Assessing Rosenhan’s scientific activity, its dynamism, multi directionality, as well as a relative lack of consequence in pursuing a given issue should be emphasized. In the Scopus database, there are 31 publications from the years 1961-1998, where he is the author or co-author. The highlighted article in this paper published in 1973 in “Science” achieved 1,276 quotations up to mid-2022. There are also two papers that exceeded 100 quotations. The first comes from the January 1973 issue of “Developmental Psychology”, which is about emotions and altruism in children, and has achieved 104 quotations. It reflects Rosenhan’s interest at that time in the prosocial behaviors of children. All authors come from Stanford University, and one of them is Bill Underwood, who was later identified as one of the pseudopatients participating in Rosenhan’s experiment [2]. The second paper was done together with the researchers of the University of Arizona in Tucson and discusses the effects of the 1989 San Francisco earthquake on the frequency and content of nightmares. It was published in 1992 in the “Journal of Abnormal Psychology” and achieved 101 quotations by mid-2022 [3]. The activity of David Rosenhan brought about a substantial contribution to forensic psychology. He was one of the firsts to use the developments of experimental psychology for the choice and assessment of the behavior of the participants of a juridical proces, especially the jurors.

Among David Rosenhan’s achievements, as the most important, the extensive piece of work “Abnormal psychology” could be recognized. It was established together

with one of the most eminent contemporary psychologists, Martin Seligman, from the University of Pennsylvania, the creator, among others, of the theory of “learned helplessness”. The first edition, with Rosenhan as the first author, took place in 1984. The book can be to this day regarded as a compendium of the knowledge on psychological and biological mechanisms of mental disorders as well as a description of psychopathological processes and their treatment. It also shows Rosenhan’s didactic talent, adored by his students. In the initial part of the book, the authors delineated seven elements of psychological abnormality such as suffering, maladaptiveness, irrationality and incomprehensibility, unpredictability and loss of control, vividness and unconventionality, observer discomfort, and violation of moral and ideal standards. Among the rich reference list at the end of the book containing about 1,200 items, there are seven papers with Rosenhan as the first author and ten papers where the first author is Seligman. In the chapter on schizophrenia, it is stated that auditory hallucinations are the ones most frequent in the illness; however, nearly nothing is said about their content [4].

In the subsequent editions of the book, since 2001, these two authors were joined by Elaine Walker, a professor of psychology at Emory University in Atlanta. In 2003, the edition of the book with these three authors, this time Seligman as the first and Rosenhan as the last, was translated into Polish and published under the title “*Psychopatologia*” by the the editorial office “*Zysk i S-ka*” in Poznań. The scientific consultant for the Polish edition was Prof. Helena Sęk, from the Institute of Psychology at Adam Mickiewicz University in Poznań [5].

The article

The article begins with the words: “If sanity and insanity exist, how shall we know them?” It describes an experiment where eight healthy persons came to twelve psychiatric institutions reporting auditory hallucinations. They reported hearing voices coming from an individual of the same sex saying the words: “empty”, “hollow”, and “thud”. Based on this, seven of them were admitted to the psychiatric ward with suspected paranoid schizophrenia and one with suspected manic-depressive psychosis. After the admission, they behaved normally and denied these symptoms; however, they already had a “label” of mental illness. They all had pharmacological treatment ordered by psychiatrists, and the total number of tablets they were supposed to take exceeded 2,000. However, the participants of the experiment were previously instructed on how to avoid taking drugs. The duration of psychiatric hospitalization ranged from 7-52 days (mean of 19 days). They were all released from the hospital on their demand, against medical advice, mostly with a diagnosis of “schizophrenia in remission”.

Eight pseudopatients (five men and three women) constituted a heterogeneous group. One of them, in his twenties, was a fresh graduate of psychology. The remaining

were older – in this group, there were three psychologists, a pediatrician, a psychiatrist, a painter and a housewife. They were admitted on false surnames. The persons having a profession connected with mental health gave another occupation. Other than that, all presented data from their biography were truthful.

The article has several chapters in which its messages are discussed in more detail. They are titled: “The normal are not detectably sane”, “The stickiness of psychodiagnostic labels”, “Powerlessness and depersonalization” and “The consequences of labeling and depersonalization”. According to the author, the difficulties or even the impossibility to establish the mental health of the experiment’s participants were not related to the type of psychiatric ward and the period of their observation. In the hospital notes, there were no mentions of a possible or suspected simulation of mental illness, whereas sometimes, the comments of other patients suggested to a participant that he/she may be healthy. The author thinks that physicians are more prone to assess a healthy person as sick than a sick person as healthy, which may arise from diagnostic strategy in somatic illnesses where a lack of distinct symptoms can result in overlooking a severe illness. He also claims that the results obtained reaffirm the essential role of “labeling” in mental disorders. After the first label of schizophrenia, the possibilities of its altering are very limited and this substantially shapes perception of the patients and their behavior. In the pseudopatients, a diagnostic concept was sometimes further confirmed by the data from their biography and by their behavior in the ward, e.g., taking intensive notes. Apart from the labeling, Rosenhan also points out the negative consequences of patient powerlessness and depersonalization resulting from a lack of attention and interest of the personnel.

Cultural and social context

At the time when the article was published, the public opinion in the USA was very skeptical and critical of psychiatric institutions. Among others, this was an aftermath of several popular movies. The movie “The snake pit” which came out in 1948, with the excellent creation of Olivia de Havilland, showed the authoritarian organization of psychiatric hospitals and possibilities of abuse of patients. Another movie, released in 1963 titled “Shock corridor” tells the story of a journalist who gets himself intentionally committed to a mental hospital to solve a murder committed within the institution. However, all were outcompeted in 1975 by the movie “One flew over the cuckoo’s nest”, directed by Milos Forman. The role of a psychiatric patient (McMurphy) is played by Jack Nicholson, and the head nurse Ratched is created by Louise Fletcher. The film was awarded many Oscar prizes, and in 2020, was ranked 18 in the “Top rated movies”. Here, as in the lens, the main messages of Rosenhan’s articles are focused on: admission to a psychiatric hospital of a person with unsubstantiated mental illness as well as an oppressive system for a patient. The movie also demonstrates a forcible use of “inhumane” treatment methods such as electroconvulsive therapy and lobotomy.

As to electroconvulsive therapy, shown in its traditional form, the movie continues to play a negative opinion-forming role to this day.

In 1961, three books appeared that greatly influenced social perception of psychiatry, and probably also Rosenhan's attitude toward psychiatric diagnosis and treatment in a psychiatric hospital. The first two belong to the advocates of so-called antipsychiatry. In the book titled "The myth of mental illness", American psychiatrist of Hungarian origin, Thomas Szasz (1920-2012) argues that there is no mental illness and such diagnosis is mere labeling of persons having troubles in an adaptation to contemporary society [6]. In turn, Scottish psychiatrist Ronald Laing (1927-1989), in the book "Self and others", which was re-issued in a second supplemented edition in 1969, also presents a concept of mental illness as a phenomenon of disturbed interaction between an individual and the environment. Nota bene, it is Laing to whom the creation of the concept of "schizophrenogenic mother" is ascribed [7]. The third book published in 1961 is titled "Asylums", and authored by an American sociologist of Canadian origin, Erving Goffman (1922-1982) [8]. The title pertains to psychiatric institutions (lunatic asylum). The book contains four essays titled "On the characteristics of total institutions", "The moral career of the mental patient", "The underlife of a public institution", and "The medical model and mental hospitalization". Goffman describes a psychiatric hospital as a "total" institution, where all should perform the appropriate roles. It concerns mainly the personnel and patients. Taking a "role" is essential for the treatment process. In Poland, the most popular book by Goffman has been "The Presentation of Self in Everyday Life" (*Człowiek w teatrze życia codziennego*), first published in 1977 [9].

Ten years before this publication in "Science", there was a famous message by President John Kennedy, and signed by him the Community Mental Health Act. An essential part of this document was a recommendation for decreasing the number of psychiatric beds, and starting the process of deinstitutionalization. In the period leading up to the publication of Rosenhan's experiment in 1973, the number of psychiatric beds in the USA was reduced by half, from 500 to 250 thousand, and this phenomenon was continuing to gain momentum. And the publication in "Science" showing psychiatric hospitalization of healthy persons and the unfavorable recovery conditions in psychiatric hospitals, was grist to the mill for this process.

For Polish readers, Rosenhan's publication was made available after five years, in a collection of articles in the book "*Przełom w psychiatrii*" (A breakthrough in psychiatry) edited by a brilliant psychiatrist and psychotherapist, Kazimierz Jankowski (1931-2013), published in 1978 [10]. However, earlier, Kazimierz Jankowski quoted this paper in his book "*Od psychiatrii biologicznej do humanistycznej*" (From biological to humanistic psychiatry) appearing in 1975 [11]. The conclusions from Rosenhan's article made for the author a prominent argument for "humanistic" psychiatry.

Robert Spitzer and DSM classification

American psychiatrist Robert Spitzer (1932-2015) can be regarded as the founding father of the third edition of the Diagnostic and Statistical Manual (DSM-III) published in 1980 [12]. The historians of psychiatry find this publication as an essential paradigm shift in the diagnosis of mental disturbances. The eminent French psychiatrist, Pierre Pichot, compared the influence of the DSM-III and its consequences to the effect of the diagnostic concept of Emil Kraepelin of the dichotomic division of mental disorders [13].

Robert Spitzer had previously participated in the preparation of the DSM-II, published in 1968, and five years later contributed to deletion of homosexuality from this classification. When on his way to creating DSM-III, Spitzer joined the psychiatrists who fiercely criticized Rosenhan's article in "Science". In his paper published in 1975 in the "Journal of Abnormal Psychology", Spitzer named Rosenhan's article "the pseudoscience presented as science". Among many controversial elements of the article, he pointed out, based on his own experience and the opinions of psychiatrists working in other hospitals, that the diagnosis of "schizophrenia in remission" is extremely rare. Referring to this, Spitzer proposed the term "logic in remission" for the assessment of Rosenhan's work [14].

Rosenhan's response was an article published in the same year and the same journal on the contextual nature of psychiatric diagnosis pointing to particular circumstances of diagnosing schizophrenia in his pseudopatients [15]. Spitzer's reaction was instantaneous, this time in the most prestigious psychiatric journal, "Archives of General Psychiatry". Spitzer argues that, although the content of auditory hallucinations was rather unusual, the pseudopatients stated that they had experienced them for several weeks and declared a willingness to be admitted to the hospital showing that these symptoms were a significant problem for them. This could justify a provisional diagnosis of schizophrenia [16].

The publication of DSM-III was preceded by the article on the research diagnostic criteria, published in 1978, with Spitzer as the first author [17]. This psychiatrist can also be regarded as the first author of a modified version of the DSM-III, i.e., DSM-III-R, published in 1989. Spitzer also significantly contributed to the elaboration of the DSM-IV, appearing in 1994, at the 150th anniversary of the American Psychiatric Association, which originated in 1844 as the Association of Medical Superintendents of American Institutions for the Insane. He also witnessed a coming into being of the DSM-5 in 2013; however, for a variety of reasons, was critical of this.

Susannah Cahalan and the book "The great pretender"

The book written by Susannah Cahalan, meaningfully titled "The great pretender" [18], played a significant role in recent years in demystifying David Rosenhan's experi-

ment and himself as a person. In Poland, the book was titled “*Zrozumieć szaleństwo*” (To understand the madness) [19].

Susannah Cahalan had autoimmune encephalitis, initially diagnosed as a mental disorder described in the book “Brain on fire: my month of madness” published in 2012 [20]. The book was a basis for the movie “Brain on fire” in 2016, where the role of the author was played by an American actress, Chloë Grace Moretz. In Poland, the book appeared as “*Umysł w ogniu*” [21]. Cahalan found out about Rosenhan’s experiment in 2013, during her tournée around the United States, reporting on her illness. Her initial excitement regarding Rosenhan’s publication could have arisen from the fact that similar to the persons in the experiment, she experienced “labeling” with mental illness of a medical condition that turned out to be a rare neurological disorder. Cahalan decided to spend the following years verifying the experiment and searching and identifying its participants. A great help in this enterprise was the private writing treasure of Rosenhan, containing, among others, his unpublished book, diaries, and correspondence. The access to it, she owed to Rosenhan’s friend, Florence Keller.

In Rosenhan’s notes, there were fictional surnames of the pseudopatients under which they were admitted to psychiatric wards. However, their first names were unchanged. Already at the beginning of her search, Cahalan made sure that the first pseudopatient registered as David Lurie was David Rosenhan, what he admits himself in the article [1]. Lurie was the maiden name of his mother, Nuna. In February 1969, under his adoptive surname, he spent nine days in the Haverford State Hospital in Pennsylvania. During this time, he was a lecturer of psychology at Swarthmore College, located, like the hospital mentioned above, in the vicinity of Philadelphia. Rosenhan’s notes presented a gloomy picture of the psychiatric ward: dirty toilets without doors, inedible food, pervasive inactivity and boredom, and inattention and negligence of patients by the personnel. However, Cahalan’s analysis of the hospital documentation revealed that the complaints reported by Rosenhan exceeded those of mere auditory hallucinations: “empty”, “hollow”, and “thud”. He admitted having suicidal intentions and applying a copper pot to his ears to reduce the intensity of hallucinations.

Cahalan succeeded in the identification of patient No. 8 from the article as Bill Underwood, a Stanford University graduate, who collaborated with Rosenhan. During the interview in 2015, Underwood had already retired. Previously, he had been a professor of psychology at the University of Texas at Austin, and next, after obtaining qualifications for an engineer, was employed as part of a research team at the Motorola company. As mentioned earlier, he was, together with Rosenhan, a co-author of the article that achieved over 100 quotations [2]. As a pseudopatient, he was named Bill Dixon. He reported his nine days of hospital stay as pretty dramatic because initially, he could not avoid taking a dose of chlorpromazine which resulted in spending two days in the intensive care unit.

The author also traced another “patient” who voluntarily allowed admission to the state psychiatric hospital in San Francisco. He was Harry Lando who during the interview with Cahalan, worked as a professor of psychology at the University of Minnesota. For nearly 50 years, Lando has been doing research on the pathophysiology and treatment of nicotine addiction. The first paper on the subject, with him as the only author, appeared in 1975 [22]. Recently, he was a member of a research team that decried the advantages and disadvantages of using e-cigarettes [23]. Preparing for the experiment, he arranged with Rosenhan for his secret mission to adopt the name Harry Jacobs. The 19 days spent in the psychiatric ward he described as overwhelmingly positive which was expressed in the article published in 1976 in “Professional Psychology” [24]. However, the very friendly aspect of a psychiatric hospital presented by him resulted in the fact that Lando was not included as the ninth person in the experiment because it did not fit Rosenhan’s concept of an oppressive and depersonalizing picture of such a ward.

Despite great efforts, Cahalan was not able to identify the remaining six persons participating in the experiment. In Rosenhan’s notes, they are denominated as John and Sara Basley (No. 2 and 3), Martha Coates (No. 4), Laura and Bob Martin (No. 5 and 6), and Carl Wendt (No. 7). The last one, according to Rosenhan’s notes had multiple hospital visits of a total duration of 52 days, and Rosenhan himself was concerned whether he had some kind of “addiction”.

In Rosenhan’s writing archive, Susannah Cahalan found a separate folder titled “Robert Spitzer”, containing extensive correspondence between the two researchers. It was of a very passionate nature, which could add to the polemics in professional journals presented in the previous subsection.

Cahalan wrote a letter to “Science” asking for sharing the data connected with the paper, among others, the reviewers’ opinions. A help in this respect was offered by the eminent psychiatric historian, Andrew Scull, who confirms this in his recent book “Psychiatry and its discontents” [25]. The author was answered that the review process is confidential and the reviewers cannot be disclosed, whereas in the answer to Andrew Scull, it was stated that the editorial office does not keep the data for this period.

An assumption for the doubt can be given by Rosenhan’s behavior after his publication in “Science”. Cahalan is not right in her claim that Rosenhan did not later publish any paper connected with this experiment. Such an article is surely “The contextual nature of psychiatric diagnosis” published in the “Journal of Abnormal Psychology” in 1975 [15]. It is true, however, that Rosenhan made a contract with the Doubleday publisher for a book, referring to the publication in “Science”, with the working title “Odyssey into lunacy” and even wrote eight chapters of more than 100 pages. Eventually, he decided not to complete the book and not promulgate the manuscript. And in 1980, the publisher sued him for breaking the contract.

Rosenhan's article after fifty years

After fifty years of publication, Rosenhan's article can be a source for many reflections. To begin with, performing such an experiment nowadays, both in the USA and Europe, would be impossible. A patient coming to a psychiatrist presenting psychotic symptoms would be proposed a pharmacological treatment as an outpatient. So-called atypical antipsychotics are preferred, although some typical ones are still valid, mainly haloperidol. However, still many patients diagnosed with schizophrenia are hospitalized, mainly in the initial period of the illness. Nevertheless, the progress in psychopharmacology has resulted in a systematic increase of schizophrenia patients never entering a psychiatric ward.

At the same time, both in the USA and in many other countries, there has been a growing problem of a shortage of psychiatric beds. It turned out that too forceful execution of John Kennedy's message brought about significant troubles. In his recent book "Healing: our path from mental illness to mental health", a former director of the NIMH, Thomas Insel, states that the number of psychiatric beds in the USA in 2014 was 40 thousand in state hospitals, 28 thousand in private hospitals and 31 thousand in psychiatric wards in general hospitals. The duration of stay in most of the wards is limited to several days which practically makes impossible the appropriate organization of the diagnostic and therapeutic process [26]. In Poland, the necessity of an adequate number of inpatient psychiatric beds was underscored by a fiasco of the National Program of Mental Health 2011-2015, assuming a reduction of such beds. It turned out that during this period, psychiatric hospital admissions greatly increased. Describing some patients in his book, Insel points out that at some moment, there was no available psychiatric bed for a patient requiring hospitalization in the whole state [26]. It may hark back to a situation in recent years in Poland concerning child and adolescent psychiatry – an equivalent of a state could be a voivodeship or even a region. The problem of a shortage of psychiatric beds has recently been lively discussed in psychiatric journals both in the USA [27] as well as in other countries, e.g., the United Kingdom [28]. In the USA, additional alarming associations have been given, e.g., a significant correlation between a reduction of psychiatric beds and an increase of suicides in the recent two decades [29]. A Californian neuropsychologist, Dominique Kinney, interviewed in 2016 on psychiatric deinstitutionalization, stated: "We could see the light at the end of the tunnel. We did not know that it was an oncoming train". Tentative suggestions for a reactivation of bigger psychiatric centers have even appeared [30].

Due to the lack of psychiatric beds in the USA, two kinds of allocations are left for psychiatric patients: to go homeless or be admitted to prison. Recent research of adult homeless persons showed that, compared to the control group, they had significantly higher scores of depression, suicidal behavior, and psychoactive substance use. A considerable percentage of them would probably meet the criteria of "major" psychiatric disorder [31]. And in 2022 in the USA, there were ten times more psychiatric

patients in prisons than in psychiatric hospitals. This reflects a phenomenon of so-called transinstitutionalization in the USA: a decrease of beds in psychiatric hospitals and an increase of spots in prisons, resulting from significant funds in the prison system and lack of those for psychiatric hospitalization. The psychiatric care of minimal standards exists only in some prisons [26].

The most important message of Rosenhan's article is the impossibility of diagnosing and confirming the presence of a mental illness. In this regard, great help is available, given all their limitations, with the DSM editions. The greatest hit of them was DSM-III, prepared by Robert Spitzer. The subsequent editions of DSM, especially DSM-5, did not meet the expectation of embedding psychiatric disorders in a wider etiopathogenetic context. However, their descriptive aspect has still made a basis for psychiatric practice and research, especially if compatibility among psychiatrists is concerned. Also, in the textbook "Abnormal psychology" by Rosenhan and Seligman, which had its first edition in 1984, an appendix is enclosed at the end with the DSM-III classification [4].

Twenty years after Rosenhan's publication in "Science", an opinion was expressed that it was something like a sword plunged into the heart of psychiatry. After another thirty years, it is legitimate to ask the question: could present-day psychiatry be the same without this article? The probable answer is: no. Beyond any doubt, the article raised a deep reflection in innumerable psychiatrists who read it. It contributed to a modification of many processes in psychiatry, involving both research and organizational aspects. Perhaps, paying attention by Rosenhan to the depersonalization of a patient in the psychiatric hospital is incorporated into the general trend in medicine to increase the patient's rights. Thus, given all reservations and controversies, the article can be acknowledged as a remarkably significant event in the history of psychiatry in the recent half-century.

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