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Electroconvulsive Therapy (ECT) and Nursing Practice in the Netherlands, 1940–2010

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Abstract

Electroconvulsive therapy (ECT) has been applied in mental and general hospitals in the Netherlands since 1939, but we know little about nurses' role in the transformation brought about by the ECT machine and its use. Based on archival documents, interviews and a case study of nurses' work in ECT at the university hospital in the city of Groningen, this article shows how nurses' professional identity was depicted and changed within the application and practice of ECT. Although nursing was an integral part of ECT practice from the outset, it was also affected and changed by it, especially as public debate and controversy over ECT arose in 1970s. During this time mental health grew as an interdisciplinary field, pressuring nurses to articulate their psychiatric nursing expertise. New governmental ECT guidelines in the 1980s also shaped nurses' work. Once protest over ECT subsided in the 1990s, reflecting a new acceptance of biological psychiatry, use of ECT increased again and nurses obtained a specialized role in ECT. The article concludes that whereas nursing's traditional close ties to medical knowledge and practice has been a source of professional tension, the connection also gave nurses new opportunities to renegotiate their expertise when the use of ECT increased during the 1990s. It realigned them with medicine in new ways, opening new professional avenues in specialized ECT nursing practice.

1 Introduction

We know little about the history of Electroconvulsive Therapy (ECT) and the transformation the introduction of the ECT machine brought about from the point of view of nurses. This article examines psychiatric nursing practice and the way nurses' role changed in response to the introduction of the ECT machine and its application in the Netherlands from 1940 to 2010. ECT has been applied in mental hospitals and psychiatric departments of general and university hospitals in the Netherlands since its first application in 1939. I will mainly focus on developments in one general hospital as a case study, the university hospital in the city of Groningen, where ECT was first performed in 1941 and continued to be applied in the psychiatric clinic to the present day.

The analysis builds upon nursing and medical history scholarship that examines medicine, nursing and machines in hospitals in its historical and social context.[1] It examines ECT as a therapeutic approach that involved the use of a machine, the working and application of which transformed psychiatric practice, including nursing. As such the introduction of ECT and its historical development is considered within a broader understanding of the history of medical and nursing technology and the relational context of nursing care, that is, as part of larger cultural, social and technological transformations.[2] ECT was adopted into an existing structure

[1] Fairman 1998, 2000; Howell 1989; Keeling 2004; Pinch/Bijker 1987; Toman 2001.

[2] Much of the initial historiography on nursing technology and the negotiation of professional jurisdiction between medicine and nursing focused on general nursing in hospitals the North-American context, using a history of technology framework. Recently a broader perspective on care in practice extends this scholarship,

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and hence changed it.[3] When ECT was applied nurses' work and knowledge were an integral part of that structure and praxis.[4] In one of the most recent analyses of the history of ECT, Max Gawlich considers three domains in which the ECT machine worked as a practice-transforming agent or tool: firstly the handling of medical information, documentation and recordkeeping, secondly the technology and fabrication of the machine itself, and thirdly, the therapeutic and hospital praxis.[5] The examination of ECT through the lens of nursing in this article mostly pertains to the third domain, exploring the way nursing became part of ECT practice and the way it structured their work and nurses' responses to it. My analysis centers on nurses' professional identity as a response to and part of ECT use. I examine how nurses took up this work and how their professional identity was depicted during the initial decades of the therapy's use in the 1940s and 1950s, and how it changed, especially during the time public debate over ECT arose in 1970s, fueled by a rising anti-psychiatric movement, and in the decades thereafter.

Following a period of dwindling use and much controversy over ECT in the late 1970s and 1980s, its application increased again in the Netherlands over the last 30 years. During this time outpatient or psychiatric clinics in general hospitals gradually became the dominant environment for ECT, whilst nursing obtained a central and specialised role in ECT. In the latest, 2010, ECT guideline of the Dutch Association of Psychiatry, for example, the role of nurses is explicitly included; moreover, the guideline lists 36 ECT Centres, the majority of which are located in psychiatric departments of general and university hospitals.[6]

The current specialized professional role of a Nurse Specialists in Mental Health Care, appointed as an ECT Coordinator, and supported and formalized by legislation under the Dutch Act on the Health Professions, indicates a profound shift away from the controversy that surrounded the treatment in the 1970s and 1980s.[7] ECT's controversial 1970s portrayal is vividly kept alive, for example, in the world-famous movie *One Flew Over the Cuckoo's Nest,* not only depicting ECT as a contentious practice in unmodified form, but also stereotyping the nurse as a cold and heartless figure in the controlling character of nurse Ratched.[8] Such conflicting images warrant a more thorough historical examination, which is a key goal of this article. The conflicting images in role development underscore how a machine is not a neutral object but part of a complex techno-social system in which the use and working of a machine is embedded in a complex relational web, in which power relationships are negotiated, socially, politically, ethically, professionally and culturally. All of these aspects, influences and relationships form the way a machine "works" in

providing fresh perspectives on technology and care practices in relational and community contexts: Mol/Moser/Pols 2010; Pols 2017, 2012; Twohig 2005.

[3] Gawlich 2018; Vijselaar 2013.

[4] Braunschweig 2013, pp. 188–207; Aan de Stegge 2012, pp. 599-603.

[5] Gawlich 2018.

[6] Van den Broek et al. 2010, pp. 136, 177. For historiography on ECT see: Gawlich 2018; Kneeland/Warren 2002; Sadowsky 2017; Shorter/Healy 2007; Vijselaar 2013.

[7] The title Nurse Specialist in Mental Health Care is the literal translation of "Verpleegkundig Specialist Geestelijke Gezondheidszorg" - the legislation referred to is the Wet op the Beroepen Individuele Gezondheidszorg [the Act regulating the Health Professions], artikel 14; Interview with nurse Franklin Dik by author, 20 June 2011.

[8] On a history of the movie: Hirshbein/Sarvananda 2008; the movie is based on Kesey 1962.

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practice.[9] A second goal, therefore, is to provide a more nuanced view on the development of nursing expertise and nurses' role in the use of technological tools by situating nurses' role in ECT in its social, ethical and technological context, which I argue, provides a portrayal that emphasizes the complexity of the development of nursing as a competent, professional and ethical practice inherently shaped by the circumstances and relational context in which it evolves.[10]

In order to put nurses' role in ECT in perspective, I examine developments in one general hospital in the Netherlands in particular, the university hospital in the city of Groningen.[11] In the psychiatric clinic of this hospital, ECT was first performed in 1941 and has continued to be applied to the present day. Competent nursing was a key component in ECT treatment from the outset. Although nursing's close ties to medical knowledge and practice have been a source of ambivalence and professional tension, this connection, I argue, also gave nurses new opportunities to renegotiate their expertise in the domain of biological psychiatry during the last quarter of the 20th century. Mental health nursing and the evolution of nurses' role in ECT mirror shifts in jurisdictional control that marked general nursing when hospitals and community service changed in the latter half of the twentieth century.[12] Changes in social welfare, public health insurance, health science and technology transformed hospital care. In the process, certain measures and interventions, such as taking vital signs, measuring blood pressure, giving injections, and so on, once central to the jurisdiction of medicine, were transferred to nurses with concurrent realignment of professional authority and power relationships.[13] A similar process of realignment of responsibilities can be observed in the use of ECT, particularly when its application increased during the 1990s.

[9] Gawlich 2018.

[10] ICN (=International Council of Nurses) Code of Ethics 2012; for an analysis of nursing role development in community mental health care see Boschma 2012.

[11] Based on information from secondary literature and comparison of information from the records of the university hospital in Groningen and those of the St. Canisius hospital in Nijmegen clinical developments in Groningen appeared to be comparable to similar institutions in the Netherlands at the time. Whereas in many places ECT was no longer used in 1970s and 1980s, in the Groningen hospital it never disappeared although its use decreased there as well during this time. See also Boschma 2013. Unique to the Groningen case study was the inclusion of interviews with nurses on their experience with ECT using oral history. The nurses I interviewed were all registered nurses. They had leading roles as nurse manager or ECT coordinator at the time of interview or had worked for a substantial number of years in the 1980s on units in the Groningen psychiatric clinic where ECT was regularly performed. Where appropriate biographical details are included in the text. Information from interviews with psychiatrists is also included. The latter all had performed ECT at some point in their career and had leading roles in psychiatry at the time of the interview.

[12] Boschma 2012; Fairman 1998; Hallett/Madsen/Pateman/Bradshaw 2012; Twohig 2005.

[13] ECT nursing, I argue, reflects a process of professional and technological renegotiation between medicine and nursing comparable to similar processes indentified for example in intensive and cardiac care nursing. See Fairman 1998, 2000; Keeling 2004; Toman 2001. Historical analysis of advanced nursing practice, nurse consultant and specialty roles in the European context is emerging: McKenna/Richey/Keeney/Hasson/Sinclair/Poulton 2006; Doody 2014. In the Netherlands specialized, advanced nursing roles emerged from the late 1980s onwards, involving transfer of medical-technological responsibilities and initially often called 'nurse-practitioner.' Currently the accepted terminology is Nurse Specialist [Verpleegkundig Specialist], now a formalized specialty role in Dutch nursing (see also note 8): Roodbol/Lolkema 2002; Borguez 2005.

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In this article I first explore how nurses took up their work in ECT in the 1940s and 1950s. Then, I examine the way they negotiated their professional identity in the face of dwindling ECT use and fierce anti-psychiatric critique in the 1970s and 1980s. Finally, I discuss how ECT use increased again during the 1990s, after governmental regulation of ECT had been introduced in response to the political controversy. The way it increased affected nurses' professional knowledge, their work ethic and authority over ECT. From the 1990s onwards, nurses developed new specialised roles in ECT shaped by their expertise in both general and psychiatric nursing.

2 Somatic treatments, ECT and nursing in the Groningen clinic until the 1950s

Since its first application in Italy in 1938, ECT provoked mixed public responses. Its use and side-effects have been the subject of controversy and debate. Current debates centre on the effects on memory, whereas in the past, unmodified treatment sometimes resulted in fractured bones or vertebrae.[14] In current mental health practice, ECT entails the induction of a convulsion instigated by a short electric impulse through the brain for less than a second. It is commonly given with an anesthetic and muscle relaxant under close monitoring and, if necessary, delivery of oxygen in a well-equipped surgical room in a hospital or outpatient clinic. According to current guidelines of the Dutch Association for Psychiatry depression is the primary indication for ECT with varying rates of effectiveness reported.[15] Patient or family permission and informed consent for ECT has to be obtained, according to the same guidelines.[16]

In the Netherlands, ECT was first applied in 1939 at the mental hospital in Heiloo by psychiatrist Johannes Barnhoorn. He reported on its use at the spring meeting of the Dutch Association for Psychiatry and Neurology in 1941.[17] In that same year, Willem van der Scheer, Professor and Head of Psychiatry at the Groningen University Hospital, decided to buy an ECT machine.[18] He reported with great optimism about the new, so-called 'somatic treatments' in the Dutch Journal of Psychiatry and Neurology. Medical confidence in somatic treatments had gained momentum in the 1920s, nationally as well as internationally, starting with the application of malaria fever

[14] Interview with psychiatrist Walter van den Broek by author, 23 March 2011. See also: Vijselaar 2010, pp. 193-195; Meeter/Murre/Janssen/Birkenhäger 2011. For a contemporary patient view on ECT: Dukakis/Tye 2006.

[15] ECT is indicated in particular for medication resistant depression, for which antidepressant medications have not been effective; for depression with characteristics of psychosis it might be the primary indication: Van den Broek et al. 2010, pp. 31, 36-39. Research reports on healing effects, or effectiveness reported in terms of remission percentages, vary from 28% to 68% for patients with medication resistant depression, and from 41% to 91% for patients with non-medication resistant depression: Van den Broek et al. 2010, p. 40.

[16] Van den Broek et al. 2010, pp. 31-35, and 139-145; on nursing in ECT: Fitzsimons 1995; Fitzsimons/Mayer 1995; Munday/Deans/Little 2003. Recommendations to inform families of the risks of ECT and ask their permission were included in nursing textbooks from the 1950s: Hamer/Haverkate 1950, pp. 509; Hamer/Tolsma 1956, p. 558.

[17] Barnhoorn 1940, 1941.

[18] Jaarverslag [Annual Report (AR)] van het Algemeen, Provinciaal, Stads, en Academisch Ziekenhuis te Groningen (APSAZG) [General, Provincial, City and University Hospital in Groningen] 1941, pp. 4. Hereafter cited as AR-APSAZG.

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treatment and deep sleep therapy.[19] Subsequently, shock treatments with insulin and metrazol were introduced in the 1930s. Van der Scheer conducted a survey on the results of the latter treatments used for patients with schizophrenia during the 1930s.[20] These treatments generated a comatose state in a patient using insulin, or artificially evoked a convulsion using metrazol, both of which allegedly had a healing effect. Although Dutch psychiatrists were well aware of the risk these therapies also posed, they considered them to be promising because of beneficial effects at least for some of the patients. It had been noted for example, in the application of metrazol therapy, that patients could experience a frightening sense of hopelessness, sometimes described as near death experience, just before the onset of the convulsion. Some suggested that accompanying psychotherapy might mitigate such effects. Still, with few effective treatments available, psychiatrists embraced the new somatic treatments as approaches with promise and potential for cure.[21]

Importantly, these new somatic treatments depended on competent nursing.[22] Probably not unrelated to the popularization of these treatments by the mid-1920s the clinic in Groningen had increased its nursing staff significantly and nursing education was expanded. The psychiatric clinic had grown from a 40-bed-unit in 1915 to one for 127 patients ten years later.[23] Each year a few student nurses sat the exam in psychiatric nursing and obtained the so-called B-diploma.[24] A training course in psychiatric nursing was introduced as well. By 1930, the clinic counted 30 student nurses and several graduated nurses.[25] Labour intensive somatic treatments may have raised the demand for nurses, not only for more nurses but also for nurses with particular competencies to be able to attend to the patient, monitor bodily functions and patient reactions resulting from the treatments and intervene as required to keep the patient safe.[26] Application of the new somatic treatments entailed new medical knowledge on how to best apply the therapy, which psychiatrists shared in professional journals and during conferences or site visits,

[19] Vijselaar 2010, pp. 183-198; Gijswijt-Hofstra/Oosterhuis/Vijselaar/Freeman 2006, pp. 44-47; Schmuhl/Roelcke 2013.

[20] Van der Scheer 1941.

[21] Vijselaar 2013; Hutter 1941.

[22] Jelgersma 1937.

[23] AR-APSAZG, 1915, 1925.

[24] AR-APSAZG, 1911, 1915. Similar to the United Kingdom, the Netherlands had a separate register for psychiatric nurses. The A-registry was for graduates of general hospital schools (A-diploma). Graduates of nursing schools in mental hospitals received a B-diploma and were registered on the B-registry. See: Aan de Stegge 2012.

[25] AR-APSAZG, 1930.

[26] Jelgersma 1937; Hamer /Tolsma 1956, pp. 558-559. The latter textbook explicitly stated the need for schooled personnel in case of monitoring patients during insulin treatment for example, which, according to the description, typically involved a 30-day routine of a daily hypoglycemic coma lasting one to one-and-a-half hours whereafter the patient was awoken by administering a sugar or glucose solution typically given by tube feeding. Nurses had to monitor bodily temperature and respiration, monitor for signs of transpiration, changes in skin color, properly inserting feeding tubes, and, in case of a crisis, intervene by stopping the comatose state by administering glucose or giving an injection. They also provided the patients with a meal and a bath afterwards, and provided consolation. Physicians had to be on call, the authors pointed out, whereas nurses stayed with the patients, who were not to be left alone.

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but it also expanded the need for nursing knowledge and training, so nurses would be able to assist with treatments and careful monitoring of patients.[27]

A detailed account in the Dutch Journal of Nursing in 1937 of the application of metrazol therapy, the fore-runner of ECT, by psychiatrist Jelgersma gives insight in the demand for and acknowledgement of nursing competency during this therapy. He pointed out that the therapy required four nurses: 'While the physician prepares the injection,' Jelgersma wrote, 'one of the nurses ties the arm, a second nurse stands on the other side of the patient with a rubber mouthpiece (to hold between the teeth during the insult), a third holds the arm still for the injection, and preferably a fourth nurse is available to help.' Because of its complexity, he asserted, 'competent help of nurses, who understand what is going on and what needs to happen is therefore required.' Afterwards a patient could vomit, experience a head ache, or be 'in great need of company or can be confused or unpredictable in their actions,' he stated, and would need close observation, bed rest and regular checks of the pulse.[28] Jelgersma's instructions also reveal the work was conceived as a hierarchical relationship suggesting a power differential reflected in the organization of the work: nursing assistance during the treatment and careful observation was essential, while the physician took charge of the diagnosis, prescription and technical part of preparing and giving the injection. Nurses also provided consolation and close monitoring afterwards, staying with the patients.

Considering the extent of this hierarchical arrangement around ECT and other somatic treatments, it is noteworthy that the report of the launch of another type of therapy, the so-called Active Therapy, related in the annual report of the Groningen clinic in 1931, affirmed the involvement of nurses differently. Van der Scheer had been instrumental in introducing this therapy in the Netherlands – a form of occupational therapy introduced in the 1920s and 1930s – as superintendent of the Santpoort Asylum near Amsterdam, prior to his appointment in Groningen.[29] He wanted to start it in the Groningen clinic too. To familiarize nurses with this work, which entailed involving patients in meaningful activities, the report noted that Van der Scheer sent two of them off to his former workplace, 'to study this topic.'[30] Being send off to study suggests a slightly different power differential around the role of nurses envisioned and the knowledge developed. Probably because this work required domestic, behavioural and pedagogical knowledge more so than bio-medical expertise, doctors might have found it easier

[27] Vijselaar 2013; Aan de Stegge provides an analysis of psychiatric nursing textbooks, and found that information on somatic treatments was newly included in the 1929 edition of a regularly used (and reprinted) nursing textbook; additional textbooks on basic physics and chemistry for nurses appeared in 1926 and 1936 respectively: Aan de Stegge 2012, pp. 445-447. Boschma 2013; Nolte 2017. Karen Nolte makes a similar point about nursing expertise and early use of ECT based on an analysis of patient records in the University Clinic of Würzburg in the 1930s and 1940s: Nolte 2017, pp. 140-147. She found that results of ECT therapy were mixed and patients often feared it, especially during the time it was administered unmodified.

[28] Jelgersma 1937, pp. 476-478. Translation of quotes by the author. Metrazol therapy included administration of metrazol by injection.

[29] Aan de Stegge/Oosterhuis 2010.

[30] AR-APSAZG 1931, 6. Italics and translation by the author.

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to allow nurses some independence in developing this work as compared to biomedical treatments, such as ECT.[31]

ECT was applied widely throughout the 1950s characterised by the described hierarchical work relationship. Jaap Prick, a psychiatrist from the St. Canisius Hospital in Nijmegen who had started his career in 1947, confirmed: 'Yes,' he said, 'ECT I did myself, indeed, push the button'.[32] He regularly performed ECT with help of nurses: 'ECT you always did together, especially before anesthesia. A nurse had to put a piece of rubber or towel between the jaws.' Prick noted the importance of competent nursing:

'For severe neurotic cases we did insulin shock. We brought the patient into a hypoglycemic state. But you had to watch carefully. When the patient began to sweat, or turned red, you had to give them sugar, using a tube. The tube had to be put in the stomach properly. Nurses had to be properly instructed and knowledgeable.'

Work relationships had to be negotiated as an act of mutual dependency indicating how the use of the machine was part of a technological system, in which expertise was negotiated and appraised in a relational context. Prick, for example, preferred to hire nurses with a diploma in general hospital nursing (the "A"), as well as the B-diploma in psychiatric nursing as both areas of expertise were necessary and enhanced the success of somatic therapies. Nurses' expertise in close observation of the patient, provision of comfort and ability to check bodily functions was important in conducting ECT. Similarly, a 1956 textbook for psychiatric nurses contained detailed instructions on required nursing care, competence and assistance during and after ECT.[33] Prior to the procedure nurses had to ensure quietness and calm for the patient. If the patient was anxious a sedative could be asked for. Also, the necessary equipment had to be prepared, and nurses had to make sure the patient would not take any food prior to the procedure to avoid risk of aspiration, especially in cases where curare was used as an anesthetic, the book stated. The patient should have urinated prior to ECT as well. Experience with anesthetics was in its infancy then and required careful attendance.[34] During the procedure the nurse had to provide comfort, placing a pillow under the head and back, a rubber device in the mouth, and gently hold the arms and shoulders because of the risk of fractures. Equipment for giving oxygen also should be ready for use, making sure cylinders were filled, as was equipment of intubation, in case such was necessary. These were nursing responsibilities as was assisting in administering them. Care after the procedure required competence as well, because the patient could be restless, was at risk of falls, and therefore "one never should leave the patient alone" until they were fully awake and in a calm state. Vital functions had to be checked. Risk of difficulty with breathing or mucus secretion needed to be attended to, as was the responsibility to attend to fears patients might have, or to experiences of disorientation or amnesia afterwards. Nurses were also in a position

[31] Aan de Stegge/Oosterhuis 2010.

[32] Interview with psychiatrist Jaap Prick by author, 21 April 2011. Quotes from this and all other interviews are translated by the author. St. Canisius hospital had a clinic for psychiatry since 1926. Jaarverslag [Annual Report] St. Canisius Ziekenhuis 1926.

[33] Hamer/Tolsma 1956, pp. 555-559.

[34] A point confirmed by Goos Zwanikken, psychiatrist in Nijmegen who had started his career in the 1950s and regularly conducted ECT. Interview with Goos Zwanikken by author, 24 February 2011.

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to overhear patients' conversations amongst themselves about the procedure. Such bonding might be beneficial, it was stated, but it should not digress into patients making each other anxious - nurses should attend to these conversations. Interestingly, it also was spelled out that the maintenance of the ECT machine itself was a nursing responsibility, followed by more detailed instructions: making sure the electrodes to be placed against the head were moist before the procedure, putting no moist electrodes on the machine, and rinsing them afterwards. Cords should not be overstretched, the machine kept 'dust- and stain free,' and not be damaged by bangs or bumps when transported. [35] It should be noted that the nursing textbook knowledge was all framed and written by psychiatrists, who carefully controlled the relationship and training of nurses. As such, the textbooks appeared to be an instructional device that not only told nurses what to do but also instilled them with a framework of interpretation of their work that was grounded in careful listening to what the doctor had to say. At that point in time nurses had little control over their education. Psychiatrists provided the education and also wrote the bulk of the nursing textbooks.[36]

3 Decline in ECT and increase in biological psychiatry: A new role for nurses

In addition to mental hospitals and university clinics, general hospitals also became an attractive site for specialized psychiatric departments from the 1960s onwards.[37] These sites' attractiveness grew, in part because of new schemes of public health insurance supporting admission, but also because a psychiatric department in a general hospital seemed a less stigmatizing alternative for mental hospital admission.[38] Still, the use of ECT decreased from the late 1950s onwards, mainly for two reasons. Firstly, intra-professional tension arose in psychiatry in the interwar period between medical-biological and psychogenetic, or psychoanalytic, explanations of mental disease, with the latter gradually growing more prominent. Psychiatrist Prick, for example, favoured a biogenetic view of psychiatry, ascribing the cause of psychiatric diseases to neurological and physiological explanations.[39] Yet, a psychogenetic, or psychodynamic view was grounded in psycho-analytic theory, and assumed that psychological causes or conflicts formed the basis of mental illness. Freud had been influential in claiming this point. While Prick was a proponent of the medical-biological view, leaning towards neurology, this gradually became a minority standpoint. Psycho-analysis and therapy began to dominate psychiatry despite the new stimulus of the somatic treatments.[40] Secondly, the advent of psychotropic medication in the 1950s further reduced ECT use during the 1960s. Whereas for some the new medications confirmed the organic nature of psychiatry, finally enabling treatment of organic causes with chemical remedies, proponents of psychotherapy saw medication (and ECT) as a measure to

[35] Hamer/Tolsma 1956, pp. 555-559. The quote is on p. 555, the description of the machine's maintenance on p.557.
[36] Aan de Stegge 2012, pp. 155-197, 421-504. This power dynamic began to shift in the 1970s and 1980s.
[37] Boschma 2012, 2013.
[38] Dolk 1956.
[39] Interview Prick.
[40] Abma/Weijers 2005, pp. 63-106, 175.

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apply psychotherapeutic treatment more effectively.[41] Moreover, psychiatry and neurology were formally split into separate medical fields in the early 1970s in the Netherlands, and a psychodynamic perspective dominated psychiatry over a medical-biological one.[42]

Mixed results of ECT therapy, limited theoretical explanation of its working, and the way its therapeutic use could be justified in a variety of ways may have played into this ambivalence, making medication seem a more viable approach.[43] Although ECT brought considerable, and often rapid relief to some patients experiencing severe despair in psychotic depression, and was therefore sought after by some, others did not experience any improvement at all and fear for the treatment persisted. Power to refuse the treatment might have been very limited, or non-existent for involuntary admitted patients. Even though ECT could be used effectively in case of depression, it also was understood and used as a way to counter excessive agitation. Without a clear therapeutic rationale, or, as medical historian Joel Braslow has effectively argued, within a therapeutic relationship in which a patient's symptoms of agitation might be considered a reason for ECT, the alleged legitimate use of the therapy could tip over into a form of restraint, and be used as a disciplinary or corrective measure instead of as a helpful, empathic intervention, both of which reportedly did occur. From a social and ethical perspective, doctors' views as to the necessity of the treatment typically took precedence over insights or preferences of patients. In the late 1978 formal procedures for informed consent were only beginning to be considered in medical practice and patients had little say in their treatment.[44] Still, the way in which ECT resulted in rapid and effective relief in some cases of severe depression (in ways medication did not) remained a significant clinical insight; practical results were not only vividly remembered and recalled in interviews by patients as well as professionals, but also figuring as an argument in support of ECT when controversy over its use grew.[45]

The clinic in Groningen revealed this trend in the 1960s and 1970s, showing how the practice of ECT did not entirely disappear, nor did biological explanations. Although neurology and psychiatry had split into two medical specialties, psychiatry still included reliance on biological approaches, particularly as the use of psychotropic medication became more prominent. In 1963, Kuno van Dijk, a prototypical psycho-analyst, was appointed Professor and Head of Psychiatry at the clinic. With substantive foresight that psychiatry would continue to require a biological foundation in addition to social and psychological ones, he encouraged the establishment of a

[41] The movie Snakepit (1948) exemplifies this viewpoint, which also has been described as an effect of other somatic treatments. Vijselaar 2010, p. 191.

[42] Interview Prick. Abma en Weijers 2005, pp. 94-99, 104-106. In the early 1970s the law on registration of medical specialties changed and in this process neurology and psychiatry became two separate medical specialties each with their own registries and training requirement. The split was formally enacted in 1972. Abma/Weijers 2005, p. 105.

[43] Interview with Zwanikken and Joke Zwanikken-Leenders (nurse) by author, 10 and 24 February 2011.

[44] Bradslow 1997, pp. 104-117; Vijselaar 2010, pp. 193-95; Shorter 1997, pp. 214-224; Rooijmans 1978. About the introduction and regulation of informed consent: Koster 1992; Witmer/de Roode 2004.

[45] Interview Zwanikken and Zwanikken-Leenders; Interview with psychiatrist Fons Tholen by author, 15 March 2011; Aan de Stegge 2012, pp. 602; Nolen 1999.

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new subfield of biological psychiatry to enhance the scientific foundation of medication use.[46] In 1966, he appointed one of the first professors in biological psychiatry in the Netherlands, Herman van Praag, who became internationally known for his physiological and biochemical based research in depression.[47] Van Praag was instrumental in maintaining ECT treatment in this clinic, which he occasionally applied.[48]

To assist him in the new biological research, Van Praag hired a nurse, Louise Dols. The expansion of her nursing role beyond immediate patient care illustrates the way new research contexts of psychiatry also created new nursing roles, albeit in this case within a traditional medical hierarchy.[49] Dols worked with Van Praag from 1968 onwards until he left for an appointment in Utrecht in 1977. The 1960s were turbulent times in the Netherlands, Dols remembered: 'There was a very permissive attitude suddenly'.[50] Significantly, it was Dols' general hospital training that made her well suited for the job. She had obtained her A-diploma in general nursing and knew very little about psychiatry and had no B-diploma. Probably Van Praag appreciated her general hospital background and the fact that she was neither affected by the anti-psychiatric mood nor steeped in psychoanalytic approaches. Dols did know medication and nursing, two ingredients essential to the new screening of patients in new biological research. She was appointed as a 'research nurse,' a new role she herself helped to create: "Why don't you call me a research-nurse," she had suggested, similar to 'research-lab technician', an already existing position in the hospital.[51] Dols pioneered a new domain of research involvement for nurses. She had to be diplomatic about her work because the idea of biomedical research and screening of patients was met with resistance amongst the nurses in the clinic: 'Application of numbers,' Dols remembered, 'nurses saw as objectifying patients'; allegedly 'there was no [therapeutic] relationship.' She recalled how Van Praag occasionally did apply ECT treatment, in cases of severe depression. It was always done with anesthesia, 'very carefully', she noted, but infrequently, reflecting the drop in its use in the 1960s.[52] Use of anesthesia in combination with muscle relaxants grew more common in ECT treatment to reduce adverse effects, but it also stimulated its application in a general hospital environment where expertise in anesthesia was more readily available.[53] When Van Praag left in 1977 his successor also occasionally performed ECT, Dols recalled, and hence the treatment never disappeared in the Groningen clinic.[54]

[46] Interviews with: Tholen; with psychiatrist Willem Nolen by author 15 March 2011; with psychiatrist Frans Zitman by author, 17 March 2011.
[47] Van Praag 1980; Interview Nolen.
[48] Interview with nurse Louise Dols by author, 22 March 2011.
[49] For historiography on clinical nursing research in mental health in the US, see Smith, 2018. In the Netherlands clinical nursing research evolved in the 1980s. A university department for nursing science opened in 1980 at the University of Maastricht.
[50] Interview Dols.
[51] Interview Dols; Interview with nurses Piet Gruisen and Hans Warning by author, 22 March 2011; Dols' position was newly created.
[52] Interview Dols.
[53] Interview Van den Broek.
[54] Piet Gruisen also remembered how Van Praag's successor, Rudy van den Hoofdakker, occasionally applied ECT. Interview Gruisen and Warning.

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4 Anti-psychiatry and controversy over ECT in the 1970s and 1980s

Meanwhile, from the late 1960s onward, a rising countercultural movement criticised psychiatry. Mental hospitals, with their alleged authoritative medical model, were perceived as inadequate and triggered activism. Political tension arose over the realities and inadequacies of long-term admission in mental hospitals.[55] Under the influence of broader social, emancipatory, and emerging patient rights movements, internationally the public view of psychiatry turned critical and the Netherlands was no exception.[56] Mental hospitals became the target of social controversy. According to the critique, too many patients were kept in hospital for too long, too isolated from society, and under inadequate circumstances. Biomedical approaches and treatments were seen as inadequate, oppressive and objectifying individual human beings, obstructing their capacity for self-development and obscuring social causes of mental illness.[57] The countercultural-inspired occupation of one mental institution by vocal representatives of an emergent patient movement, Dennendal, became headline news in the mid-1960s and triggered unprecedented political turmoil over psychiatric care.[58] Activism also centered on biological psychiatry, which was seen as representing the alleged objectionable and narrow-focused medical model, with ECT becoming an essential symbol of the critique. Its alleged widespread use in mental hospitals, particularly as a method of discipline and punishment, stirred public debate and provoked political action. Professionals, activists, family members, and patients alike protested against the use of ECT. The editorial board of the newly established newspaper, the *Gekkenkrant* [The Mad-News] was an instrumental force in bringing diverse activist groups together and sparking media attention. In 1977 their rallies culminated in a National Anti-Shock Action (NASA) protest.[59] Names of psychiatrists who continued to perform ECT were placed on a 'black-list.' Van Praag was also targeted; at a symposium on biological psychiatry in Utrecht in the late 1970s, a smoke-bomb was thrown into the lecture hall. At another symposium on ECT in 1984, the Mobile Police Unit was called for assistance.[60]

At several mental hospitals' nurses joined the anti-psychiatric revolt and formed action-groups – student nurses, bonded through their training, protested not only oppressive patient treatment, but also authoritarian educational structures. In Arnhem, for example, a group of psychiatric nurses from the Wolfheze mental hospital joined the ECT protest at the gate of the municipal

[55] During the 1950s family awareness and resistance against inadequate institutional care began to gain momentum. Corrie van Eijk-Osterholt was one of the first family members to express her concerns to the Mental Health Inspectorate. Hunsche 2008; Van Eijk-Osterholt 1972.

[56] Aan de Stegge 2012, pp. 706-716; Blok 2004; Gijswijt-Hofstra/Oosterhuis/Vijselaar/Freeman 2006; Beyer 2017; Rotzoll 2017.

[57] Blok 2004.

[58] Activists included academics, ex-patients and professionals alike: Heerma van Voss 1978; Fox/Van Herk/Esselink/Rijkschroeff 1983.

[59] Blok 2004; "Speciaal Voor U: De Zwarte Lijst [Van Artsen Die Shocken] [Especially For You: The Black List of Doctors who Shock] 1977, pp. 10-12.

[60] Interviews Nolen and Dols.

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hospital in the June 1977 rallying to stop ECT.[61] Their anti-psychiatric stand was intertwined with their increasing discomfort with the strict rules, regulations and medical hierarchy of their training system.[62]

Trying to stem the turmoil among nurses, the editors of the Journal of Nursing started a discussion series on ECT in 1977, but without much success; no nurse responded. Perhaps because psychiatrists wrote the series, nurses did not react – nurses began to resist medical domination. Instead, they felt pressured to articulate their own professional identity in the face of new competition from a variety of new occupational groups in psychiatry, such as pedagogical mental health workers, therapists, and institutional assistants. These groups intruded into their occupational terrain, while nurses still were controlled in a medically dominated hierarchy. 'Is this profession of psychiatric nursing still viable,' one nurse leader lamented, showing an identity crisis among nurses over their profession.[63] Gradually, reform began to transform nursing the education of both general and psychiatric nurses.[64] In general hospitals and university clinics, nurses seemed less involved in political activism. These nurses were 'more encapsulated' in the medical model, one former leader of the anti-psychiatric movement pointed out to me.[65]

The controversy over ECT soon generated debate within municipal councils and the national parliament, in part because several of the mental hospitals in which activism was stirred were municipal institutions or linked to municipal or provincial governments.[66] Hence politicians with ties to such local interest groups began to raise the matter in municipal and provincial councils and the national parliament. In response, the national government requested formal advice on ECT from the National Health Council. In 1983 the Council concluded that ECT had its value as a medical treatment and should be allowed under certain restrictions, such as regular inspection for compliance with regulations, as a measure of last resort, and only with patient or family permission by means of informed consent. To not withhold a treatment that might have benefit to some people was an important ethical consideration, but procedures for informed consent were also implemented, which was a considerable change in view of the fact that public debate over informed consent in medical practice was only beginning to take shape.[67] Using ECT as a measure of last resort only after other treatments such as medication had been tried seemed a compromise adapting to the Dutch context.[68] Based on this advice, governmental ECT guidelines were accepted and published in 1985 and an inspectorate established, including a registration system for the treatment. Eventually, in the 1990s, this system of governance was transferred to the psychiatric profession overseen by the ECT Working Group of the Dutch Psychiatric

[61] Newspaper clipping 1977a, 1977b.
[62] Heerma van Voss 1978.
[63] Vermaas 1980.
[64] Aan de Stegge 2012, p. 737. For Germany see Rotzoll, 2017; for the UK see Nolan, 1993.
[65] Flip Schrameijer, sociologist (Seminar presentation, University of Utrecht, 28 March 2011).
[66] Vos 2007, p. 143.
[67] Koster 1992; Witmer/de Roode 2004.
[68] Nolen 1985.

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Association. The publication of the ECT guidelines seemed to stem the tide of widespread public protest.[69]

5 Towards a new acceptance of ECT: A new specialized role for nurses

In a sense, the governmental ECT guidelines acknowledged ECT as an acceptable treatment, and from this time on ECT treatment gradually expanded again, although protests continued throughout the 1980s. In 1985, for example, the anti-psychiatric 'Nuts Foundation' in Nijmegen organised a public debate when ECT was reintroduced in the Nijmegen University Hospital.[70] The panel, which attracted over 200 attendants, included a nurse, Ganny Boer. She was among a list of well-known public speakers on the topic, such as the provincial Inspector of Mental Health Care, and the Patient Ombudsman. Her presentation clearly reveals the shift towards acceptance, and the professional opportunity ECT eventually provided for nurses.

Ganny Boer represented the Dutch Nurses Association. Her speech gives insight into nurses' changing professional involvement in ECT.[71] Ganny told the public how she had been delighted at first to be invited on the panel to voice nurses' opinion. But she soon found herself disillusioned when preparing her speech. It transpired that her Association did not have a formal standpoint on ECT and her own views 'were all from pre-1978'. She probably remembered the NASA anti-shock actions, but had little knowledge of what had happened since. Upon inquiry, she learned about the new 1985 ECT guidelines. To find more information, she contacted a colleague from the Psychiatric University Clinic of Groningen, who had presented 'a small study' on ECT at a symposium in 1984.[72] To her dismay, that survey of 40 nurses working in the Groningen clinic revealed that 'only one of them turned out to be against ECT'. Still not convinced that these results were fair, Ganny surveyed another 20 of her own colleagues from the Nurses Association. She was surprised to find these 20 colleagues were also in favour of ECT; it had given them an opportunity to participate in decision-making in multi-disciplinary teams in their workplace, they told her, enabling them to influence policy and practice. The clinics most of these nurses referred to or were employed at had become referral centres for ECT, established in response to the governmental ECT guidelines, where clients came for a six-week observation before ECT was performed as per the new guidelines. To Ganny's surprise, nursing care plans and systematic observation by nurses actually mattered in these clinics. Nurses' input was valued by the interdisciplinary team. Nurses had gained a professional voice, Ganny concluded, a significant change from their earlier subservience to the medical model. Significantly, ECT had enhanced their professional status and identity, Ganny now argued, and this new identity provided an opportunity to advocate for the patient. Ganny's view had clearly changed. Implicitly her speech serves as a commentary on the shifting professional context for nurses during the 1980s, both

[69] 'Richtlijnen Over Electroconvulsie-Therapie' [Guidelines on ECT] 1985; Interview Van den Broek. The ECT workgroup (Werkgroep ECT Nederland) was established in 1995.

[70] 'Terugkeer van de Elektroshock' [Return of ECT, Report] 1986.

[71] Ganny Boer represented "Het Beterschap" [Dutch Nurses Association]. Her speech is listed in 'Terugkeer van de Elektroshock', pp.10–13, see previous note.

[72] The study was reported in Nolen1985, p. 298.

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in terms of education and professional emancipation. Their participation in ECT had provided them with new professional avenues.

My oral history interviews in the Groningen clinic confirmed this observation. During the 1980s, few nurses in this clinic were against the application of ECT. The nurses I interviewed had worked in the clinic during the 1980s on the unit where ECT was applied.[73] Two of them were graduates of the B-psychiatric nursing education program at the clinic, but also had their general hospital nursing diploma [A-diploma] prior to their enrolment in the psychiatric nursing training. Gerard Meurs had worked in intensive care prior to enrolling in the clinic's last class of the B-diploma in psychiatric nursing. Curiosity had attracted him to psychiatry. He did not remember whether ECT had been covered in his courses, but when he was appointed on the unit where ECT was occasionally given, he did not mind. Whilst it was controversial to some, he observed that patients sometimes benefited from ECT: 'Often it was a situation of which you thought, "things can't continue like this," and then ECT was a measure of last resort.'[74] Moreover, the technical side of the care actually appealed to him. He was well grounded in physiological care and medical intervention as a result of his previous education 'in the A [i.e. the general hospital].' Meurs remembered that one of the nurses, who happened to be on duty that day, would accompany the patient to ECT treatment, but always on a voluntary basis. His colleague Piet Gruisen, had a similar memory: 'among the general public the image of ECT as "not done" prevailed. Some looked down on the fact that the [university hospital] still did this', he noted, 'but I am actually glad that [we] still continued it'.[75] Having seen its effect, both nurses were in support of ECT and considered it a useful medical intervention in some instances.

Procedures were followed, they noted, and guidance of an anesthetist accompanied the treatment: 'At first there was a designated room on the unit', Gruisen remembered. 'The anesthetist came there too, and the equipment was there.' But in the early 1980s, ECT was performed in a better equipped operating room. These general hospital rooms enabled proper monitoring and anesthesia. When patients were transported in a shuttle bus over the hospital grounds, a nurse always accompanied and stayed with them afterwards, regularly checking vital signs, Gonda Stallinga remembered. She had worked in surgery and general medicine before coming to psychiatry in 1982. ECT sparked her curiosity: 'I was neither positive nor negative, but mostly curious', she said.[76] 'When I came to work [in this mood disorder unit] I noticed an ECT schedule hanging on the office wall. Certain patients, particularly ones depressed for a long time, [were on ECT]. They already had tried medication or sleep-deprivation,' she recalled, 'If nothing worked ECT was given.' Stallinga's comments illustrate the effect of the 1985 governmental guidelines on ECT procedures in that ECT would be recommended only after other available treatments had been tried. Stallinga was interested in the medical side of things: 'It interested me, I already had a liking for somatic care.' She recalled, 'The actual treatment lasted only for a short moment, patients had to stay in bed for a while, and we had to check vital signs.' Grounded

[73] Interviews by author with nurses Gerard Meurs (23 Feb 2011), Gonda Stallinga (15 March 2012), Piet Gruisen and Hans Warning (22 March 2011).
[74] Interview Meurs.
[75] Interview Gruisen and Warning.
[76] Interview Stallinga.

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in medical thought and treatment, these nurses were accepting of ECT and saw it as an acceptable option when other treatments failed.

A last uprising of ECT protest in the Netherlands occurred in 1990, when three Amsterdam hospitals decided to reintroduce it.[77] Indicative of nurses' ambivalence over its use, in one hospital half of the nurses of the psychiatric department resigned overnight in protest.[78] Despite the commotion, then head of the department Frank Koerselman used the walk-out as an opportunity to appoint a new group of nurses who were in support of ECT.[79] Soon thereafter protest died down; as biological psychiatry gained ascendency in psychiatry, ECT's acceptance grew.

In the Groningen clinic, the responsibility of guiding and observing the patient before, during, and after ECT developed into a specialised nursing role during the 1990s. One of the staff nurses took the new post-graduate course for Nurse Specialists and became responsible for coordinating ECT care in the clinic, Gruisen recalled.[80] In 2010, another nurse, Hans Warning, was appointed, who took on the role of ECT coordinator. He was formally appointed as a Nurse Specialist in consultation (liaison) psychiatry.[81] Prior to his appointment at the Groningen clinic, he had set up protocols for ECT in a nearby general hospital, at which ECT had been introduced in the 1990s.[82] Consultation-psychiatric nursing was Warning's specialty. As ECT coordinator, he took on a more independent and specialised role, grounded in specialised nursing education and the new, formally legislated professional responsibility of a Nurse Specialist.[83]

At another mental health facility nurse Franklin Dik had obtained a similar specialised role and formal appointment as Nurse Specialist. Similar to Warning, he was appointed as psychiatric-liaison and ECT nurse specialist at a new mental health clinic adjacent to one of the general hospitals in Rotterdam.[84] As discussed, new legislation under the Health Profession Act in the Netherlands had formalised new advanced nursing practice roles such as those of Warning and Dik.[85] Both of them had obtained new appointments in the dual role of psychiatric-liaison nurse and ECT coordinator with considerable professional independence and specialized expertise. Some scholars have argued that domains of nursing with high use of technology, such as intensive care or emergency nursing, tend to attract more male nurses, indicating patterns shaped by cultural influences of masculine values and career opportunities.[86] Although ECT nursing could be argued to be such a domain, whether such general patterns are adequately

[77] Koerselman/Smeets 1992.
[78] Interview with psychiatrist Frank Koerselman by author, 6 July 2011.
[79] Interview Koerselman.
[80] Interview Gruisen and Warning.
[81] See note 8 regarding the legislation providing the legal framework for this designation and role. Interview Gruisen and Warning.
[82] Interview Gruisen and Warning.
[83] Interview Gruisen and Warning; Note 8 above.
[84] Interview with nurse Franklin Dik by author, 20 June 2011.
[85] While there were slight differences in the designated roles of Franklin Dik and Hans Warning, both had an expanded set of professional responsibilities and were involved in a shifting context of clinical decision-making context over ECT.
[86] Evans 2004; Lindsay 2007.

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perceived or might have been at play in these nurses' career choices would be difficult to judge based on these two particular situations, and would require further study.[87] The opportunity the new ECT nursing role provided them to advance nursing practice based on their clinical expertise figured as a particularly motivating influence for Warning and Dik.[88]

Franklin Dik was one of the first nurses in the Netherlands to be qualified and certified under the Act to perform ECT under arms-length guidance of a psychiatrist in 2011.[89] The particular afternoon I interviewed Dik he was managing the ECT clinic held that afternoon in a day hospital setting, a site purposefully used to accommodate ECT treatment and recovery afterwards. He had five patients scheduled for ECT therapy that afternoon. Some came from home, others from a nearby mental hospital accompanied by a nurse, and others from the adjacent mental health clinic. Typically each patient received a series of ECT treatments on a weekly or monthly basis. Dik had arranged that the patients would come with the same nurse as much as possible to assure consistency and continuity in their care. To make the care less intimidating, 'I also have moved ECT from the (old) operating room' and brought it over to the Day Treatment Clinic, he noted: '[That old operating room] instilled too much fear in the patients.' Still, that location had already been a major improvement from the way ECT was conducted prior to that arrangement, Dik pointed out. Then it was conducted on the grounds of the mental hospital where 'the facilities were not optimal', Dik recalled. As the managing nurse, Dik was able to establish a care ethic that not only addressed individual patient needs, but also implied directing the care environment, indicating the professional stance of an advanced practice role. In this role he also provided consultation to other units and nurses in mental health settings in the region. During the afternoon's visit, I was able to observe the treatment and care provided in well-equipped rooms, both for the procedure and recovery. Patients remained at the Day Treatment Clinic for a couple of hours following the procedure, closely observed by the recovery room nurses who consulted with Dik on a consistent basis. Dik's leading role in the clinic built upon a longstanding career in mental health nursing in which he had not only observed the transformations in the performance of ECT, but also helped establish them, similar to Warning's role in the Groningen clinic. Their advanced expertise on the matter was clearly needed and relied upon. The expansion of consultation (liaison) psychiatry, the need for more complex close observation during and after ECT treatment, increased application of ECT since the 1990s, and the new cultural acceptance of biological psychiatry all shaped the expansion of this new advanced nursing role.

6 Conclusion

The historical analysis of ECT in Dutch psychiatry affirmed that nurses were involved with ECT from the outset. Both medicine and nursing are characterised by a long history of transferring procedures and interventions once central to the jurisdiction of medicine to nursing whether that entailed measuring vital signs or advanced practice skills such as IV-therapy and hemodialysis.[90]

[87] New perspectives from masculinity studies on men in nursing: Schwamm 2017; On gender constructions in caring work: Davies 1995; Wecker 2006; On the history of men and gender in psychiatric nursing: Boschma 2003, pp. 175-196; Boschma/Yonge/Mychajlunow 2005.

[88] Interviews Gruisen and Warning, and Franklin Dik.

[89] Interview Franklin Dik.

[90] For details see notes 2-4 above.

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From the theoretical perspective of objects and use of technology as a complex social system, the transfer of ECT coordination to nurses seems another example of such jurisdictional renegotiation. Nurses' engagement and the transformation of their role in ECT and the way the introduction of the ECT machine reshaped nursing practice must be understood in its complex relational and social context. The ability for nurses to define and control nursing knowledge and practice in the psychiatric domain was circumscribed and influenced by the dominance of the psychiatric profession over the field of nursing. On the one hand, this dominance drove nurses to join broader social protest in the 1970s and 1980s – they wanted more say and participation – but it also compelled nurses to define their expertise in a widening range of therapeutic roles in the mental health field from the mid-1980s onwards. Although nursing's traditional close ties to medicine and medical knowledge and therapies has been a source of ambivalence and professional tension, the connection also gave nurses new opportunities to renegotiate their expertise in the domain of biological psychiatry. As ECT became more accepted during the 1990s, nursing's grounding in the medical domain realigned them with medicine in new ways, opening new professional avenues in nursing expertise and advanced practice.

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