

Prehistory of the problem

How did the discipline of nursing come to be in a position where significant parts of nursing theory and research are thought to be irrelevant to nursing practice? One might think that the relevance gap arose in the 1970s because only then was there sufficient nursing theory for there to be a theory–practice gap. It would be a mistake to begin the story there. While the development of nursing’s research program in the 1950s and 1960s was revolutionary for the profession, theory has been important to nursing since its inception. To understand how the theory–practice gap arose, and why the relevance gap emerged when it did, we have to understand how the relationship evolved between professional nursing and the theories that supported it.

The domain of nursing

Florence Nightingale is praised for her work in identifying the nurse’s role in health care, for establishing nurse training, and for her theoretical writing. All three were important for the subsequent development of nursing attitudes toward theory. *Notes on Nursing: What It Is and What It Is Not* (Nightingale, [1860] 1969) makes two kinds of contribution to theory. It described a domain of nursing expertise that was independent of the physician’s expertise. Specifically, the nurse was oriented toward the environment of the patients, everything from the condition of their bandages to the layout of their sickrooms. From Nightingale forward, then, one kind of theoretical writing in nursing has been to define nursing: to identify the proper scope of the nurse’s action, the kinds of nursing response to the patient’s needs, and the values that inform nursing actions. Nightingale asked the philosophical question “What is nursing?” and she gave a philosophical answer. She analyzed the nurse’s role with an eye toward the values that dictate what it should be (as opposed to the facts about what it is). Nightingale’s other theoretical contributions

were more empirical. It is often forgotten that in *Notes on Nursing*, Nightingale rejected the germ theory of disease. The germ theory was just emerging in this period, and while it was known as a possible account of disease, it was not widely accepted. Nightingale preferred a late form of the Galenic theory of disease, and she believed that the diseased state of humans sometimes arose directly from their environment (Nightingale, [1860] 1969, pp. 32–34). While this theory of disease did not survive into the twentieth century, it was an important part of Nightingale’s justification for the nurse’s role. Physicians were to address the problems with the body that caused disease (imbalance of the humors), while nurses addressed the environmental causes. This gave nurses a domain of expertise that fell outside of the physician’s domain.

While we can recognize her empirical writings as important theoretical advances in nursing, Nightingale probably would have been reluctant to call them “theory,” or to say that nurse training required much in the way of “theory.” Indeed, she sometimes expressed a rather ambivalent attitude toward theory. In an 1881 address to the nurses at St. Thomas’s Hospital, she wrote:

“You are here trained for nurses—attendants on the wants of the sick—helpers in carrying out doctor’s orders (not medical students). Though Theory is very useful when carried out by practice, Theory without practice is ruinous to Nurses.” (Vicinus & Nergaard, 1990, p. 385)

This sentiment was echoed elsewhere in the late nineteenth century nursing literature. In the 1895 essay “Comparative Value of Theory and Practice in Training Nurses,” Brennan wrote:

“Theory in conjunction with practice is what we want, and although it is undeniable that theory has done more to elevate Nursing than any amount of clinical practice alone could have done, we still must remember that ‘too much reading tends to mental confusion.’” (Brennan, 1895, p. 355)

These passages warn nurses against delving too deeply into theory. This is puzzling because both authors clearly think that knowledge of theory is necessary to good nursing. This tension between the need for theory and the danger of too much theory highlights the role that theoretical knowledge played in nineteenth and early twentieth century nursing. Both authors make these remarks while discussing obedience. The role of nurses, both Nightingale and Brennan argued, is to carry out the orders of the physician. The implicit model is that the physicians are the repository of medical and scientific knowledge. To carry out the physician’s orders intelligently, nurses must know the medical terminology and enough about medical theories to understand what the physician was asking, and why he was asking for it. The sense in which nurses were enjoined not to read too much, or that theory can be “ruinous,” is the sense of “theory” that equates theory with medical knowledge.

Professionalization and the translation gap

The theory required for nursing practice could not be fully identified with medical knowledge, even in Nightingale's time. Nightingale isolated a domain of responsibility where the nurse had expertise. There was, then, a special form of nursing knowledge to be mastered. However, through the late nineteenth and early twentieth centuries, both physicians and nurses expected women to already have this specialized knowledge, at least in part. A young woman with "good upbringing" would already know how to cook and clean, to care for a child or elderly relative, and perhaps to manage domestic help. Her knowledge of the household environment would be refined by apprenticeship in the hospital. The substantive knowledge that was specialized to nursing, contained in works such as *Notes on Nursing: What It Is and Is Not* (Nightingale, [1860] 1969) or *Norris's Nursing Notes: Being a Manual of Medical and Surgical Information for the Use of Hospital Nurses* (Norris, 1891), was largely communicated to the student through experience in the clinic. The knowledge that was specific to nursing was embedded in practice. The pedagogical consequence was that the divide between theory and practice became a divide between knowledge taught in the classroom (or physician's lectures) and knowledge that was acquired in the process of caring for patients. The earliest form of the theory–practice gap, then, was a translation gap. Nurse students and educators faced the challenge of translating medical knowledge into clinical practice.

Throughout the late nineteenth and early twentieth centuries, most of the literature on how theory and practice are related is concerned with pedagogy. Journals for nurses and nurse educators discuss how classroom and clinical work are to be balanced or arranged in the curriculum, and how to test whether the classroom knowledge is being used in the clinical practicum (cf. Norris, 1889, p. 23; McIsaac, 1903; Sellew, 1928). It is a bit surprising, perhaps, that during this period there is *no* literature complaining that theory is irrelevant or useless. Whenever the relation of theory and practice is discussed, the authors presuppose that theory—that is, models of human biology and anatomy, theories about disease etiology, etc.—is relevant to and supports nursing practice. When the theory–practice gap was not strictly pedagogical, it always involved problems of translation. For example, Hyde (1922) complained that what nurses learned in the school setting was often discarded when they entered the profession, not because it was irrelevant, but because the culture of the ward or the pressures of the job kept them from adhering to the ideals they were taught in school. During this period, theory remained relevant to practice partly because nursing stayed in a subservient role. The nurse's job was primarily to carry out the orders of the physician, and knowledge of the physician's theories helped her do so. The relationship between theory and practice was stable for the first hundred years of modern nursing, but its stability was maintained by a relationship of power and authority. The theory–practice relationship changed as the gender dynamics that grounded the physician–nurse relation evolved.

The drive to create a nursing profession was, perhaps, the most important motive for the rise of nursing research. Nursing was not always considered a profession by its practitioners. Nightingale thought of nursing as a vocation, not a profession,

and she opposed registration and examination of nurses (Vicinus & Nergaard, 1990, p. 416). In spite of her opposition, nursing organizations pushed for professionalization. The British Nurses Association (established in 1888) and the American Society of Superintendents of Training Schools for Nurses (established in 1893) lobbied for nurses in matters of registration and licensure, educational standards, and working conditions. They initiated the first studies of nursing and established journals for the dissemination of nursing knowledge.

The conception of a profession held by nurses in the first part of the twentieth century was strongly influenced by Dr Abraham Flexner. Flexner was known at the time for his influential study of medical education, and nurse leaders tried (and failed) to get the US Bureau of Education to sponsor a similar study of nursing education (McManus, 1961, p. 77). In 1915, Flexner gave an address at the National Conference of Charities and Correction where he proposed criteria for the status of a profession. A profession, he argued, required “essentially intellectual operations with large individual responsibility” and it must derive its “raw material from science and learning” (Flexner, [1915] 2001, p. 156). Flexner’s criteria became the touchstone of nursing discussions about professionalization (cf. Covert, 1917; Roberts, 1925; Bixler & Bixler, 1945; Wolf, 1947, p. 40; Brown, 1948, p. 76). Flexner argued that nursing was not yet a profession (in 1915) because nurses were not sufficiently independent of physicians. “Her function is instrumental,” he wrote, “[I]t is the physician who observes, reflects, and decides” (Flexner, [1915] 2001, p. 158). This characterization was disputed by Emily Covert. Covert argued that “nursing is a science” (Covert, 1917, p. 108) with its own literature, that nurse education was moving away from the apprenticeship model, and that the domain of independent nursing responsibility was expanding.

The professional status of nursing was already a topic of lively debate when Flexner made his remarks, so much so that he prefaced them by saying: “I am conscious of endeavoring to pick up a live wire when I undertake to determine the status of the trained nurse” (Flexner, [1915] 2001, p. 158). The dispute about the professional status of nursing involved three related issues: nursing education, the scope of nursing responsibility, and the intellectual basis of nursing. For Flexner and subsequent authors, status as a profession depended on having a domain of independent responsibility. But responsibility alone was insufficient; the responsibility had to have an intellectual basis. Nightingale had already identified the patient’s environment as nursing’s special responsibility. If nursing was to become a profession, then, the nurse’s knowledge of that domain needed to be based on “science and learning” (Flexner, [1915] 2001, p. 156). This meant that nursing education had to move away from hospital-based apprenticeship and into the universities. It also meant that the intellectual basis of nursing action would need to be identified, and ultimately, developed through research.

Nursing education reform in the United States

The main professionalization effort in the first part of the twentieth century was directed toward reform of nursing education. The early nursing schools were

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affiliated with hospitals. Nurses learned their art primarily through apprenticeship, and hospitals quickly recognized that nursing students provided cheap and plentiful labor. Hospital-affiliated nursing schools thus spread quickly in the English-speaking world. However, the quality of the training varied widely. In the United States, there were many studies of nursing education, of which the Goldmark Report (Committee for the Study of Nursing Education, 1923) and the Brown Report (Brown, 1948) are the most well known. Both were critical of the quality and consistency of nursing schools, and both recommended university-based training for nurses. Brown went so far as to argue for the value of the liberal arts for nurses, in addition to courses in psychology and sociology (Brown, 1948, p. 141).

The move to affiliate nursing schools with universities was an important change. Many nursing schools were very small, and they were staffed by nurses who had been apprenticed, but had no advanced training. Affiliation with universities meant that nurse educators needed advanced degrees. In the 1920s, Teachers College at Columbia University began a masters program in nursing education. Some of these nurses were also trained in research techniques, and they became important contributors to the early study of nursing education (McManus, 1961). There were no doctorates in nursing, and this presented a problem of parity between the faculty of a nursing school and the faculty of the university with which it was affiliated. Brown argued that, if nursing education was to move into the universities, universities would have to permit nurses without PhDs to become professors and directors of nursing programs (Brown, 1948, p. 153). This did not come to pass, and as nursing education became more closely affiliated with colleges and universities, the demand for PhD-trained—and hence, research-trained—nurses increased.

As health care became a more complicated and varied social enterprise, the independence of nurses grew. Public health and private duty nurses had always operated more independently and tended to have more responsibility than their institutional counterparts (Brown, 1948, p. 141). Within hospitals, the medical advances of the early twentieth century made hospital care more elaborate. Nurses were needed to do more than monitor the patient and his or her environment. Nurses were given the responsibility for a variety of actions that were previously restricted to physicians. The domain of nursing activity thus expanded, and nurses were no longer simply carrying out the direct orders of the physician. Nurses were gaining autonomy. At the same time, women were gaining autonomy. World War II saw an influx of women into the workforce in both Great Britain and America. Nursing had helped solidify the notion that women might have a professional life (even if there was a difference between male and female professions). The idea that nursing knowledge could be a simple extension of the woman's household role could no longer be sustained. Nursing required a specialized form of knowledge, and the leaders among nurses recognized that this knowledge needed to be developed through research and taught in a university.

While the need to develop nursing knowledge had been recognized since the early twentieth century, little research was actually carried out. The final push came when the US government began to fund nursing research. During World War II, American government agencies gathered data on the availability and need for

nurses. The importance of nurses and their indispensability to modern health care had become widely acknowledged. Because of this recognition, research on nursing became a public funding priority. In 1948, the US Public Health Service created a Division of Nursing Resources, which eventually developed into the National Institute for Nursing Research. Beginning with small grants from the Division of Nursing Resources, funds gradually became available for nursing research. This began a project of research on the education of nurses, on their job satisfaction and turnover, and on nursing functions and activities (McManus, 1961; Gortner, 2000, p. 61). The journal *Nursing Research* was established in 1952, marking the beginning of a full-blown research enterprise.

Nursing research begins

Early nursing research fell, broadly, into three categories. During the early part of the twentieth century, research by and for nurses focused on educational and professional matters. The bulk of the work published in *Nursing Research* during its first decade continued the tradition of examining nurse education, roles, and job responsibilities. This literature was sociologically oriented and was strongly influenced by mid-century trends in sociology. Gradually, however, studies began to appear that either examined the effectiveness of nursing interventions or proposed a useful way of approaching nursing problems. By the early 1960s, this second kind of research had an established place in the literature.

Systematic treatises on nursing were the third kind of nursing research. Hildegard Peplau's *Interpersonal Relations in Nursing* (1952), Ida Jean Orlando's *The Dynamic Nurse–Patient Relationship: Function, Process, and Principles* (1961), Ernestine Wiedenbach's *Clinical Nursing: A Helping Art* (1964), and Virginia Henderson's *The Nature of Nursing* (1966) were among the first of these. These books had several aims. Primarily, they provided an analysis of nurse–patient (and sometimes nurse–family, nurse–nurse, etc.) interactions. They divided the process of nursing into stages and articulated the roles distinctive of nursing. The conceptual framework was intended to facilitate nursing practice and education. Conceptualizing the process was a valuable aid to making explicit nursing problems and their solution. Finally, these works tried to establish what was special, important, or essential to nursing. They aimed to provide the underlying rationale for the existence of the nursing profession.

As the resources and capacity for research grew in the 1940s and 1950s, there was some discussion about the future directions of nursing research. In the first years of its publication, *Nursing Research* ran a regular column asking subscribers about the research topics they thought most important for nursing. The first expression of concern about the kind of research being done in nursing was an editorial by Virginia Henderson in 1956. She pointed out that in the first 4 years of publication, most of the essays in *Nursing Research* had concerned nurses—their education, occupational role, working conditions, etc.—not the science that supported nursing practice (Henderson, 1956). Henderson's generalization was

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supported by Hortense Hilbert, who surveyed 630 articles published in health journals between 1950 and 1958 (Hilbert, 1959). Henderson and Hilbert were both members of the editorial board for *Nursing Research*, and these leaders were calling for an increase in “clinical nursing research.” As they saw it, this research was to be based on the natural and social sciences. Theory was needed too, but this was not yet conceived in the terms that are now familiar to nurses. In their proposal for “An Experimental Program in Nursing Research,” Eleanor Sheldon and her colleagues wrote:

“Another aspect of nursing research is its lack of theoretical orientation and its strong emphasis on urgency and utilization. . . . However, if nursing is viewed (as medicine could be viewed also) as a process of assessment and remedial intervention, the nursing research might be conceived of as a sharpening of that assessment perspective, the products from which could yield more efficient and refined remedial intervention—for the ultimate purpose of improving the care of patients. A sharpened perspective in relation to research, however, must be drawn from a theoretical orientation or at least a body of content from which to draw and formulate researchable questions. Members of the nursing profession are not ignorant of the dire necessity for some articulated and systematic fund of knowledge on which to build both its present and future practice.” (Sheldon *et al.*, 1959, pp. 169–170)

It is clear from the content of the proposed program that Sheldon *et al.* were thinking of “theory” as a systematic consolidation of natural and social scientific findings relevant to nursing practice. In the 1950s, then, the call for a new direction in research was a call to move away from educational and occupational research and toward a more systematic investigation into the kinds of theory that had traditionally supported nursing practice.

Nursing research thus developed gradually through the first half of the twentieth century. It arose out of the desire to professionalize nursing, and the belief that a profession needed a unique knowledge base to support independent action in an area of expertise. The existing theories—biological, psychological, and social—were held to be relevant and important for nursing practice. Indeed, Henderson’s critique in 1956 was aimed at increasing the engagement of nurses with these established scientific domains, not finding a new frontier for nursing science. Up through the 1950s, there was no concern that nursing research and theory was irrelevant; a relevance gap between theory and practice had yet to arise. This means that the theory–practice gap must be the result of some subsequent development. It also hints that the relevance gap between theory and practice is distinctive of the nursing discipline. It is not a general problem about how academic knowledge is related to practical know-how. If it were, the problem would have arisen during the first hundred years of modern nursing. No, the relevance problem has to do with the way nursing knowledge and the academic discipline of nursing have been conceived, and it is a product of the latter part of the twentieth century.

A philosophy of nursing

The inaugural issue of *Nursing Research* opened with an essay entitled “What is Nursing Research?” (Bixler, 1952). It set the direction for the new journal, articulating a conception of research that was broad and inclusive. Indeed, it was so broad as to call for research in nursing *philosophy*: “There is the greatest dearth at present in the area of philosophical research, in nursing even more than the literature of other professions” (Bixler, 1952). To those of us with a passion for both philosophy and nursing, this allusion is as vexing as it is exciting. Little in the nursing literature before or after Bixler’s essay would be recognized by philosophers as a contribution to their field. What could she have meant by “philosophical research?” The clue is provided by the remarks that immediately follow:

“Difficult as this kind of [philosophical] research is, it is very necessary and more of it should be produced. In times of rapid social change such as ours, it is dangerous to be charting courses by means of tradition only as a guide. On the basis of directions considered desirable by the leaders of the profession and others, and within the framework of the democratic philosophy as well as known scientific principles, systematic investigation of a projective sort must be undertaken. . . . It will include schemes for evaluation as well, another aspect of research as yet imperfectly understood and practiced within nursing.” (Bixler, 1952, p. 8)

Bixler’s talk of “rapid social change” and the need for direction from “leaders of the profession” indicate that she was referring to the rapidly changing role of nurses. At the beginning of the century, most nurses were employed in private practice. They had responsibility for the complete care of the patient. By the middle of the century, most nurses were employed in hospitals. Nurses had taken over many technical procedures that had been the sole provenance of the physician. More problematically, it also meant that many traditional nursing functions were being handed over to “nonprofessional” staff. Nurses were moving away from direct patient care and into a managerial role (Brown, 1948; Saunders, 1954; Reissman & Roher, 1957). To many nurses, this was a troubling loss. Bixler’s call for a philosophy of nursing was thus a call to define nursing, to find its heart, and thereby defend a nurse’s proper role.

Concern about the changing role of nurses led a number of mid-century authors to pursue a philosophy of nursing in Bixler’s sense. Since it was widely recognized at the time, Bixler was no doubt aware of Sister Olivia Gowan’s “definition of nursing”:

“Nursing in its broadest sense may be defined as an art and a science which involves the whole patient—body, mind, and spirit; promotes his spiritual, mental, and physical health by teaching and by example; stresses health education and health preservation, as well as ministrations to the sick; involves the care of the patient’s environment—social and spiritual as well as physical; and gives health service to the family and community as well as to the individual.” (Gowan, 1946, p. 10, quotation reprinted in *Nursing Outlook* 7 (4), 199 (1959))

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This philosophy of nursing sounded all of the themes on which subsequent definitions would draw (e.g., Henderson, 1966). The other early works that fit Bixler's conception of a philosophy of nursing were the systematic treatises on nursing by Peplau (1952), Orlando (1961), and Wiedenbach (1964). These works helped define nursing by providing an analysis of the nurse's function that was based on an empirical study of nursing activities. Orlando characterized her work in these terms:

"The nature of the patient's distress and his need for help are examined in order to identify professional nursing function. The nursing situation is analyzed in terms of its elements (the patient's behavior, the nurse's action and reaction) as they effect the process of helping the patient. From this analysis, principles of effective nursing practice are formulated." (Orlando, 1961, p. viii)

Orlando expressed the hope that this kind of analysis would contribute to the discussion of "nurse-patient relationships, the nurse's professional role and identity, and the development of knowledge which is distinctly nursing" (Orlando, 1961, p. viii). By the early 1960s, nurse scholars began to think that the relationship between a philosophy of nursing and the development of "distinctly nursing" knowledge was extremely important.¹

What would a nursing science look like?

The connection between a philosophy of nursing and the larger research enterprise was developed in two influential papers: Dorothy Johnson's "A philosophy of nursing" (1959a) and Rozella Schlotfeld's "Reflections on nursing research" (1960). Both essays voice concerns about the professional role of the nurse. They took the position that nurses ought to be direct caregivers, and they were looking for intellectual grounds on which to resist change to this role. Nursing had been changed, they felt, by "social forces," not by reflective, intentional action by nurses. Since Flexner ([1915] 2001), the intellectual expertise of a profession had been taken to be definitive of its proper domain of action. Both Johnson and Schlotfeld argued that nursing needed to develop its intellectual arm so that the proper role of the nurse could be identified and defended. Up to that point, they felt, the knowledge that supported

¹ A charming example is Kathryn Smith's (1960) essay "The new tomorrow in nursing: what the nurse educator sees in her crystal ball." The author gazes into the remote future of 1980. The first thing she sees is: "[T]he nursing profession has met the challenge of its member and allied professions to formulate and to accept a *philosophy of nursing*. With clarity and assurance she can answer the many questions which were asked in 1960: What is nursing? What are appropriate roles for nurses? What are appropriate roles for nursing assistants? How are those roles coordinated to provide integrated patient care of good quality? Are nurses prepared primarily for technical functions? Do nurses do therapy? What is a nursing diagnosis? Where is the bedside nurse? What is the psychotherapeutic function of the nurse?" (Smith, 1960, p. 547, italics in original).

nursing was primarily medical knowledge. In the 1940s and 1950s, nursing education had supplemented the physician's biological knowledge with psychology and sociology. Nursing knowledge had thus grown beyond the boundaries of medical knowledge, but there was, as yet, little that nurses could call their own. Research and theory development were needed to create a knowledge base that would be unique to nursing. By calling for the development of an intellectual domain for nursing and relating it to practice, both Johnson and Schlotfeld were creating the conceptual background for the emergence of a discipline of nursing.

In these essays, Johnson and Schlotfeld also began to articulate the relationship between the discipline of nursing and the professional practice of nursing. They held that nursing research and theory development should be largely autonomous of the practical needs of nurses. The philosophical definition of nursing should set the goal for nursing practice. The knowledge required to achieve those goals would then be the intellectual domain of expertise of the professional nurse. The goals of nursing would thus determine the scope of nursing knowledge and the proper topics for research and theory (Johnson, 1959a, p. 200; Johnson, 1959b, p. 292; Schlotfeld, 1960, p. 493). Nursing research would then develop and test theories about a range of topics, including the health of the patient, the patient's response to nursing intervention, and the nurse-patient interaction. These theories would be the knowledge on which nursing practice would be based. As Sue Donaldson and Dorothy Crowley were to later express the point, "the discipline of nursing should be *governing clinical practice*" (Donaldson & Crowley, 1978, p. 118, emphasis in original).

Johnson and Schlotfeld did not require that nursing theory and research directly respond to the problems of practice. As Myrtle Brown put it, nursing research should aim at "the pursuit of knowledge for the sake of knowledge; its aims should not be limited to the search for facts needed to solve a specific practical problem" (Brown, 1964, p. 111). An alternative view was articulated by a number of scholars, many of whom were associated with the Yale University School of Nursing (e.g., Wald & Leonard, 1964; Conant, 1967a; Dickoff & James, 1968; Ellis, 1969). These authors argued that nursing research needed to be directly responsive to the problems of nursing practice. Some concepts of nursing theory would be drawn from nursing practice. Practicing nurses, Ellis argued, already had substantive knowledge that was relevant to patient care. Nursing research would make some of this knowledge explicit. Established biological, psychological, or social theories would be used to illuminate and expand the practitioner's knowledge. Then nurse researchers would subject the generalizations to clinical test. Since the theory was developed in response to problems recognized by nurses, the knowledge generated by such research would be useful to the nursing profession. Wald and Leonard called this view "practice theory" (Wald & Leonard, 1964). The focus on problem solving, rather than knowledge for knowledge's sake, led to a different conception of the theory-practice relationship. While many writers held that the discipline must govern the practice, practice theorists held that the practice should govern the discipline: "The domain of nursing practice should delimit the domain appropriate to theory development for nursing" (Ellis, 1968, p. 222).

Nursing theory and nursing knowledge

Some nurse scholars worried that a focus on problems in nursing practice would keep nursing research from developing into a proper science. In an essay written for the 10th anniversary of *Nursing Research*, Loretta Heiderken argued that most nursing research up to that point had been “problem-oriented rather than knowledge-oriented” (Heiderken, 1962, p. 141). As a result:

“research in nursing is not yet scientific. Problem-solving and research are not synonymous; to be scientific problem-solving in research must proceed from a body of theory (at least a simple conceptual model) and feed back into that theory.” (Heiderken, 1962, p. 141)

This idea that properly scientific research proceeded from and fed back into theory was supported (and perhaps inspired) by mid-century philosophy of science. Beginning in the late 1950s, the nursing literature regularly cited work by philosophers such as Carl Hempel, Hans Reichenbach, Karl Popper, Herbert Feigl, and Ernest Nagel. For these philosophers, the creation and testing of theory was definitive of science. Moreover, scientific theory was supposed to have a particular logical structure: it was a set of abstract and general laws. By specifying values for the variables or other initial conditions, testable hypotheses could be deduced from theory. If the hypotheses conflicted with observation, the theories would have to be modified. Scientific research was thus a matter of theory development and testing. It followed that without theory, nursing research could not be scientific. Brown’s essay “Research in the development of nursing theory” (1964) was one of the first works to develop this idea. She argued that nursing researchers needed to clearly show the relationship between their work and some larger theory. Only such a link would unify nursing research projects into a true science of nursing.

Borrowed theory

The perceived need for theories to guide research raised another question: what kind of theory did nurse researchers need? Some were content to draw on existing sciences. Nurse scholars such as Laruie Gunter (1962), Eleanor Sheldon (1963), and Virginia Cleland (1967) held that nursing research should draw on theories from sociology, psychology, physiology, and pathology. Gunter argued that practicing nurses needed sound science on which to base their activities, and some of the knowledge relevant for nursing had already been developed in other disciplines. “These theories alone,” Gunter wrote, “will not be unique, but the contribution and the special aspects stressed for each will be unique to nursing in such a manner as to distinguish it (nursing) from other functions” (Gunter, 1962, p. 6). Rosemary Ellis (1968) developed this idea by suggesting that the unique circumstances of nursing would require that these theories be developed and modified. Because the nursing encounter was holistic, theories from different domains would have to be combined. While the theories would be drawn from other disciplines, Gunter (1962, p. 219) and

Sheldon (1963, p. 150) thought that the goals of nursing (as established in a philosophy of nursing) should set the scope of nursing knowledge and determine the selection of relevant theories. In the views of these authors, the disciplinary knowledge required for the profession did not take the form of theories unique to nursing. As Ellis put it, “[W]e strive to act holistically, though our knowledge does not come for use from any holistic science of humans” (Ellis, 1969, p. 1434).

Other nurse scholars rejected the idea that nursing should rely on “borrowed theory.” Wald and Leonard (1964, p. 310) argued that, if nursing was to “become an independent ‘discipline’ in its own right,” it would have to free itself from the other sciences and develop its own theory. In her 1968 essay, “Theory in Nursing: Borrowed and Unique,” Johnson² presented an argument to support the need for a unique nursing theory. The proper boundaries of nursing practice, she argued, need to be established with the cooperation of the wider society, and “society will grant a monopoly of judgment for an area of original responsibility only when there is proof that we have acquired the knowledge needed to solve problems of social significance” (Johnson, 1968, p. 208). The only way to develop such knowledge is through research on the “area of original responsibility.” In other words, the unique responsibility of the profession is determined by the unique knowledge base. Therefore, Johnson concluded, the profession of nursing would have secure and sound boundaries only if nursing science could create a distinctive area of intellectual expertise (Johnson, 1968, p. 208).

Uniqueness

If nursing theories are to be unique, then what features distinguish nursing theories from the other sciences? Johnson suggested: “If there is an area for study and theory development unique to nursing, it will evolve only through the study of phenomena and the asking of questions in a way that it not characteristic of any other discipline” (Johnson, 1968, p. 208). Nursing theories are thus distinctive because their content is unique. Johnson’s suggestion was important and novel in the nursing literature. The idea that a discipline should have unique subject matter did not get much play in the literature of the 1950s and 1960s. There was general agreement that the subject matter of nursing science should be something about the nursing process, the way that nurses interacted with and influenced the health of their clients. Through the mid-1960s, however, most writers were content to identify the study of nursing process as an “applied science.” Wald and Leonard had argued nursing science was not applied (Wald & Leonard, 1964), but they did not propose a unique subject matter for nursing theories. Johnson’s essay was thus important because it argued that theories unique to nursing were necessary, and it used the content of nursing theories to identify their uniqueness.

² In her early work on the character of nursing science, Johnson (1959b, p. 292) was content to think of nursing theory as a “synthesis, reorganization or extension of concepts drawn from the basic and other applied sciences.” By 1968, Johnson shared Wald and Leonard’s view.

In a series of influential essays, James Dickoff and Patricia James developed Wald and Leonard's idea of a practice theory (Dickoff & James, 1968; Dickoff *et al.*, 1968a, 1968b). Dickoff and James distinguished nursing theory, not by what its theories were about, but what they were *for*. The purpose of nursing theory was to help nurses bring about change. Theories in other disciplines were primarily descriptive and explanatory. Nursing theory needed to build on these other levels of theory, but it must go beyond them insofar as it articulates what makes nursing activity *good*. Nursing theory aimed to identify the goals of nursing practice and show how some kinds of nurse–patient interaction contributed to those goals. The theories specific to nursing science, what Dickoff and James called “situation-producing theory,” thus incorporated values. This was a revolutionary suggestion. The common view among scientists and philosophers of science at this time was that science should not include values; science was value-free.³ Dickoff and James recognized that if a discipline was closely associated with a professional practice (such as nursing, medicine, dentistry, social work, or engineering), it must incorporate some evaluative commitments. Since the purpose of nursing theory was to support the interventions of professional nurses, it required a kind of theory that would articulate the goods of nursing practice. Nursing theory was thus unique not only because it had a distinctive subject matter (the nursing process), but also because it included values.

Conclusion: the relevance gap appears

It was within the intellectual milieu of the late 1960s that a *relevance* gap between theory and practice was first mentioned in the nursing literature. In two essays (Conant, 1967a, 1967b), Lucy Conant expressed the concern that nursing theory and research were not sufficiently useful to the practitioner:

“Research frequently is seen as being a desirable activity in itself, regardless of its purpose and nature. The result of this thinking is that nursing research is not necessarily evaluated in terms of its contribution to nursing practice. At the same time there are many problems in practice that are being ignored by nurse researchers because of their distance from the realities and complexities of nursing. The result is that there is a wide gap between the nurse researcher and the nurse practitioner, as neither sees the other as having a useful contribution to make to her own interests and concerns. If this separation should continue, it could lead ultimately to the deterioration of both nursing practice and nursing research.” (Conant, 1967b, p. 114)

For the first time, the concern about the relationship of theory and practice is not a matter of either pedagogy or of translating scientific discoveries into useful bedside practices. Rather, researchers are said to be “ignoring” the needs of practitioners,

³ It should be pointed out, however, that this view had been already challenged and there was debate about it within the philosophy of science (Rudner, 1953; Churchman, 1956; Jeffery, 1956; Levi, 1960). These arguments will be discussed in Chapter 5.

and professional nurses are said to think that nursing research and theory are useless. Conant made these points in the course of arguing against the “knowledge for knowledge’s sake” perspective on nursing theory and research. On the contrary, she was arguing, theory needed to be in the service of practice, and should be evaluated by its contribution to practice. Like Dickoff and James, she thought that nursing theory incorporated values: “Scientific theory is descriptive and predictive, while practice theory must not only describe and predict but also prescribe the activities of the practitioner” (Conant, 1967b, p. 114). Conant’s articulation of the relevance gap between theory and practice was thus part of an argument that *unless* nursing theory and research were conceptualized along the lines of practice theory, nursing theory was doomed to be irrelevant.

While Conant’s presentation of the relevance gap is clear, the idea lay dormant in the nursing literature for 10 years. Conant’s essays were critically discussed, but subsequent nurse scholars did not reaffirm her expression of the gap. It was 1978 before Margret Hardy would complain that “grand theories” provide “no practical foundation for nursing practice” (Hardy, 1978, p. 42), and it was the 1980s before concern about the theory–practice gap became widespread. Conant’s presentation of the relevance gap, then, was like Henderson’s question: “Research in Nursing Practice—When?” (Henderson, 1956). Both were ahead of their time in sensing that there was something wrong with the direction of nursing research. The stage was set, but the play would have to unfold before the audience would discover what, exactly, was rotten in Denmark.