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Nursing Science in Germany.
The State of Development of a New
Scientific Discipline

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Reprint

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Foreword

In the early 90s nursing entered the academic world in Germany with unexpected vigor. What had seemed barely achievable in Germany till then now developed astoundingly suddenly and expanded very dynamically. To illustrate this development in terms of numbers it should be remembered that at the beginning of the 90s there was just one single course of nursing studies, while today there are about forty. Expansion of these courses of studies is by no means over yet: further founding activities can be seen at technical colleges, and at universities several, though few, chairs are waiting to be filled. In the meantime, the first graduates are leaving their institutions of higher education – time to define a position for discussion of further tasks involving the development and expansion of nursing science, and also to take a closer look at the IPW’s profile.

Such a definition of position will have to take place at a number of levels. It will first be necessary to ask where we stand in terms of nursing practice: what do the urgent challenges and problems consist of here, how are they related to the state of academization, and what consequences ensue therefrom at a scientific level? The state of development attained in the establishment of nursing studies will also have to be looked at. Important questions linked thereto are: is the founding boom at institutions of higher education resulting in a sensible contour – especially in respect to its original intentions – and where can gaps and problems be seen? Third: how do matters stand with nursing as a science and the development of this new scientific field in the Federal Republic of Germany? And, finally, it will be necessary to take a look at nursing research and ask what the current tasks are here. In the following, these three complexes of topics to be found at different levels will be necessarily highlighted, and a first attempt will be made to draw up a balance sheet. Despite the indisputable successes we will be noting, the respective remarks will be tantamount to an analysis of deficits. The reason for that is to be found in the fact that we in the Federal Republic of Germany are in a very early development stage, in which many problems are necessarily waiting to be solved. We will have to bring them to mind and try to solve them, if the academization of nursing is to become an enduring success endowed with a substantial impact.

1. The Situation of Nursing Practice in the Federal Republic of Germany

Today, it is almost a commonplace: due to a demographic and epidemiological transition, i.e. the fact that our society is growing older and grayer (like nursing care as well, in which old people account for the majority in nearly every area, cf. Garms-Homolová/Schaeffer, 1997) and the fact that chronic diseases are unceasingly on the rise, there has been a profound change in the health-problem situation of people in western industrialized nations, a change the respective health systems are still far from having adequately adjusted to. Nursing is, as is well known, especially impacted by this development. Not only has its importance for health
care risen, it is also increasingly coming under pressure from a number of problems. For conventional nursing tasks have changed in the course of this transformation and many new demands are now being faced, demands that qualification profiles have no longer kept up with. Next to intervening and helping people to cope with diseases, functional constraints and other losses of personal autonomy, safeguarding and promoting health, just like rehabilitation, has become an important nursing task. But the dichotomy between health and illness in nursing has long since become untenable. Instead – as emphasized for some time now in discussions of nursing theory by – it is necessary to inquire about the balance between impairments and resources, to devote oneself to the restitution thereof and thus to promotion of existing health potential with and despite restrictions, i.e. with and despite conditional health (Schaeffer, 1995b). The shift that would require from simple orientation to deficits (or diseases) to orientation to health and resources requires new, scientifically underpinned nursing concepts and precisely such competence.

These developments, only hinted at here, tipped the scales in favor of establishing nursing studies that are supposed to not only take into account the need for revised qualifications and the modernization of nursing in Federal Germany but, what is more, to also initiate a fundamental repositioning of this health profession with such a rich tradition: from an auxiliary medical occupation in the tight embrace of physicians to an autonomous, professional service vocation that acts on the basis of its own scientific concepts and tools, while clearing the path to a broader view of nursing itself and its tasks.

But this description of the basic situation can already be considered as obsolete, or at least as too narrow. For the incipient academization of nursing was paralleled by a far-reaching restructuring of the health system, which was in turn initiated by the numerous laws passed on health reform and long-term care (SGB XI). In them a health-policy paradigm change is manifested (Rosenbrock, 1997) which is mainly distinguished by the fact that economic competition and free-market control mechanisms are finding their way into the health system, and thus into nursing. The accompanying economization necessitates rationalization measures that are currently threatening to end for the most part in rationing measures. But that is less in debate than the fact that nursing is being called on to initiate radical changes in customary routines, which for their part are accompanied by a large number of new challenges.

Thus, leaner hospital care, for instance (due to a reduction in the number of beds and length of stays), is leading to a greater number of severe patient-related problems and intensified nursing routines, which is turn is aggravated once again by the simultaneous cutback in staffing – triggered by the abolition of the PPR (nursing staff code) and the introduction of budgetary measures. Harmonizing the accompanying pressures to rationalize with efforts to optimize nursing is not exactly a simple undertaking but one that today is more likely to trigger resignation than a willingness to act. The situation in outpatient care is a similar one. Precisely this field of health care, one that for a long while was hardly taken note of in discussions about health and nursing sciences, is currently undergoing a massive transformation: the change in financing
principles initiated by the Long-term Health Care Act requires new patterns of internal work organization, routines and performance of tasks, likewise a division of labor with other professions and interaction with the patients. They, too, are in conflict with the traditional way of acting, including its underlying value-orientation, and that alone is currently producing a great amount of confusion and turbulence in practice (cf. Ewers/Schaeffer, 1998).

At the same time – triggered especially by the Long-term Health Care Act – the range of tasks was enlarged by important ones that are likewise new in the field of nursing. That includes, for example, assuring health-care integration and continuity through improvements in networking and interface regulation, quality assurance, filling of health-care gaps by the development of new services and forms of service, the performance of educative functions, e.g. supporting and supervising family members or providing guidelines for the patients.

All these changes are not only increasing the pressure on nursing to reform but are also encountering a practical situation that is still inadequately prepared for the new, second wave of reform demands. The academization just begun in the FRG has not yet taken hold in practice, so that in nearly every area there is a lack of qualifications and, more seriously: a lack of criteria and principles for adequate reaction to the current challenges. In other words, the old and as yet unresolved reform logjam is now being added to by further and qualitatively different innovation requirements. But the latter basically presuppose already modernized and professionalized nursing if they are to be sensibly tackled. The consequence of this dilemma is becoming increasingly tangible. Almost every area of nursing is now being deluged by innovations, and that poses the following danger: the reform logjam that has evolved over the years will get out of hand and tendencies that run counter to the aims of academization will spread.

Thus, for example, there has recently been a rapidly progressing downward trend in the level of qualifications (to be seen most distinctly in outpatient nursing) instead of an upward trend. Instead of overcoming the tight restrictions on nursing activities and implementing a broader, scientifically underpinned view of itself and its tasks, nursing is threatening to be reduced to precisely those “craft” and instrumental functions that were to be overcome with the establishment of academic studies. If this development continues, it will have to be feared that the goal of optimizing nursing activities and patient care will take a backseat to rationing trends once and for all.

Steering an opposite course is one of the central challenges facing the academization of nursing. Important tasks related thereto are: support on the practical side in dealing with the contradictory incentives situation, motivation to make selective instead of diffuse innovations as well as reforms in harmony with the target vision described at the beginning, and the fastest possible elaboration of concepts, including the requisite scientific foundations for coping with both old and new nursing reform requirements.
2. The Situation of Nursing Science in the Federal Republic of Germany

Let us now ask how Germany's nursing science is equipped for this task. Nursing science's entrance into the universities overshadows, upon close examination, two developments: for one, the introduction of nursing courses and, for another, the establishment of a new scientific field of study. The two have to be looked at separately. First to the courses of studies.

2.1 State Reached by the Establishment of Nursing Studies

Accompanied by many hopes, a broad network of nursing studies has arisen in the last five years. This is an indisputable and immense success in view of its career, which was accompanied by a large number of setbacks (cf. Botschafter et al., 1982; Bartholomeyczik/Müller, 1997). That success makes sure it will be possible to follow on from developments that took place a long time ago in many other countries. Thus, for example, the academization of nursing in the USA, the country in which this development had its start, began as long ago as early this century. In many European neighboring countries, but likewise in Asia and many a country we generally do not number among the western industrialized countries, nursing has an academic tradition. This underlines the immense need in the FRG to catch up, a need that viewed in this light is not only a national but also an international one.

The successes achieved of late in remedying this double need for overdue modernization are – it should be underlined once again – considerable. But that should not blind one to the fact that so far the first cautious attempts to walk have been taken on unfamiliar terrain and that the academization of nursing in this country is still in an early stage. The expansive nature of this development deserves a uniform target vision – a blueprint (Schaeffer/Moers/Rosenbrock, 1994: 16). There are several dangers inherent in this state of affairs. The most important ones will be briefly mentioned here:

- Nationwide, a number of very different answers to the challenge posed by the “academization of nursing” were sought within the suddenly opening reform framework. Which of them are tenable and appropriate to the problems remains to be seen for now. Thus, there are courses of study for nursing management and education, in which respect the latter are to be found at both universities and technical colleges. In addition thereto there are (technical college) courses that aim at academic qualifications of a more generalist nature. And in addition to them, in turn, the first basic nursing-science studies at the university level are also forming, master-level studies are being planned and nursing science, as here in Bielefeld, is to be found under the aegis of public health. The situation is consciously depicted in somewhat overblown fashion in order to point out that the current state of development, when looked at systematically, tends to be more a colorful kaleidoscope than a self-contained whole. That is not surprising. To a certain extent we in the
FRG are in an experimental situation in which the people doing the nursing, the scientists and institutes of higher education make different use of the latitudes available in order to realize what they view as their contribution to the establishment of nursing science. Its experimental character confers advantages and disadvantages. Advantages arise from the wide variety of spontaneous developments and from the broad variance of study-related concepts. Disadvantages will have to be expected if the current situation becomes immutably established and there is a failure to look for a harmonized and intermeshing overall contour for the future. There will also be disadvantages if the need for restructuring evoked by academization does not go into basic, further and advanced training. Failures of the kind that are beginning to be seen will likely prove to be counterproductive. This task will require, rather, discourse and the cooperation of all the actors concerned with training questions.

- Many of the courses of study are beginning – despite the great time lag – where this development also began in other countries and are concentrating on subareas of nursing activities: on nursing management functions and nursing education. When the development of nursing science is looked at in countries with a head start in experience – especially that of nursing in the US –, it becomes apparent that a path strewn with a great number of obstacles is possibly being taken thereof. In that country the narrow focus on just a few partial or management functions of nursing activities soon proved to be too pragmatic, too inappropriate to the problems and was tantamount to a transitional stage. From then on, preference was given to the establishment of nursing science studies which – assuming that nursing has to basically take place on a foundation of scientific knowledge – are aimed at overall nursing and provide a broad orientation of studies in keeping with the diverse nursing tasks (Moers/Schaeffer, 1993)

Today, it can already be presumed that this development will also bear fruit here and that in the long or short term it will be necessary to expand nursing studies beyond the partial functions of nursing management and education. At the same time, this is meant to indicate that in the FRG the academization of nursing will have to be structured not from its point of departure in other countries but from its end point if time- and strength-consuming detours are to be avoided. That, of course, presupposes that the professionalization paths taken by nursing in other countries are subjected to systematic analysis and lessons important to the German situation are filtered out – a task that will be given a prominent position within the scope of the advancement of nursing research.

- Looked at from the endpoint of development in other countries, it can be seen that the overall contour of nursing studies is in need of supplementation in other ways as well, or, to be more exact, from a vertical point of view. The majority of courses created to date are those that train for practical functions and are to be found at the technical-college level. So far there has been a lack of (master-level) nursing-science courses at the advanced university level, just like a lack of doctorate and post-doctorate possibilities. That means the infrastructural and
qualificatory preconditions required for a new scientific generation to be recruited from its own ranks without having to detour through outside disciplines are not to be found in the FRG. Nor are they available for nursing science to be established as an independent scientific reference discipline and for the tasks thus arising to be tackled in the fields of theory, method and research development. Eliminating precisely this deficiency must be the prime task of the future. For without a scientific foundation and without a range of studies aimed at the training of scientific competence and a new scientific generation, the transformation of nursing to an independent professional service vocation acting on the basis of scientific concepts and standards will not be endowed with great success.

- If such vertically supplementary study possibilities (nursing-science masters and doctoral studies) are to be created, it will be necessary to demand that they intermesh with the existing, practice-oriented studies at technical colleges in order to avoid undesirable developments of the kind to be found in this country in, say, the fields of social work and social education. For me there would seem to be no doubt that close co-operation between technical colleges and universities is necessary and that new models will have to be looked for jointly, if only to avoid excessively long paths of training in the tertiary area of education.

- Most of the courses of study are based on pragmatically additive curriculums, the subject-matter canon of which is very much structured by a view of problems and patterns of perception that belong to the scientific disciplines accommodating nursing. Moreover, many of the curriculums are mainly trying to place hereditary tasks on a secure basis of qualifications, assigning what tends to be secondary importance to innovation and to relaxation of the tightly demarcated limits on nursing action (Schaeffer/Moers/Steppe, 1997). It is only recently that more ground has been gained by the opinion that greater attention should be given to the reform requirements that once triggered the creation of nursing studies. At this point it should be remembered that the academization of nursing was supposed to help react with new concepts to the tasks involved in the maintenance of independence, safeguarding of health, prevention and rehabilitation, tasks that arose due to the epidemiological and demographic transition. It is likewise important to take current health-policy challenges at the curriculum level into greater account: economization and the resulting radical change in nursing routines, the postulated primacy of outpatient over inpatient care, the demand for quality development and the integration of care, which entails new patterns of cooperation and interface regulation for nursing, etc.

That, too, is not surprising in view of the early stage of development and current speed of innovation. Nevertheless, this combination of circumstances will require a high degree of curriculum-related flexibility and creativity if intentions and reality are to be brought into agreement with each other. Only through constant willingness to revise curriculums will it be possible to harmonize the academization of nursing with the multifarious changes in nursing-practice requirements and to con-
tribute to their optimization. And only through willingness to conduct constant debates with the practical side and to react to the same will it be possible to keep a gap from forming between science and practice and to prevent graduates from unexpectedly falling into a difficult dead-end situation of the kind found, for example, in the field of educational professions when they were specialized out of the higher-education sector (Schaeffer, 1992b). But such a flexible and consensual process runs counter to the cumbersome tradition of German institutions of higher education. Here, too, we will have to learn to take new paths.

- To conclude this complex, reference should also be made to the problem of profession-related localization, i.e. the question of which professional context the academization of nursing is taking place in and how it should be organizationally anchored. In this respect, too, there is currently a wide variety of models to be found in the Federal Republic of Germany: the existing courses of nursing studies are to be found in the fields of social studies, economic sciences, education, medicine or health sciences. The open question is what impacts the respective tie will have on scientific development in the field of nursing and which of the accommodating guest disciplines is most likely to converge with the intentions and tasks of nursing (Heller, 1995). Today, it can already be seen that organizational “sororizations” or “fraternizations” (ibid.) which have sometimes been entered into are throwing up a wealth of unanticipated difficulties, either because responsibilities and domains carefully watched over in terms of professional policy are touched on or because efforts on the part of nursing to attain an independent position within the structure of health-related professions clash with the efforts of the accommodating guest discipline and/or profession to likewise attain greater independence and/or latitude.

- The history of nursing science can be studied to learn that subsumption under a foreign roof – regardless of its origin – may be unavoidable in the early states of its academization in order to gain entrance to the level of higher education, but there is always the risk of its being cast in the outside discipline’s mold. In this sense it is possible, for example, to describe various, sometimes interlocked phases for nursing in the USA: that in which it is turned into a natural science or medical field, that in which it is turned into a field of education and social science. The respective “over”-molding hinders – according to Meleis (1988) – development of its own professional identity and impairs the unfolding of autonomous scientific potential. Only in the course of the so-called nursing-science turnabout, i.e. the establishment of nursing science as an independent reference discipline, did this situation change. That is when nursing’s knowledge base began to disengage itself from the various reference disciplines it had been subsumed under until then, its organizational autonomy beginning parallel thereto. Today, the roughly 500 “schools of nursing” form independent scientific departments and together with medicine, pharmacy and public health belong to the so-called health sciences (Schaeffer, 1995a).
Regardless of which localization or entry-level model was and is being sought in this country, we will have to keep it from being immutably defined and must not succumb to the mistake of confusing what is feasible at the moment with what is necessary in the long run. It must not be forgotten that the academization of nursing is the first step (and necessary condition) for the transformation of nursing from an “auxiliary medical occupation in the shadow of the physician” (v. Ferber, 1993) to an autonomous professional health-related vocation, the path to independence being sought therewith. This has both content-related (cf. Schaeffer, 1994) and organizational consequences and must in the long term mean striving for organizational autonomy – in practice and at the scientific level. Realization thereof will depend for one on the long-term stability and expandability of the success achieved, and also, of course, on the extent to which there is success in advancing the scientific development of this new field in Germany. That leads directly to the next complex of topics to be addressed.

2.2 The Situation of Nursing Science as a New Scientific Field

Internationally, there is consensus to the effect that nursing is “a science and art” (Rogers, 1991). As a science, it represents a coherent body of systematic theoretical and problem-solving knowledge. Its art consists in the creative utilization of this knowledge, in the service of healing people (ibid.).

This notion has been realized in many countries. There cannot yet be any talk thereof in the Federal Republic of Germany. So far, an academization process has taken place in which training is provided at a scientific level, at least for partial functions. As gladdening as this beginning may be, in factual terms the second step was taken before the first in the hope that the first could be taken later (Rosenbrock/Noack/Moers, 1993). First, courses of studies were created. They were to be followed by treatment at a scientific level of the development challenges posed by their academization, and an independent nursing-science reference discipline was to be constituted. The latter presupposes anchoring at the university level, but precisely that is still far from being seen to the extent required. Thus, nationwide three university chairs have been filled for nursing science, two of them within the scope of nursing education studies¹ (one of them in turn within the scope of a pilot experiment with a cutoff date). This landscape cannot be expected to densify substantially in the future: only two more chairs are in the process of being filled, and at two other institutions of higher education corresponding plans are threatening to bog down. The private university of Witten/Herdecke is also taking action in the field of nursing science, but does not yet have the necessary state approval.

As rapidly and suddenly as nursing was thus able to make its way into the technical colleges, just as hesitantly – looked at nationwide – are universities opening their gates to nursing, as attested to alone by the dura-

¹ Only the chair established with the Faculty of Health Sciences at the University of Bielefeld serves primarily the development of science and research, the state of North-Rhine Westphalia thus assuming a pioneering function.
tion and obstacle-strewn path of many a university appointment proceeding. Resistance at the university level is bolstered by the fact that there is science-policy controversy about whether nursing science should play “a role of equal standing in the concert of sciences and their supporting systems” (Wolters, in process) or should merely be localized at the technical colleges. If the latter position gains acceptance, nursing once again runs the risk of turning into a special education-policy case and, moreover, of being instrumentalized as an example of reversals in science policy – what is alluded to here is the establishment of nursing education at technical colleges and the debate conducted parallel thereto about whether in the future the training of teachers should not, in principle, be moved out of the universities. It is likewise to be feared that in this structurally restrictive set of circumstances its development potential will only suffice for a “mimic profession” (Forsyth/Daniesicwicz, 1985) or “weak profession” (Freidson, 1986). All these semiprofessionalized vocations are, among others, characterized by the fact that their theoretical and methodological basis of knowledge is inadequate, which gives rise to a multitude of problems in their everyday activities (as can be studied in exemplary fashion in the case of social work, Hildenbrand, 1991; Garms-Homolová/Schaeffer, 1990; Dewe/Ferchhoff/Radke, 1992; Schaeffer, 1992a.).

If professionalization of this quantitatively most significant health vocation is to be initiated with the academization of nursing now begun, the necessary course will have to be set: professionalization processes are condemned to failure from the very beginning if the formation of an independent, universally valid basis of knowledge – or, to put it in the words of Martha Rogers: its own body of knowledge – is neglected. Forging ahead with the infrastructural preconditions required for this purpose and with the development of a science is a priority-level task that is now being frequently called to people’s attention (Robert-Bosch-Stiftung, 1996).

The urgency of its realization does not stem solely from the requirements accompanying professionalization processes but also from the necessity to place courses of studies on a secure footing. In this respect as well, we have taken steps in a questionable order: With the large number of courses now available the intention is to diffuse new nursing-science competence and concepts on the practical side, and in this way help to solve the problems and meet the reform requirements to be found there. Efforts are likewise being made for future nursing services to be placed on a basis of scientifically founded knowledge and expertise. The basis of this expertise, like that of the concepts supporting reform, has not yet been elaborated in the FRG, so a transfer of foreign models is only conditionally possible. That is why the claim to the effect that establishing courses of studies contributes to the scientific underpinning and innovation of nursing practice still lacks the preconditions for its realization. This, too, underlines once again how important it is to fill the vacuum existing in the FRG at the level of the development of science.

What challenges are individually linked to the task confronted in the development of science? Roughly speaking, there are, above all, four complexes to be cited:
• developing theories and methods
• expanding nursing research
• developing concepts and securing a transfer of knowledge
• promoting a new generation of scientists.

The subject of the promotion of a new generation of scientists was already discussed above, which is why only the importance of the tasks confronted at this level will be mentioned once again at this place. The first graduates of nursing studies are presently leaving their institutions of higher education and are wandering off abroad for a lack of graduate and post-graduate possibilities. At the technical college level, cooperation agreements are sometimes striven for with institutions of higher education in neighboring European countries in order to institutionally ensure such a possibility and compensate for the deficits in the FRG. Though this strategy born of need may promote the coming together of Europe, it underlines at the same time the need for action in the Federal Republic of Germany and shows that we cannot put off meeting this need until the distant future.

The securing of a transfer of knowledge is, in view of the pressure exerted by the problems encountered in practice, a central task that must by no means be underestimated. People must already be warned not to believe that the tasks arising in connection therewith can be solved by simply building a bridge between science and practice. Rather, research on the use of knowledge shows that independent conceptualization tasks are linked thereto (cf. Dewe, 1988; Back/Bonss, 1989; Schaeffer, 1991). How important it is to tackle the same at once can be seen by taking another look at the situation in countries with a head start in gaining experience. In many places there is a gap between theory and practice that is very difficult to span, thus leading to the fact that nursing-science knowledge was increasingly rejected in everyday nursing life, and practice grew remote from science (Orlando, 1987). It may not be completely possible to keep a discrepancy from developing between theory and practice – as emphasized years ago by Axmacher with his reference to the ineluctable "loss of nursing's homeland" due to the academization of nursing (Axmacher, 1991) –, but we can indeed try to keep such a discrepancy as small as possible by securing early on a transfer of knowledge – and, namely, a bilateral transfer of knowledge – and by developing discursive strategies of how to develop science.

Let us now look at the development of theories and methods. Here, too, the balance sheet of Germany's activities is not exactly be a splendid one – the result of its still juvenile stage of development. The abundance of tasks entailed by this situation leads to the consequence that existing resources are absorbed by development-related work and the tasks encountered in the development of theories are only sporadically tackled.

There is now an immense demand and need for the creation of nursing-science theories. That is demonstrated, for example, by the large number of visitors to the first German congress of nursing theory in April of this year as well as by the large number of translations of US nursing-theory literature and the great interest displayed in the first German publications
(inter alia Steppe, 1990; Mischo-Kelling/Wittneben, 1995; Schaeffer et al., 1997). All these publications listed here by way of example show that we do not have to start at zero in the development of theories. There is already a large stock of nursing theories (mainly of US origin), and it is important to first make fruitful use of them for the debate in this country. Another task will be to systemize the present stock of theories, check them for their capacity to bear up under scrutiny and start to reach an understanding on the “how” and “what” of the theories that will have to be formed in the future. Such critical/analytical inspections and examinations are called for in the light of not only the questionable adaptation tendencies presently emerging but also the make-up of the stock of nursing-science theory.

Digression: creation of nursing theory

To illustrate what is meant by that, brief reference should be made to the creation of nursing theory (also see Steppe, 1993a). It began in the 50s in the USA in the course of the so-called nursing-science turnabout, i.e. its detachment from foreign reference disciplines. If until then there had been theoretical discourse of, at best, only a tentative nature, there now began a phase of intensive theorization in which the aim was to provide proof – from the theoretical point of view as well – of the organizational independence of nursing that had been achieved. The legitimation problems linked to the claim of scientific autonomy left their mark on the early era of theorization, and also on the theories themselves. Without exception, they are set up – as typical of a young science – as “grand theories”, as theories with far-reaching import, i.e. without any restrictions in terms of space and time, and they pursue the intention of grasping and legitimizing nursing as not only a science but also as a practice in need of scientifically supported knowledge and methods. Derived from conceptual clarifications and centered on the question of “what is nursing” – i.e. a definition of the subject, its constitutive elements, the reach of nursing and how the same differs from other health professions – all the nursing theories arising in this phase are based on monistic notions of theory: i.e. the position that there can be only one theory of nursing, in which the entire theoretical knowledge of nursing is combined in one single, noncontradictory system that is equally binding on teaching, research and practice (Meleis 1998, 1997; Moers/Schaeffer/Steppe, 1997). This pretense to comprehensive and sole validity (like the excessively high degree of generality leading to “fitting” problems with the practical side), had, after a relatively short period of time, an increasingly inhibitory effect on the further development of theory. It prevented a productive debate about theories still in the rough, led to the formation of schools, together with all their negative consequential phenomena, and led the discussion of nursing theory into stagnation after a brief heyday. This was seen, inter alia, in the fact that theoretical publications of this type abruptly ended – with the exception of a few stragglers. The stagnation was not overcome until another position got a hearing, a position that countered the prevalent notions based on theoretical monism with ones based on theoretical pluralism (cf. Donaldson/Crowley, 1978). The era of so-called “grand theories” ended de facto when this position gained acceptance, and the path was open to new developments. Without going into the individual phases of theory formation any further here (cf. Meleis, 1997; Moers/Schaeffer/Steppe, 1997), it should be noted that preference is given today to a variety of theories in competition with each other. Theories with a small trajectory and/or situational theories are preferred, and, moreover, value is today attached to empirically supported, inductive strategies of theorization instead of the rationalistic/deductive kind (like those underlying familiar nurs-
ing theories). This is supposed to keep theory and practice from drifting any further apart and is also supposed to overcome the parallel decoupling of theorization from empirical research.

This brief digression into the world of nursing theories was supposed to show that in the development of theories, as well, one should not return to where such development once began and one-sidedly adopt the rough theories of the early era – a tendency that is currently spreading in the FRG, as the latest memorandum of the Robert Bosch Foundation also laments (Robert-Bosch-Stiftung, 1996: 13). Furthermore, it should also be made clear how urgent it is to take up the debate on the strategy and methodology of the theorization required in the field of nursing. The current state of international discussion would suggest that preference should be given to inductive theorization strategies and thus to theories with a small reach or ones generated from empirical facts. The consequence thereof for nursing science in Germany is that central importance must be attached to the elaboration of nursing research right from the beginning in order to circumvent a “schism between theory and research” (Kirkevold, 1994) of the kind to be found internationally. In this respect, the advancement of nursing research will have to take two directions. On the one hand, it must aim at the establishment of basic research – which is required to generate theoretical knowledge and formulate theories while, on the other hand, it must also encompass application-oriented research – which is required to elaborate solutions to problems encountered in practice. Work has already begun on the latter task; the importance of the former has yet to be adequately recognized, and it is also running up against infrastructural and material obstacles. Instituting a change here represents another important challenge in the construction of nursing science.

3. The State of Nursing Research

With that, the third complex of subjects to be discussed has been touched on, a look at the state of nursing research. In the early 90s von Ferber called attention to the deluge of nursing literature (v. Ferber, 1993), and now that courses of study have been created, this inundation has grown in leaps and bounds once again. Nevertheless, the situation must not blind one to the fact that many publications are only conditionally usable from the point of view of nursing science. Most of the literature is, moreover, recruited from translations of work from the Anglo-American area and center on nursing-theory debate – research papers having appeared in what are still immensurable quantities. Nevertheless, there is, from an international point of view, a broad tradition of nursing research: especially in the USA and Great Britain, likewise in other European countries (The Netherlands) and also in Asia. The fact that the same, as well as the corresponding literature, has so far not been thrown open is because nursing research, “which has its place in nursing and was definitively initiated and carried out by those doing the nursing” (Robert-Bosch-Stiftung, 1996: 17), has a very short history in Germany due to the lack of an academic tradition (ibid., Krohwinkel/Schröck/Bartholomeyczik, 1991). That
is why at the end of the 70s the Federal Republic of Germany was still unable to participate in an international WHO research project involving the nursing process, because the latter had not been put into practice in this country, nor was corresponding research competence to be found.

Although a few pioneers constantly called attention to this deficit, they found little response, either outside or inside nursing itself (Grauhan, 1989; Bartholomeyczik/Müller, 1997). This situation slowly changed in the course of the 80s: the professional associations began – though hesitantly – to catch up with international developments and the first nursing research activities took shape – again driven by just a few pioneers. They were given a boost by the Workgroup of European Nurse Researchers (WENR), which held its annual convention in Frankfurt in 1989. This event helped to move nursing research in the Federal Republic up to a more prominent position on the agenda. This was reinforced by the “German Association for the Promotion of Nursing Science and Research”, which was founded at roughly the same time. It sees its task as being the initiation and documentation of nursing research. Only since then, i.e. since the end of the 80s, have studies worth mentioning arisen from nursing itself (for an overview see Bartholomeyczik/Müller, 1997) about, for example, the night watch in hospitals (Bartholomeyczik et al., 1990), examinations of traditional nursing measures – e.g. decubitus prophylaxis (Neander et al., 1989), a survey of respiratory dangers (Bienstein, 1988), the nursing process in the case of stroke patients (Krohwinkel, 1993) and later about the elements of nurse-patient interaction – e.g. about the importance of emotions and emotional work as well as their effects on the nursing relationship (Sowinski, 1991; Paseka, 1991; Overland, 1994). Worth mentioning is also the first work being done in the field of historical nursing research, for instance on the history of nursing as a women’s profession (Bischoff, 1992; Sticker, 1989) and on nursing during the Nazi years (Steppe, 1993b) as well as nursing in India (Steppe, 1997).

In the meantime, further changes are emerging. Kicked off by the establishment of nursing studies, the extent of nursing research activities in the FRG is now increasing. Nursing is increasingly becoming the subject of research, which means a painful development backlog is now starting to be caught up with. But excessive hopes must be warned against, for those who had been doing research have in the meantime been absorbed by academization and are consequently occupied with teaching functions and construction work. Their research expertise is going mainly into the supervision of research – of educational research to be more precise. Or to put it pointedly: *nursing research is currently a largely student-related undertaking* and is taking place mainly within the scope of papers for a diploma and doctorates. Here, too, we are thus in an experimental situation, which likewise applies to the level reached in this respect. A closer look at the state reached yields the following picture:

We have nursing research “from below” (3.1) “from outside” (3.2) and “from abroad” (3.3).
3.1 Nursing research “from below”

As just implied, a creeping scientification of nursing has long since taken place, despite the lack of infrastructural preconditions in the past. Those involved in nursing have started to research topics of relevance to nursing on their own initiative and without having suitable framework conditions at their disposal. Two currents can be seen in this respect: for one, small research projects have been carried out on the practical side, more or less in the form of grassroots undertakings. On the other hand, nurses have dealt with topics of relevance to nursing by studying other sciences (due to a lack of nursing-science studies) (e.g. Elkeles, 1990; Steppe, 1997). How important these activities are for the establishment of nursing science and research is revealed by a look at the relevant history: many of the nursing theories considered as classical today go back to papers for degrees and qualifications which were written by nurses within the scope of their training (Moers/Schaeffer/Steppe, 1997). Nursing research originally arose in this fashion.

Nursing research “from below” has changed its nature with academization and, to be correct, must now be designated as “from within”. The number of research activities has risen in the course of this process: there are a greater number of studies financed with third-party funds (e.g. Höhmann/Müller-Mundt/Schulz, 1996; Dahlgaard/Schiemann, 1995), and the first research coalitions are being constituted, yet research within the framework of papers submitted for qualifications predominates. That also includes nursing-science doctoral theses prepared abroad (Arndt, 1996; Bauer, 1996; Osterbrink, in process). In view of this fact, current research can, to a certain extent, still be largely viewed as “coming from below”, but research that is now taking place on the basis of a different initial situation, namely the existence of nursing studies. If we look at their thematic focal points, they are mainly in the field concerned with the conditions in which nursing activities take place: questions of training (Althoff/Moers, 1991; Bischoff, 1991 and 1994; Ewers/Schaeffer, 1998; Oelke, 1991; Pinding/Thomae/Kirchlechner, 1972), qualification and professionalization (Haug, 1995; Kellnhauser, 1990; Schaeffer, 1994; Weidner, 1995), working conditions and organization (Bartholomeyczik, 1993; Elkeles, 1990), the shaping of nursing care, networking (especially the transition-related kind; Domscheit/Wingenfeld, 1996), quality development (Dahlgaard/Schiemann, 1995; Giebing, 1990; Höhmann/Müller-Mundt/Schulz, 1996; Kaltenbach, 1991) etc. (cf. among others the documentation of DV Pflegewissenschaft). Research on the “nursing phenomenon” (Dassen/Buist, 1994), i.e. research in nursing or research about genuine nursing questions has so far undergone only tentative development.

3.2 Nursing research “from outside”

Nursing was and is, moreover, the subject of research in contiguous disciplines, for instance in education, sociology and, especially, medical sociology, psychology and the health sciences. Central thematic focal points here, too, are questions of nursing qualifications (e.g. Bals, 1990; Büssing,
With the introduction of long-term care insurance, the number of studies concerned with nursing has rapidly grown, and nursing has become an important topic in health-science discussions, which tended in the past to be characterized more by hesitance (Rosenbrock/Schaeffer/Moers, 1996). At the same time, the focal point has shifted. The implementation and effects of nursing insurance (e.g. Rothgang, 1996; Asam/Altmann, 1995), questions of quality development and quality management (e.g. Garms/Homolová, 1996; Güntert/Hoirsberger, 1991; Ewers, 1998) as well as assessments of the need for nursing (e.g. Berg et al., 1996, Heigel/Rosenkranz, 1994, Kliebusch et al., 1996) take up a great deal of space. Here, too, a structural problem must be mentioned: the growing tendency to handle nursing-specific questions within the framework of other disciplines because nursing research has yet to be adequately established and because there is a lack of human and qualificatory resources for the same. The problem of how to assess the need for nursing is one example that stands for others.

When the findings of research conducted by contiguous disciplines is involved, a number of other studies have to be mentioned, examples being those that do not deal directly with nursing itself but with other topics of great relevance to nursing science and research. Reference should be made here by way of example to the question of how interaction should be shaped in help-providing professions (Hildenbrand, 1991; Rommelspacher, 1986; Sahle, 1987; Schneider, 1987; Schaeffer, 1992b; Schmitz, 1983), to studies that research chronic disease (Badura, 1981a and 1981b; Broda, 1987; Bury, 1982; Charmaz, 1991; Corbin/Strauss, 1993; Fischer, 1987; Gerhart, 1986; Krajic et al., 1997, Strauss/Glaser, 1984; Schaeffer, 1995b; Muthesius/Schaeffer, 1997), to the situation of the mentally ill and in general to findings of gerontological research. Furthermore, papers on system design (on, say, the hospital system: Badura/Feuerstein/Schott, 1993) and on management problems in the health system (Schwartz/Wismar, 1997; Schwartz et al., 1995) should also be mentioned.

So there is a large stock of empirical knowledge to be dug up here. Although it may largely involve research on nursing or even research in areas surrounding nursing, these research papers should first be compiled, their relevance to nursing investigated and then turned to fruitful use.

3.3 Nursing research “from abroad”

There is, moreover, copious work from all those countries in which nursing research is already established. In 1985 nursing research in the
USA was raised politically to one of the main directions of health research when the “National Center for Nursing Research” was made a department of the “National Institute of Health” (Botschafter/Steppe, 1994). In 1993 it was upgraded once again and proclaimed as the “National Institute of Nursing Research”, thus being put on equal footing with other institutes. Here, nursing research has now reached a state unparalleled in any other country and consequently has a wide range of topics to present. An important task in the development of nursing research in Germany is to process these topics, gain an overview of the international state of research and open it up to discussion here. That applies likewise to the discussion being conducted at the international level about the methodology and methods of nursing research. Here it is possible, at best, to get only a rough glimpse of this discussion.

Here, as in other countries, the focus is primarily on application-oriented research and clinical nursing research. For a long time too little attention was given – as self-critically noted today – to the area of basic research. Countering this deficit is considered to be an urgent task in the meantime (ibid.).

When we look at the thematic lines of development, they are seen to be comparable for every country. The focus of research was, in keeping with the development requirements thrown up by academization, initially on questions of training schemes, development of curriculums, the organization of labor, shifts in nursing's position within the structure of the health professions and on problems posed by the transformation of nursing activities from the intuitive/empirically oriented kind to scientifically founded, systematic ones. This is noted by McFarlane for Great Britain (1977), emphasized by Meleis for the USA (1997) and confirmed by Maanen for Canada (1996). Only later, after the buildup and consolidation of nursing studies and science had been concluded to a certain degree, did the focal points of research shift from the context-related conditions of nursing activities to genuine nursing questions.

Today, it is possible to identify the following focal points being dealt with from points of view relevant to nursing (cf. inter alia Brenner, 1996; Corbin, 1997):

- chronic disease,
- HIV and Aids,
- maternal and infant health (i.e. the health of mothers and children),
- the promotion of health in nursing,
- the handling and/or management of illness symptoms and functional constraints,
- adhesion and pain management,
- cooping with technology dependence,
- technological developments and nursing (e.g. information systems in nursing), cost effectiveness and outcome orientation, and, subsumed thereby,
- quality management,
• the professionalization of nursing, e.g. the development of professional nursing roles and tasks,
• nursing in nontraditional settings.

The range of methods being put to use stretches from conventional tools of quantitative methods customary in the natural and social sciences to the qualitative methods and methodologies stemming mainly from the human and social sciences. Even though quantitatively oriented and multi-method studies based on a mixture of quantitative and qualitative methods may still predominate, preference has been given for some time now to working with qualitative methods. Papers based on grounded theory, ethnography and interpretative phenomenology are the most widespread ones to be found in this nursing research tradition.

This overview of nursing research “from abroad” shows that in this country it is by no means necessary to set foot on new territory in the establishment of nursing research, but here, too, it is very likely that priority will first have to be given to processing and systematizing this research and subjecting it to critical/analytical investigations. This applies to the great number of application-related research papers, but also and quite particularly to basic research, which is likewise internationally considered to be inadequately developed. Such a critical/analytical look should concentrate on three tasks: (1) an analysis of the topics and their careers in international nursing research, (2) the identification of research requirements and gaps, and finally (3) the retrieval of important existing knowledge and its integration in the debate being conducted in this country. But a warning should be issued against being too quick to transfer international trends and knowledge. Adopting knowledge gained elsewhere and research strategies that would appear amenable to copying will lead all too quickly into a dead-end street unless the conditions of transfer are scrutinized and attention given to other contextual circumstances.

4. Development perspectives of the IPW

The preceding remarks should have made it clear that there are still a lot of tasks to be tackled, irrespective of all the success achieved in the advancement of nursing science in the Federal Republic of Germany over the last few years. While the past development and expansion of nursing science have attained notable dimensions from the horizontal point of view, the major challenge of the future will consist of providing it with a sensible contour in a vertical sense. That applies in the “downward direction” to the practical side, in which the pressure exerted by problems is rising and tenable solution concepts are more urgent than ever before, and, above all, in the “upward direction”, where one of the most urgent tasks is to fill the vacuum at the level of nursing science development.

Tackling the same and pushing development of these new disciplines in the science landscape is a central task of the Institute for Nursing Science (IPW) established with the Faculty of Health Sciences at the University of

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2 This is related, for one, to the debate on theory and to reorientation from deductively rationalistic to inductively empirical theorization.
Bielefeld in 1995. One of the first university centers for nursing science, the IPW bears special responsibility for developing and establishing this new scientific discipline in the Federal Republic of Germany. The general requirements linked to the advancement of science at the level of the development of theories, methods and research and in areas involving recruitment of a new generation have already been mentioned in the previous remarks. The present focal points defined by the Institute for Nursing Science at the University of Bielefeld will now be presented against this background in the following.

4.1 The training of a new generation of scientists

The priority-level task of the IPW in respect to safeguarding the training of a new generation of scientists is to open up nursing-science study opportunities aimed at the training of competence in science and practical research, to make it possible to follow up technical-college studies and to create access to doctoral studies. A **multi-stage program** is envisaged in order to make the above possible.

In keeping with the evolved structures of the Faculty of Health Sciences at the University of Bielefeld, the goal pursued in the first stage will be to integrate nursing science as one of the major subjects in the postgraduate studies of the Faculty of Health Sciences. Work has already begun on the tasks required for this purpose (revision of the curriculum, changes in the examination code, etc.). Bearing in mind the past remarks, this step will serve as an entry-level function which – according to plans – will give technical college graduates access to extended nursing-science study possibilities at the university level. In so doing, a model will be followed that has already become routine in The Netherlands. In the USA, too, it has predecessors in the form of public health nursing. As with all entry-level constructions it will, however, be necessary to check whether the model found is a sensible one and should be retained in the long run, or whether it is tantamount to a transitional solution. To avoid delays, the conditions and requirements involved in the establishment of a nursing-science course of (master) studies will be examined in a second parallel step. Moreover, clarification of the preconditions for implementation of a program of studies to prepare for a doctorate will also begin. The chances of its realization are still uncertain in view of the science-policy situation in North-Rhine Westphalia. But the urgency is ubiquitous from the practical/scientific point of view: the number of doctorate-related inquiries received by the IPW is high. That is why supervisory programs for doctorates have already been accepted without the requisite structures being in place yet. Further doctoral possibilities were also secured within the scope of the graduate course applied for by the faculty.

When it comes to safeguarding nursing-science competence, a further task will have to be given high priority in view of the current situation: to search for compensatory arrangements in close cooperation with the technical colleges so as to make up for the present shortfall in the promotion of a new generation and keep more people from drifting off to other countries. Moreover, it will be important to establish intermeshing, verti-
cal supplementation of the studies structure presently in existence and also planned for the future.

4.2 Development of theories and methods

Pushing the establishment of a scientific discipline at the university level also implies dedication to the development of theories and methods. In so doing, the focus will initially be on further clashes with the present tradition of theory, a task that has already begun on an individual basis (e.g. Schaeffer et al, 1997) and which is now to be continued within the context of the IPW. In this respect, an attempt must be made to link up with the discussion forums of the “scientific community” in the field of nursing and continue the process involving a critical/analytical examination of nursing-theory approaches. Bearing in mind the previous remarks on the course taken by the development of nursing theory, there will be less emphasis on further popularization of theoretical approaches arising in the initial phase of theorization – the so-called “grand theories” –, even though the same dominate the present discussion of nursing theory in the Federal Republic of Germany. The accent will be to just as little extent on the further development, underpinning and advancement of the current nursing-theory tradition. Instead, importance will be attached to following on the theorization tradition dedicated to the development of theories with a small reach or situation-specific theories – not only because the same are now preferred in the international debate on nursing theory but because they promise the greatest benefit for the construction of a nursing science (ibid., Meleis, 1997). In conjunction therewith, preference will be given to inductive strategies of theory development, and theorization will be striven for which is generated from empirical facts. That will produce not only consequences for research but also for the development of methods.

If in the future the development of theories is to take place far more on an empirical basis than in past phases, discussion will soon have to be opened up to questions of methodology and methods. The IPW will commit itself in this field as well. For example, for 1999/2000 a conference on methods is planned which will concentrate on qualitative methods of nursing research.

4.3 Development of nursing research

Another IPW task area is the development of nursing research, especially the development of basic research. That is required to permit a scientific foundation for nursing and to develop a universally valid body of knowledge of its own. It is also necessary in view of the theorization strategy presently preferred, for the latter requires a close interlinkage of theory and research development.

The development of basic research first implies dealing with its preconditions, given the current situation in Germany. That includes – as already mentioned – identifying research requirements, creating researcher potential and searching for material resources. Nursing research has thitherto
been financially supported by only very few bodies. The consequence thereof: even today nursing research – despite notable activities – still tends to be a grassroots undertaking. Research coalitions like those, say, in the field of public health do not exist, even though the number of nursing studies long since far exceeds that of health-science studies. The following steps are planned in order to introduce changes here: building up cooperative structures and networks within the nursing-science community, establishing a research coalition, determining support possibilities and conceptualizing research projects. It is already possible to list important topics that will have to be constituent parts of a coalition serving basic research, examples being analysis of the various courses taken by professionalization in countries with a head start in gaining experience, so as to obtain clues from the positive and negative experiences gained there and apply them to the further course to be steered in the Federal Republic of Germany. Further important research needs are to be found in the area of nurse/patient interaction – especially in nontraditional settings, in an analysis of the specific and unmistakable reach of nursing and its contribution to safeguarding the health-related integrity of society, in coming to terms with questions of (nursing) demand and need and its fields of tension, the scientific establishment of new tasks in nursing (health promotion, rehabilitation, etc.) and new nursing roles (instruction, consultation, coaching, etc.), the importance of nursing for coping with chronic diseases and impairment of patients' autonomy as well as for coping with transitions in a person's health-related biography. This by no means systematic look is supposed to hint at how broad the range of topics arising therefrom is.

In view of the abundant problems in nursing practice, greater importance will also have to be attached to the elaboration of application-oriented research. In this respect it is possible to fall back on an already existing tradition at the IPW. Nevertheless, it will first be necessary here, too, – in view of the research landscape outlined above – to prepare systematic analyses, plans and definitions of focal points if one is not to run the risk of getting lost in the maze of problems so promising for research. A look at the international state of nursing-science development also shows that it is necessary to avoid dealing mainly with questions that are imposing themselves as urgent in this early stage. In other words, nursing research undoubtedly has to concern itself with questions pertaining to the conditions in which nursing takes place (either in the area of training or in institutional settings), but that should not be done exclusively. One should begin now, and not after further delay, to conduct research on the core of nursing activities, on genuine nursing-related questions. Nor should one forget to devote special attention within the scope of application-oriented nursing research to those challenges that once triggered the academization of nursing. Similar remarks apply to the practice-related requirements resulting from the health-policy paradigm change, requirements that call for contributions to be made – despite the difficult basic circumstances – to nursing care that is appropriate to the demand and needs of today's dominant groups of patients and to counteract restrictive development trends. Against this background it is possible to identify the following topics guiding the IPW's work in the field of application-oriented research:
Reorientation of nursing activities
- importance of nursing for the maintenance of patients' independence;
- the promotion of health and orientation of resources, nursing and rehabilitation: approaches, concepts and experience;
- demand and need for support in coping with illness from the point of view of the sick;
- assessment of nursing from the patients' point of view.

Changes in requirements and restructuring in practical fields of nursing
- nursing in the case of different types of chronic and chronic/ degenerative disease;
- new educative tasks in nursing: symptom management; patient instruction, adaptation to sickness, coping with the human/technology interface;
- changes in the conditions and requirements of outpatient care;
- new requirement profiles in hospital nursing;
- people from other cultural groups requiring nursing, “transcultural” nursing;
- nursing for the dying.

Integration and continuity of nursing
- cooperation and interface regulation in nursing;
- advocatory functions of nursing, “case, care, pathway or progress management”;
- nursing in informal help networks.

Quality and outcome research in nursing
- at the level of nursing action: preconditions, tools and affects of nursing intervention;
- at the level of different institutional settings;
- at the method-related level: concepts, tools and criteria required for quality assurance.

Professionalization processes in nursing
- repercussions of incipient professionalization for training, further training and advanced training as well as for the future qualification needs in nursing;
- nursing staff in the role of “change agents”.

Enough said about some of the ideas regarding future priorities that still remain to be shaped within the scope of continuing program-related discussions at the IPW.

4.4 Transfer of knowledge

The last subject to be addressed in this connection is the transfer of knowledge – another task to which great importance is attached at the
IPW. Right from the beginning, as noted earlier, it is important when developing a science to avoid the danger of decoupling theory from practice and to strive for close cooperation between the two sides. This will not succeed with a normative control of such development – as already emphasized by Axmacher, our colleague who was cited in this connection – nor to any greater extent by the patronization of practice by science. Instead, strategies for the development of a science should be sought that permit intermeshing. One of these strategies is to concentrate on situational theorization, another is to strive to focus nursing research on practice-related problems, while yet another is to be found in securing a transfer of outcomes, including the conceptual tasks mentioned above. The realization of all that depends, of course, on the extent to which a close cooperative network of theory and practice is successful, or to put it more succinctly: of all the instances dealing with the innovation and transformation of nursing. The realization thereof, and thus incorporation of the IPW in the broad landscape of nursing practice and science, began some time ago. But a great number of further networking tasks are waiting to be resolved in the future.

In view of Germany's nursing-science backlog, however, a transfer of knowledge will involve more and must also extend to the establishment of cooperative relationships with the nursing-science community at an international level. This task, too, has already been tackled, and continuance thereof is likewise left to the future.

Final Observations

This concludes the first balance sheet showing the current level of nursing-science development in Germany and the profile attained by the Institute for Nursing Science at the University of Bielefeld (IPW), which, as one of the first nursing-science centers at the university level, bears special responsibility for the development of this new scientific discipline in Germany. Given its continuing highly dynamic development, the profile-shaping process outlined here is by no means finished. Instead, it will have to undergo continuous revision and further accentuation in the years ahead. In this respect it will be helpful to bear the following in mind:

The new constitution of Germany's nursing has begun at breakneck speed on the threshold to the 21st century, and this conversion and/or new edifice is currently affecting every level of nursing activity: it runs from the foundation (practice) to the top of the roof (the science now forming), and everywhere construction is in progress, sometimes in relation to each other, sometimes independent of each other, but in any case at the same time. The challenges to be resolved in this connection are still immense and accompanied by unforeseen hurdles. But one must not forget the enormous achievements now behind us in the development of nursing science and the indisputable successes that have already been achieved. Safeguarding and expanding them, thus not only advancing the professionalization and autonomization of this (women's) profession with a long tradition but also making a contribution above all to innovation of Germany's health system, should be both the aim and motivation in the years to come.
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