

# Industrialising the Services?

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## Introduction

The heading already implies a hypothesis, which is that there are differing logics which govern industrial and service work. While work in industrial production systems is basically driven by division of labour, the services are characterized by interaction. Should this hypothesis hold, this would mean in consequence that there are unique requirements which must be met to achieve efficiency and productivity in the services. However, as can be observed, industrial working models dominate the attempts to streamline former public services such as health and care, which may explain personnel shortages in the face of mass unemployment on the one hand and a growth prone and employment intensive economic branch on the other hand. Against that we will argue, that modernising the services, with health and care as an example, must necessarily be based on sustainable training and learning concepts.

The paper will highlight health and care as specific sector, which nevertheless is representative of the particularities of the service industries. In Germany<sup>1</sup>, this sector stands for more than 4 million jobs or roughly 11% of overall employment, in hospitals, medical practises, seniors' homes, the pharmaceutical industry, enterprises in biomedicine and medical technology as well as in sectors close to health such as sports, tourism, wellness and nutrition. In all, the health and care sector is the "hidden champion of structural change", even in old industrial areas such as the Ruhr district in western Germany<sup>2</sup>. Forecasts indicate that due to sociodemographic change, medical and technological progress and a growing preparedness to invest private finances in personal health this branch of industry will experience further growth, in employment as well as in value added<sup>3</sup>.

However, the sector is going through a severe change and modernisation process. The improvement of the quality of medical and care services, new demands to efficiency of both public and private service providers and growing pressures to improve working conditions are the top issues on the agenda. But how to respond to these challenges? Transfer tested and proofed models from industry? Or do the services due to their particularities require original solutions? This is the question we will attempt to follow up in this paper. First, the underlying logics of industrial and service work will be compared (1)

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<sup>1</sup> in most of the paper we will argue from the backdrop of the German situation, which, however, in tendency also mirrors the situation in many west European countries; encompassing comparative studies are rare, and one of them is e.g. Schneider 2002. A systematic comparison including working conditions would be a top desideratum on a European research agenda on the service sector.

<sup>2</sup> Hilbert/Rohleder/Roth 2001

<sup>3</sup> Dülberg/Fretschner/Hilbert 2002; Schulz et al. 2001; Munz/Ochel 2001

and the different principles governing work and work organisation are sketched out (2). Following to that we will outline the basic features of work in health and care, which ends with the statement, that though working with high motivation, employees are, at last, defeated by organisational circumstances (3). Having identified qualification and competence of employees as the basic parameters for professional work, work design and quality in the services, the corner stones of an integrated design of training and work design are outlined (4). Finally, a rough sketch of a "Programme for Modern Work in Health and Care" is presented (5), which is meant to stimulate debate, both on national and European level, on research needs and actual design of work in the service sectors.

## 1. The logic of industrial work and of service work compared

Industrial sociology over the years has built up an enormous body of knowledge about work, work settings, working conditions, change and modernisation of work in a set of branches of industry (e.g. automobile, metal engineering, chemistry), while others have remained on the sidelines of scientific attention (e.g. construction, transport), which has produced a "generalization-differentiation-dilemma"<sup>4</sup>. This shortcoming is being reproduced in many reflections on the "future of work and labour", where often generalizations are driven even further, but where it is more or less traditional 'industry' which is lurking in the back of minds. This becomes evident when looking at 'modern' industries such as biotechnological productions or at the transformations which "industrial production" has undergone in pursuit of international competitiveness<sup>5</sup>.

In the attempt to differentiate between industrial and service work there are two approaches which lend themselves to an analysis: a product and a process approach. The outcome of industrial work is a tangible product, an object produced to a customer's order, or for an anonymous market, along defined technical rules of how to adequately treat materials. Stripped off all trimmings and consultants' fashions of the day, industrial production processes are based on division of labour in some way or other, be it along Tayloristic scientific work organisation methods or participative group work models. Group work, job rotation, job enlargement are methods to reduce the negative impact of segmentation and specialization on workers' motivation and creativity, but they do not fundamentally change the principle of slicing up the production process and optimising it and controlling for (disturbing) environmental influences best as possible.

The outcome of service work (leaving the case of a repaired washing-machine or a haircut aside) is an intangible product, e.g. the advice to apply certain nutrition principles, which are also produced to a customer's order, but with the customer as co-producer<sup>6</sup>: The "material" is not an object but a subject. The work process, again stripping off all trimmings, is marked rather by interaction than by planned stages of work divided among a number of specialized actors<sup>7</sup>. Instead of rational planning based on knowl-

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<sup>4</sup> Pries/Schmidt/Trinczek 1990: 96

<sup>5</sup> see e.g. the contribution by Brulin/Ekstedt 2004 in this volume

<sup>6</sup> Büssing/Glaser 2003: 133

<sup>7</sup> cf. Büssing/Glaser 2003: 131 ff.

edge of the properties of materials the predictability of the reaction of a subject is rather limited and imponderabilities and uncertainties become the characteristic feature of service work<sup>8</sup>. This can be illustrated with the example of person-related service work like in health and care, where actual daily work is highly contingent upon the acute physical and psychological state of the patient and the patient's capability and/or willingness to comply or cooperate.

Interaction work thus becomes the intrinsic core of person-related service work<sup>9</sup>. The concept of interaction work integrates preconditions, components, effects and consequences of service work. Human labour in this concept is, even more than in anthropocentric production systems, an integral part of the product. The service "reconstruction, maintenance and improvement of health" can, usually, only be performed when production and consumption coincide spatiotemporally (uno-actu principle)<sup>10</sup>. Among the structural preconditions juridical, economic and societal framework conditions are counted. In the domain of in- and outpatient care it is particularly the political demand for more efficiency and quality improvement, which (as will be shown later on) influences daily work and which, owing to circumstances, may turn out counterproductive for productive interaction work. More than in other sectors working conditions and resulting work loads are determined by respective forms of work organisation and concrete demands on activities resulting thereof. In addition idiosyncratic features of the supplier and the consumer of a service (personality, competence, attitude etc.) contribute to the "production" of the service. A constitutive condition within the concept of interaction work for a qualitative and professional performance is qualification and competence of the service worker. Here, the strengthening of the competition principle in the (German) health system has, among other things, led to an increased pressure on competitiveness, innovation and profile contouring on individual suppliers (hospitals, clinics, health centres etc.), which in turn has led to changed and new demands on service work, changes, which, however, will have to be balanced with the demands of interaction.

## **2. In search of productivity and competitiveness – The role of uncertainties**

Liberalisation of world markets have put firms under pressure, and with new technologies allowing for decentralized production systems both firm strategies, firm structures and concepts of organization of work have undergone various metamorphoses<sup>11</sup> in the attempt to respond to these pressures. The situation of the service industries is not that different though not obvious at first sight. Different from the goods producing industries the service sector has for along time been sheltered from international competition, by nature as well as politically. Services are usually highly customized (concerning their substance) and more or less tied to the residence of the customer (for delivery). As far as the professions are concerned, they are usually highly regulated (as a measure of

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<sup>8</sup> cf. Böhle/Weishaupt 2003: 151 f.

<sup>9</sup> cf. Dunkel/Rieder 2003; Büssing/Glaser 1999; Nerding 1994

<sup>10</sup> cf. Herder-Dorneich/Kötz 1972

<sup>11</sup> a preliminary final stage might be seen in the dissolution of the firm as a coherent structure and a turn to temporary/project structures blurring organizational borderlines, internally as well as externally; cf. Ekstedt 1999

market protection), and when it comes to public services such as health and care, these are not only governed by nationally differentiated and highly complicated regulations but even more by national traditions, structures and institutions which hardly leave room for international competition, on the one hand, and critical considerations of productivity and efficiency, on the other hand. But with the European internal market progressing and with GATS gleaming from the horizon the scene for change is set.

Considering the example of health and care, the public services have come under pressure from a different side: the internal change from publicly provided infrastructure<sup>12</sup> to a service supplier<sup>13</sup> and the decline of public budgets necessitate the quest for more efficiency and productivity, accelerate privatisation of public clinical services, bringing in new players and exerting competitive pressures, and finally (bad) working conditions endanger the supply of labour (see section 3 below).

But although public services in general and health and care services in particular are under high financial pressures, the health and care branches are growing stronger than most of the traditional branches of industry: Against the trend in Germany in 2002 employment in health and care grew by 1.1% while the economy as a whole lost 1.4%. In numbers, the German health and care branches provided 4.2 million jobs, 45,000 more than in 2001<sup>14</sup>.

Industrial forms of work organisation are based on economic input/output rationality, as first and best expressed in F.W.Taylor's "Principles of Scientific Management" (1909). However, industrial organisation has experienced quite some changes since his times. In search for productivity and competitiveness the focus has been extended beyond work organisation to comprise the wider personnel system, the production system and sales strategies. Even the end of mass production<sup>15</sup> and of division of labour<sup>16</sup> has been proclaimed in between, only to experience its resurrection in the model of lean production and its descendants. Today it is hard to discern a kind of common trend, across branches of industry as well as within a given branch<sup>17</sup>. Certainly everywhere efforts to push forward standardisation in order to make use of economies of scale can be observed; however, to the degree supply (outsourcing, just-in-time, firm-in-firm) and sales strategies (production on customers' demand) influence work organisation and production systems, we find strategies of flexibilisation and automation side by side. In work organisation we even meet strategies of reduction of division of labour, which, however, go along with centralisation of steering and sociotechnical control strategies. And it is only against this backdrop that models of group work (of some kind or other) and flexible working time arrangements are installed. Yet there is one aspect which should not go unmentioned: A common feature of these models is a shift of responsibility to a collective (work groups, firm-in-firm-workers) of workers for production, quality, qualification etc. on the one hand and intensification of work by means of advanced technological equipment on the other hand – both resulting in growing work strains with clear impact

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<sup>12</sup> as expressed in the specific German term "Gesundheitswesen"

<sup>13</sup> cf. Landenberger 1998: 141 ff.

<sup>14</sup> cf. Statistisches Bundesamt 2003

<sup>15</sup> Piore, Michael J/Sabel, Charles F. 1984: The second industrial divide

<sup>16</sup> Kern, Horst/Schumann, Michael 1984: Das Ende der Arbeitsteilung?

<sup>17</sup> cf. Brödner/Latniak 2002; Pries/Schmidt/Trinczek 1990: 97 ff.

on job health<sup>18</sup>, burn-out symptoms and the final consequence of early retirement (which under demographic aspect is becoming a problem<sup>19</sup>).

While industrial work organization is the attempt to pre-structure the work process and to eliminate all disturbing environmental influences as far as possible, service work, and in particular person-related services, mirror the uncertainties of their subject. Though standardisation of procedures, of course, contributes to rationalisation of work and productivity gains to some extent, work itself remains characterized by contingencies and imponderabilities, since deviations from 'normality' are an integral part of work<sup>20</sup>. And so is the "output-side" of service work: outcomes and achievements are subject to a wide range of uncontrollable parameters, so that performance expectations can only be defined in a rather general way. An industrial work organizer would try to as far as possible eliminate these disturbances – yet this is the very core of person-related service work in health and care. So the transfer of organization and rationalisation models from industry without accounting for these specific features would most probably lead to counterproductive results. It is under these aspects that the introduction of "clinical/patient pathways" and "disease management programmes" (DMP) are critically debated<sup>21</sup>.

Person-related service work such as in health and care certainly represents a counterpoint to "classical" industrial work such as in automobile production. We also could imagine these "prototypes" as the endpoints of a scale, between which we find creeping transitions from one model to the other. The services performed e.g. in a bank, an insurance company, a medical laboratory or a call centre, will probably bear quite some resemblance to tayloristic work structures in a classical industry, just like the other way round work e.g. in the IT-industries or a biotech firm comes rather close the logics of service work<sup>22</sup>. Service work, as it has been sketched out so far, is marked by the interaction between the "producer" (i.e. supplier of the service) and the co-producer, the client. But, as is pointed out by Brulin/Ekststedt in this volume, this more and more goes for recent trends in industrial production as well. They observe a shift in work organisation principles " from employee control to customer control"<sup>23</sup> and from rule-led activities to goal and problem-solving behaviour, with the consequence that work organisation becomes a "continuing search process for constantly better organisational solutions and work tasks."<sup>24</sup>

What does this mean for the design of work organization models, their applicability and transferability? To put it in slightly exaggerated terms, the organization models as they are proclaimed today by (most) consultants are already outdated. Following Brulin/Ekststedt, uncertainties are undermining "rational" industrial production schemes as customers' influences open doors for uncontrollable "deviations". The challenges resulting thereof can only be met when actors (workers, suppliers, service suppliers) are allowed sufficient degrees of freedom to improvise and to search for adequate solutions –

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<sup>18</sup> cf. van der Vliet/Hellgren 2004

<sup>19</sup> cf. Bundesvereinigung der Deutschen Arbeitgeberverbände (BDA) 2002

<sup>20</sup> Böhle/Weishaupt 2003: 150

<sup>21</sup> cf. Hellmann 2002

<sup>22</sup> for an empirical study highlighting this issue see Haipeter/Voss-Dahm 2002

<sup>23</sup> Brulin/Ekststedt 2004, (ms. p.9 f.)

<sup>24</sup> ibid. p.11

in other words: when uncertainties and deviations are accepted as "normal". Reversely, models focussing the assignment of certain work tasks and providing a given repertoire of action to each function may soon turn out to be counterproductive.

### 3. Features of work in the services – The example of health and care

To underpin the thesis of interaction as the governing principle of service work in general and particularly of work in health and care, this section will roughly outline the spectre of activities expected and performed in hospital care. A detailed analysis of work, physical and mental work load and work environment would certainly be beyond this paper and is provided in recent comparative in depth studies such as the NEXT-Study<sup>25</sup>. Neither this is the place to go into the economics of health and care, however, it should be kept in mind that we are talking of one of the most promising sectors of most of the European economies. This is not only based on public expenditures, but also on private money, which on the average runs up to 300 USD per capita in western Europe, in Switzerland even to 1,100 USD<sup>26</sup> (not accounting for private insurance contributions). The emergence of health and care as a private market, among others, is driven by growing demand for (and supply of) hybrid products, which enhance general quality of life, lifestyle and well-feeling, and also contribute to health<sup>27</sup>.

In a rough sketch, work in health and care can be described as

- female, part-time, underpaid, with socially unfavourable working time schedules
- taking place in an environment of conflicting organizational structures and philosophies resulting thereof (bureaucratic, hierarchical, professional-functional<sup>28</sup>)
- with underutilization of participative resources resulting thereof
- in daily work suffering from severe deficits in management of units/wards, requiring compensation of communicative shortcomings by rank and file staff, improvisation, waste of time for search and retrieval work and other non-professional activities
- marked by a gap between professional qualification and training of staff and actual qualitative level of work
- example of non-planning of technological and organizational change

There are two more particularities, which distinguish a hospital from other organisations in production and services<sup>29</sup>. One is, that the professional-functional aspects of performance are not represented by a homogeneous group of professionals, but by a rather (functionally and hierarchically) differentiated group of doctors on the one side and nurses and other (non-medical) health professionals on the other side. This may feed into positive synergies, but this may also give rise to conflict between the professions

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<sup>25</sup> cf. Hasselhorn/ Tackenberg/ Müller 2003; see also Büssing/Glaser 2003; von Engelhardt/ Herrmann 1999.

<sup>26</sup> OECD Health Data 2004, Frequently Requested Data, Table 16 (internet: [www.oecd.org](http://www.oecd.org))

<sup>27</sup> for a broader discussion see Potratz/Hilbert 2003; Dülberg/Hilbert/Fretschner 2002

<sup>28</sup> Mintzberg 1979

<sup>29</sup> for the following see von Engelhardt/Herrmann 1999: 22 ff.

and professional understandings of functions and division of labour, on the one hand, and necessary task and patient-related interprofessional cooperation, on the other hand.

Enter the patient/customer: while the hospital is the working place of doctors and nurses, for the patients/customers it is the (temporary) place of living under – from his/her point of view - extraordinary conditions. It is this "clash" of existential interests which distinguishes the hospital from manufacturing but also from other service organisations. Hospital workers, doctors and nurses alike, are interested in at least a minimum of standardised routines within calculable time schedules, while at the same time patients have a legitimate claim to best professional treatment whenever needed. A hospital, thus, as a working place as well as a place of living, is an organisation driven by tensions between diverse goals, interests and rationalities<sup>30</sup>.

The ward is the unit, where these interests intersect, and they become visible when looking at the spectre of care work. Von Engelhardt/Herrmann analytically distinguish five areas, which in reality are closely interlinked and overlap<sup>31</sup>:

- (1) The centre of work, of course, is direct care in interaction with the patient. While nursing activities are carried out under responsibility of nurses, medical activities are carried out on advice and under responsibility of doctors. In addition there is a set of patient-related activities such as admission and discharge procedures, communication with relatives, preparatory and follow-up activities. A number of these activities are carried out in cooperation with other nursing staff and doctors.
- (2) Less patient-related fields of activities are in housekeeping, errands in the context of documentation, support of doctors, supply, administration or waste disposal.
- (3) Closely related to the former fields are planning activities, organisation and communication within the ward team; this includes patient-related exchange of information, documentation, shift-changes, and also consultation about allocation of staff, shift planning, division of work and responsibilities, personnel planning, control, and not least conflict resolution.
- (4) Interchange, communication and cooperation with doctors in direct patient-related activities to large parts overlap with what has been described as direct care, but aside from this includes participating in doctors' ward rounds, consulting, executing medical directives and administrative support (e.g. documentation tasks).
- (5) Interchange, communication and cooperation is also required in the direction of the non-doctoral (functional) services in diagnosis, therapy, rehabilitation as well as with the hospital's social services and administration.

As can be seen, these areas of work in hospital care are marked by horizontal and vertical division of labour and responsibility at the same time. The degree to which these are managed in a directive or participative way has direct consequences for the latitude of nurses' decision-making, the quality of communication and cooperation with doctors and other staff and, resulting thereof, for the quality of care. Work in hospital care is in large parts well defined by standards and pathways, however, at the same time it is subject to rather large variations and unexpected demands, so that the reach of standards and

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<sup>30</sup> von Engelhardt/Herrmann 1999: 23

<sup>31</sup> von Engelhardt/Herrmann 1999: 25 ff.

planning is rather restricted. Interfaces with other professional groups and overlapping tasks and performance expectations permanently question professional core competences. The heterogeneity of activities and dependence on external demands make for frequent interruptions of the work flow and hectic atmosphere, requiring high cognitive, practical and psychosocial competences.

The hospital, thus, is a rather conflict-laden work place, which, however, is visible hardly on open stage. As Bandemer et al. have shown in an empirical study of 40 (German) clinics<sup>32</sup>, patients/customers showed a rather high degree of satisfaction. However, customers' satisfaction correlated highly with low work satisfaction of clinic staff. The explanation is, that customers' satisfaction was paid for by (self-) exploitation of physical and mental resources of employees. Organisational and management shortcomings are compensated for by improvisation, enlarging the work load and putting strains particularly on individual mental capacities<sup>33</sup>. Here we find a clear dividing line between service and industrial work: while for the latter it is more the immediate work place environment which counts (cycle times, safety, supply, colleagues' support etc.) for work satisfaction, in the (health) services it is more the overall quality of organisation and distribution of work, hierarchical relations and supportive leadership, information and communication which makes for higher or lower work satisfaction.

The tendency of hospital staff, nurses and doctors alike, to disregard the limits of their mental resources results in burn-out-symptoms, which are much more prevalent in service than in industrial work. Among others this is an issue of the NEXT-study<sup>34</sup>. The authors characterize this phenomenon as typically affecting "those professions in which the close interaction with another person is a key action and a condition of work success and development."<sup>35</sup> The findings show, that burn-out is distributed rather equally across all the 10 countries included in the study. Although much literature focuses working conditions of nurses, the main findings hold for doctors as well. They find themselves also in a situation of "high demand – low influence", which often collides with the self-perception and professional self-image<sup>36</sup>. The outcome in both cases is the same: employees vote by feet, i.e. they leave the profession, thus creating a severe bottleneck. What on the one hand is the personal consequence of a dissatisfying work situation, on the organisational side produces social costs in terms of reduced quality of care and loss of knowledge capital, an aspect, which would definitely need more research attention<sup>37</sup>.

A few data from Germany, which is the third biggest spender on health (behind the USA and Switzerland) among the OECD countries, may highlight this situation<sup>38</sup>. The largest groups of employees in the health sector are nurses and doctors. Between 1991 and

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<sup>32</sup> v. Bandemer/Born/Hilbert 2002

<sup>33</sup> Bandemer et al. 2002: 417 f.

<sup>34</sup> cf. Hasselhorn et al. 2003: 53 ff.

<sup>35</sup> Hasselhorn et al. 2003: 53

<sup>36</sup> cf. Bergner 2004

<sup>37</sup> an overview over recent research in health care lists 66 projects about the quality of hospital care, however, none explicitly highlights the consequences of personnel shortages for the quality and quantity of care; cf. Ross-Strjhar 2002.

<sup>38</sup> data and information are taken from Dülberg/Hilbert/Fretschner 2002, p.42 ff.; see also Statistisches Bundesamt 2002



1999 demand for nursing training and education programmes has diminished by 6.5%, while the number of offered trainee places has gone down only by 1.7%. An almost dramatic situation is to be stated for auxiliary nurses, where interest in training has gone down by 55.6%!

Concerning doctors, the situation is a little bit different. Interest in the respective university courses is relatively constant over time, but large numbers of the graduated young doctors afterwards do not show up in the medical professions, be it in clinics or practices. Between 1991 and 2000 the share of under 35-year-old doctors has dwindled down from 27.4% to 18.8%, which indicates a process of geriatricisation of this core staff group.

In contrast to these two medical staff groups in the remaining health service professions or professions close to medical and care services (dieticians, physiotherapists, laboratory assistants, health protecting professions etc.) the situation is somewhat better. Qualification and training capacities during the 90ies have gone up by 12.6%, but still this growth cannot compensate for the general loss of health personnel.

Finally it comes to income perspectives. Even in an otherwise high-wage country like Germany employees in the health services in (West-) Germany on the whole have lower incomes than their counterparts in the industrial sector of the economy, and also average growth rates are smaller. In the period of 1986 to 1995 hospital doctors had an average yearly growth in income of 3.3%, and nurses/doctor's assistants of 4.3%; a comparable employee to the latter enjoyed a growth rate of also 4.3%, but starting from a roughly 35% higher basis (1995). If you correct for an exceptional rise in 1990 and 1991 the yearly growth in income for a hospital doctor is reduced to 2.6%, and 3.7% for a nurse and 3.8% for the fictitious employee in industry<sup>39</sup>.

This description of working conditions in the health and care sector was mainly taken from observations in Germany, but by and large, may also be assumed for the rest of continental Europe and the UK, while Scandinavia is somewhat ahead<sup>40</sup>. Still, also Scandinavia suffers from an even more severe lack of staff in this sector, which hampers economic development as well as novel forms of health service governance and organisational and workplace innovation. So, to put the situation in a nutshell: employees work with high intrinsic motivation, but they are defeated by organisational conditions.

#### **4. Modern work in health and care – paying tribute to knowledge-intensiveness instead of work-intensiveness**

To summarize: the health and care services find themselves in a contradictive situation: economically, prospects are promising, however, early exit of personnel threatens to limit growth and further development. In response to the challenges put organisational models are introduced, which in the style of industrial organisations attempt to enhance

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<sup>39</sup> cf. Statistisches Bundesamt 2002

<sup>40</sup> see e.g. Exton/Totterdill and Banke/Holsbro 2004; see also Schneider et al. 2002; ver.di 2003

productivity by standardization of procedures e.g. by clinical/patient pathways, outsourcing of functions such as diagnostics and rehabilitation, firm-in-firm-models by drawing private specialists, and finally by changing the remuneration model to a system of "Diagnosis Related Groups" (DRG) which is meant to provide the economic incentive for more productivity. In care work, variants of integrated or holistic care are tried out<sup>41</sup>, which are meant to reduce division of labour, enhance professionalism and to improve the quality of care – models which are also well familiar from industrial reengineering strategies. However, the precondition for the functioning of these models is high degrees of interaction by information and communication, the integration of the diverse hierarchies of academic and non-academic staff within the ward, and, what makes for the decisive difference to industry, rather large latitude for decision-making. In other words: the logic of industrial organization in the services only works when its starting point, the control of uncertainty, is surrendered to decentralised, even participative organisation.

Yet health institutions are hesitant in experimenting with new forms of work organisations east of hierarchy and professional fiefdoms. This is the more regrettable as there are (a few) studies which point to the positive influence of new work structures on innovation, work climate and the improvement of the quality and performance of service<sup>42</sup>. The reorganisation of internal structures, processes and interfaces, driven by the quest for efficiency as well as to provide qualitatively high standing health and care services, lastingly changes demands on cooperation and communication and thus on the qualification of employees. Aside from progress in medical and care services new demands on qualification are coming up particularly in fields such as management of patients' data and information, medical documentation, quality management, technology, logistics and, finally, work organisation. All this does not necessarily mean a relativisation of the specific professional qualifications, but rather a quest for a new mix of qualifications, i.e. of (medical, care) professional qualifications proper and cross qualifications such as methodological, social and person-related competences<sup>43</sup>. A recent study of the German Institute for Employment Research (IAB)<sup>44</sup> has shown, that apart from the problem to recruit personnel at all it is particularly the demand for further training and qualification which make up the core problems of the health industry. The numbers are impressive: concerning personnel problems 65% of establishments had recruitment problems (rank 1 out of 14), and consequently 44% complained about lack of personnel (rank 3) and 36% (rank 4) regarded qualification measures as bottleneck for future development.

From this backdrop sustainable concepts in the health and care industry would definitely (a) need to consider the needs of employees and (b) should be based on a broad range of complementing measures in organisation, personnel and qualification development. As has been explained with the concept of interaction work, professional and successful service work is dependant on an integrated view of its societal, structural and individual preconditions. To clarify in advance: this also means that there is no universally applicable solution. Still, a few domains can be described, which for an integrated approach to quality, efficiency and socially compatible working conditions are of key importance:

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<sup>41</sup> for an empirical in-depth-analysis see Engelhardt/Herrmann 1999

<sup>42</sup> see e.g. Exton/Totterdill 2004; Windel et al. 1999

<sup>43</sup> cf. Evans/Hilbert 2003

<sup>44</sup> Gewiese/Leber/Schwengler 2003: 157

- (1) Work organisation has to be developed in accordance with tasks and qualifications and considering the needs and interests of employees as well as the need for competitiveness of the establishment/institution. As has been shown, work organisation for the time being is more marked by improvisation and individual commitment of employees. A modern and qualification-compatible design of work organisation and working time does not only lead up to the relief of working strains of personnel, but also to the improvement of efficiency of work flows and processes and in the end to the creation of new jobs. To bring this about, aside from professional qualifications and management competences employees would need empowerment for life-long learning in order to continuously participate in the design of their (continuously changing) working conditions.
- (2) In response to the dynamics of actual developments the pre- and framework conditions for life-long learning and personnel development have to be formed in the individual establishment (e.g. the hospital), the only place where qualification and training strategies can be fine-tuned to organisation development, which together make up the basics of modern work organisation. This already makes clear that there is rather little room for prefabricated standardised and often fragmented modernisation concepts. The actual dynamics in the health and care industry is strongly marked by growing competition between suppliers, the building of integrated health care structures (which will have crowding-out effects on traditional structures), the implementation of internal and external quality assurance and finally a growing cross-border demand for health services. This confronts executive staff in particular with fundamental challenges to traditional management paradigms. Against this backdrop studies<sup>45</sup>, however, show, that at least in Germany this is still a desideratum: In almost every second hospital (48.3%) for doctors, and in more than a third (37.6%) for care and functional services no systematic personnel development is in place. Particularly doctors only rarely enjoy systematic and continuous qualification and career planning. The existing personnel shortage in hospitals even makes it more complicated to attend qualification measures: particularly in hospitals and university clinics (!) a clear difference can be observed between the supply of qualification measures and actual participation<sup>46</sup>, so that the presently given personnel situation factually works against necessary modernisation processes.
- (3) Training and qualification in the health and care professions has to be developed continuously. The concerted interplay of establishments/hospitals and suppliers of qualification can contribute to early identification of new needs and translate them into innovative qualification concepts and measures and thus push forward the modernisation process. International best practise should be considered widely, and also benchmarking exercises should be undertaken to maximise interorganisational learning and minimise individual search and development costs.

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<sup>45</sup> DKI 2003

<sup>46</sup> cf. Gewiese/Leber/Schwengler 2003

As has (hopefully) become clear, there are manifest interactions and reciprocities between these domains. In so far it is also clear, that singular actions such as the introduction of DRG-systems will lead anywhere; only e.g. the reorganisation of work along the process chain *and* accompanying qualification of all concerned will be promising. The quest is for new forms of organisation which account for the professional specialisation of employees *and* the need for a holistic view on the "production process" in health and care. In addition, disease patterns differentiate and the needs of patients along with them. The competence of the individual "health worker" here is the decisive factor for more or less quality of the service and also for more or less quality of working life in the establishment. As has been shown in the NEXT-study, sustaining disregard of employees' qualifications, interests, needs and aspirations leads to large scale frustration with the final effect of "voting by feet", i.e. leaving the institution and the profession altogether. The problem is, that the question for the proper division of labour and work organisation, as well as for the accurate qualification profile cannot be answered definitely. It is the logic of interaction work, which makes integrated, holistic modernisation strategies necessary and which makes it a continuous change (or rather: search?) process.

## **5. What we always wanted to know but never dared to ask**

The paper has started out with the thesis of different logics of industrial and service work. The core argument is, that industrial work is governed by a logic of division of labour, while for service work it is maintained that it follows a logic of interaction. The organisation of industrial work is based on, or at least strives for, predictability, while the characteristic feature of services is uncertainty and imponderability. Interactions between supplier and customer escape clear cut definitions or programming; they require room for consideration and weighting, individual solutions and participative decision-making. In terms of institutional economics, in the services customer and producer conclude incomplete contracts, where neither the final product is defined nor the production process, so that partners have to negotiate each successive step. So, the answer to the question put in the headline of the paper is certainly No.

The thesis will probably hold as long as we confront "classical" industry such as the automotive industry and "classical" service sectors such as health and care. However, with Brulin/Ekstedt we observe a new development coming up<sup>47</sup>: industrial organisational structures become more and more floating as they take up the challenges of a knowledge based economy<sup>48</sup>; interaction is becoming a feature of modern industrial work, rendering traditional concepts more or less obsolete. On the other hand this would also send a shockwave through our argumentation, and also more generally the question would be put whether the distinction between industrial and service work and organisational models makes any sense at all. So, in conclusion, a first and overriding challenge would be to comparatively analyse work structures in "modern" industries and modern services and look for the degree of overlap of features. Should the outcome point towards convergence, then certainly the question put in this article would become

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<sup>47</sup> but see already Ekstedt 1999

<sup>48</sup> for a comprehensive discussion cf. Bröning/Oesterdiekhoff 2004

obsolete, but also long cherished theories of industrial work would have to be reconsidered, along with the political consequences resulting thereof for participation, interest representation and presumably new cultures of industrial relations.

If, following this line of argument, interaction is becoming the driving force of both "industrial" and "service" work (and the question put in the headline would rather have to be put the other way round), we would be in need of empirical research not only to re-analyse work and work structures, but even more about how to engineer the change processes, which are partly overdue, partly will be coming up soon. One certainty so far not yet really shattered is, that the "low road" certainly is no perspective, neither with respect to quality demands on work and labour nor with a view on labour supply and income. Coming back to the example of health and care discussed in this article and taking it again as a prototype, what would a "Programme for Modern Work in Health and Care" look like?

Concerning framework conditions, it must be taken into account that health and care are under considerable pressures and in a situation of upheaval and modernisation at the same time. Against this backdrop, there are two larger issues to be researched and designed:

In the first instance, there is certainly a need to translate the interactive character of service work into structural organisational patterns. What are the structural preconditions to enable hierarchical levels and professional groups to realize and sustain processes of participative organization of work, including the customer/patient as co-producer?

Secondly, issues of pay structures and working time models, as critical points for recruitment, personnel development as well as for qualification and further training, need to be reconsidered. This will need comprehensive studies of the nature of service work as well as bringing together economic trends (i.e. financial and remuneration structures in the health system) and socio-economic conditions to respond to these trends.

In sum, the upcoming economic, social and organisational changes means an intensification of research for the design of qualification concepts and contents, which reflect how the care and nursing professions should look like to be able to respond to these changes (in organisation, customers' preferences etc.), and even to make work in this sector a motor for the development of this sector and the improvement of quality of life. The development of respective qualification and training schemes and institutional models rests on breaking down the above theoretical questions respectively the answers to these questions to pragmatic "guidelines":

- (1) what is the nature of these new needs, and in how far are the medical and nursing professions prepared to serve these needs?
- (2) which are the elements in qualification and training which support the improvement of interaction capabilities in preventive, curative, rehabilitative health care and how can quality and productivity/efficiency of services be supported by new organisational concepts, technology etc.?
- (3) in how far is the institutional setting of different countries/health systems prepared to respond to the demands of interaction and holistic approaches to care?

(4) which resources can be mobilized to finance these services (public, private, collective) to improve quality of life for patients beyond publicly guaranteed standards with what consequences for work and work organization?

In the short run and more directly related to "day-to-day" work issues in need of research-based design include (no full list)

- qualification and training schemes (including distant learning) for both shop-floor and management personnel in organisation and management (leadership, information management, organisation and personnel development),
- development of assessment schemes to identify required future personality and qualification profiles of personnel in health and care, e.g. mediation capacities and knowledge management
- design of (flexible) working time schemes to improve employability of women and allowing for job rotation schemes and qualification measures
- development of labour pool schemes to better balance sick leave, temporary work overload, qualification times and other personnel shortages
- development, design and socially compatible introduction of support technologies (ICT, handling technologies) to improve information and communication and to reduce physical work strains
- introduction of "intermediate professions" e.g. for medical treatment documentation and other "back office" operations to ease the workload of patient-related staff

Many of these issues are treated in various experiments here and there, however, what is needed for a general and systematic upgrading and modernisation of working conditions in health and care is broad dissemination and continuous improvement of best practise by Europe-wide cross-enterprise quality assessments and benchmarking exercises to provide both adequate supply to patients and a high quality of working life to employees in health and care services.

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