Professionalism and Information Technology: Positioning and Mediation[1]

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Summary
The starting point of this paper is the assumption that - on the one hand - information technology (IT) is increasingly shaping the professional knowledge base and on the other the relation between organisation and profession. IT is changing the role, responsibilities and practices of social workers and therefore it is important to deal with the impact of IT on social work (representative for many: Harlow and Webb 2003; Burton and van den Broek 2008).

Hence, the general aim of this paper is to stimulate a basic discussion on "IT application in social work", or rather, in a more general way, on „technology and professions". Secondly, it is about an analytical differentiation of the process of informatisation, respectively formalisation. Thirdly we want to discuss the assumption and overall combination of efficiency, effectiveness and IT.

Therefore this paper is arranged as follows: After some opening remarks (chapter 1) we outline case management systems as research object (2). Further on, we confront the approach of reflexive professionalism (3) with the process of formalization (4). Subsequently, we touch on the debate of "technologies of care" (5) and conclude with some short remarks on a research program (6).

1 Setting the scene – IT and Social Work

Social workers and their clients have to deal with IT in numerous contexts: e-government, online-counselling or self-help-forums become part of digital initiation and delivery of social services to clients. In addition, social workers have to use various forms of software and web-applications for the purpose of cooperation and planning, documentation, accounting and evaluation of their work.

To give a first impression of the implications of IT for social work, the following heuristic comparison between traditional practice and computer assisted practice might be helpful (see Kreuger, Stretch and Kelly 2006):

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Traditional Practice	Computer Assisted Practice
Person-in-enviroment situates knowledge	Avoids situated, indexical expressions
Centers on physically embodied client	Avoids embodiment
Open to multiple orientations	Open primarily to code-only orientations
Focuses on process	Focuses on product
Involves caring	Involves monitoring
Orients to total person	Orients to person as text

Table 1: Comparison of Traditional and Computer Assisted Practice (abstract from Kreuger, Stretch and Kelly 2006 p. 30)

It becomes apparent that traditional practice and computer assisted practice implicate different modes of action, which on the one hand require different competences and capabilities and on the other hand lead to different results and consequences for social workers and their clients.

Analyses of the ambivalent relation between IT and social work can be based on very different theoretical and disciplinary approaches, as the following table shows:

- Philosophy (of technology) (i.e. Heidegger 1956; Cappuro 1987)
- media theories (i.e. Meder 1998)
- science & technology studies (i.e. Rammert 1998, 2007; Latour 1995)
- computer sciences
    - requirements-, software- and usability-engineering
    - business information systems
    - artificial intelligence (as a more cross sectoral issue)
- social informatics (Rob Kling 1999; Rolf 2003; Coy 1992)
- organisation theories
    - neo-institutionalism, (i.e. Bahnmüller and Faust 1992; Pfeiffer 2003; Benders, Batenburg and van der Blonk 2005)
    - micro politics, (i.e. Ortmann et al 1990)
    - structuration theory (Orlikowsky 1992; Ortmann et al. 1995)
- social work informatics (Parker-Oliver and Demiris 2006; Kreidenweis 2004)
- Social work theory, social policy (i.e. Garrett 2005, 2004; Parton 2006; Webb 2006)

As yet, as far as we know there is no unique study systematically relating technology studies and profession theories in the field of social work and thus tackling the question how technologies are embodied and embedded into professional action. To this end, we consider it to be necessary to briefly explore the approach of reflexive professionalism (see chapter 3). Nevertheless, we try to take the before mentioned approaches into account.

2 CMS as an object of research

IT in social work takes different forms and appears on different levels, which can be arranged in the triangle of clients, organisations and professionals (see figure below).

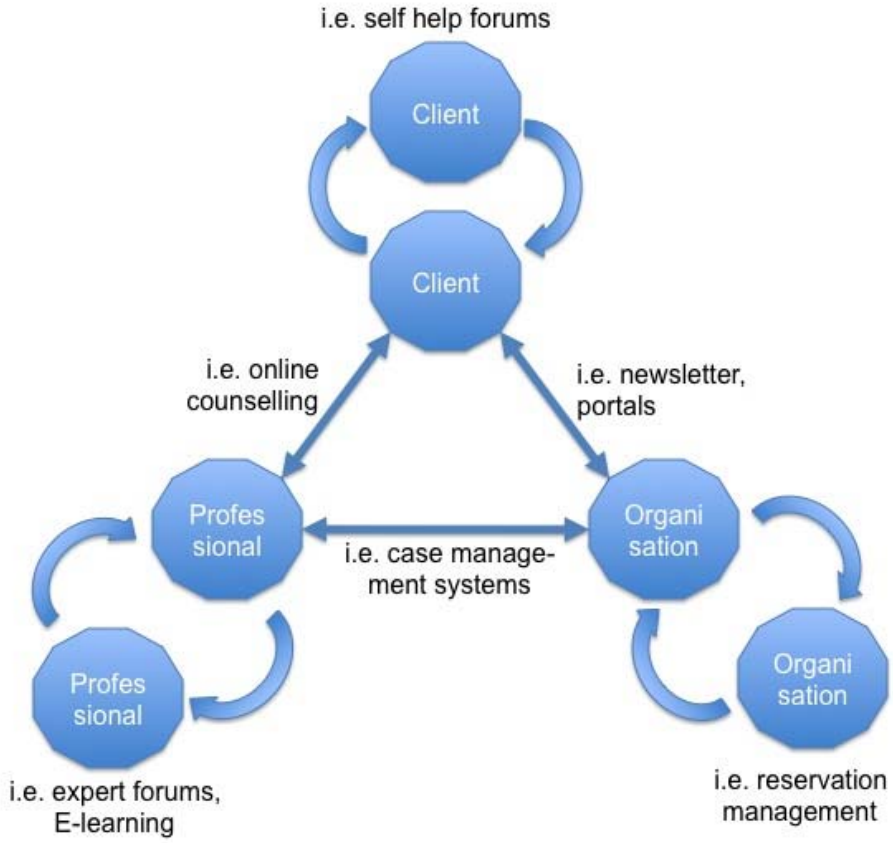

Figure 1: Analytic Matrix concerning IT applications in social work

A lot of debates reflecting the usage of IT in social work focus either on *the perspective of clients/citizens* - with the purpose of enhancing civil society and taking account of 'the digital divide' (see e.g. in this journal Kutscher, Klein and Iske 2005, Kompetenzzentrum Informelle Bildung 2007) – or on the (therapeutical) *relation between clients and professionals*, for example in online counselling (see Klein 2005 for a critical account). A third thread is about *accessing social services* in new ways, regarding for example the nationwide implementation of social service call centres in several countries (an example for many others: Findhelp Information Services 211 in Canada http://www.211canada.ca; critically for Great Britain Coleman and Harris 2008).

While in all of these three threads the client is at the center of attention, this paper refers to Case Management Systems, *which proclaim to support professional social work in „professional organisations"*.[2]

[2] Browsing the scientific literature, one finds numerous terms for this object: case management systems (CMS), management information systems (MIS), integrated information systems (IIS), decision support system (DSS), expert system (ES) etc. In the core – a database-driven file- and information-system – these applications are similar, but they prioritize different purposes.

Firstly, some short notes on characteristics of case-management-applications and on the software market for social services: As of now, there are over 300 software products in Germany alone in variable versions for several working areas like services for the handicapped, services for unemployment etc. (cp. http://www.social-software.de). Most of them have a "documental character" which is increasingly affected by psycho-social diagnosis and extended classification systems, detailed care planning, case-records, recording services, cost-performance analysis as well as case- and organisation-orientated evaluation and monitoring. Case-Management-Systems increasingly aim at reproducing the "whole workflow of social services". The prevailing software has in fact a more descriptive than a prescriptive character (in short: "it is generally looking back and not looking forward"), although this is changing with the current discourse about evidence based practice. There are only a few specialised tools (for example for risk assessment, child abuse etc.), which are apparently geared at supporting concrete professional decision making.

Lust but not least, a rather simple but important note: The software is database-driven. Only one data-base serves several up to endless users. There are different user role concepts, different observer positions and therefore different motivations (to fill in data), different requirements and different expectations on the usage and usefulness of IT. From a view of organisational research, one could shift focus to micro politics, dynamics and power plays against the background of the software.

From this perspective, we ask how the structures, functions and contents of case-management-software influence the ambivalent relation between management and case-work, or rather the ambivalence of organisation and profession. We contend that without regard to the organisation and its principles, one cannot sum up the whole situation (compare for example Schoech, Basham and Fluke 2006).

Above all, in disciplinary and professional discourses, there is no clear position on whether case management systems are of advantage either to the profession or to the organisation. Secondly, the discourse about IT and social work is accompanied by the discourse and the practice of management and business ideas. In this respect, the concepts of efficiency and effectiveness on the one hand and of information technology on the other hand are intertwined. We want to trace this basic alliance by focussing the process of informatisation in the field of professional social services.

3 The approach of reflexive professionalism

Social Work as a profession is more and more affected by the difference of front-line case-work on the one hand and an increasingly dominant management perspective on the other hand. Although Eliot Freidson (2001) describes professionalism as the third logic beside consumerism and bureaucracy, there have been negotiations in several respects in the professionalisation process of social work.

Particularly with regard to our research question, the dimensions of knowledge and decision-making are in the center of interest. These dimensions are theoretically elaborated by the approach of reflexive professionalism (exemplarily Dewe and Otto 2002; especially in this context Kessl and Otto 2006). The easiest way to define reflexive professionalism is by highlighting what it is *not* meant by this concept. If social work would only be a methodical routine which amounts to nothing more than a standardised assessment and intervention model we would call this kind of intervention - at the most - a semi-professional treatment. It would not be sufficient either to have an accumulation of specialised knowledge embodied in

the role of an expert. In our view, there is a difference between a professional and an expert. Basing interventions solely on expert knowledge would in fact lead to a one-dimensional professionalisation and just one side of the coin.

We can summarise the claim for reflexive professionalism: In addition to expert knowledge and methodical tools, social norms, social conflicts and social problems have to be kept in mind in every moment, because they are in a more general way mirrored in the concrete single case. That's why reflecting the "double mandate" is so fundamental for professional social work, given the divergence of legal claims, interests and needs of the client on the one side and the interests of controlling and governing clients on the other side (cf. Böhnisch and Lösch 1973).

This approach of reflexive professionalism implies specific forms of knowledge: With regard to the question of how professional social work generates its knowledge about the client/case, we distinguish between two inherent and constitutive logics: the logic of subsumption and the logic of reconstruction (see also the epistemological differentiation of deduction and induction) (Oevermann 1996).

The logic of subsumption (deduction) refers to a mode of knowledge one typically finds in classification systems. Classification systems comprehend established (but criticisable) terms which can be operationalised (such as the "ICD 10" in medical science and the "child behaviour check list", "looking after children" (LaC) and "Integrated Childrens System" (ICS) which are more frequently used in youth welfare). However, professional social work cannot be reduced to diagnostic classification. It always includes components which cannot be standardised, like a hermeneutical and interpretative understanding of cases and their circumstances, as can typically be found in the logic of reconstruction (induction). In fact, these are two contradictory requirements and two diverging modes of knowledge for professional actions, which exclude *and* depend on each other at the same time (Schrödter 2005).

The relationship between social work practice and its expanding body of knowledge is a long-standing issue and is often discussed in terms of the problems of decision-making. This especially applies if a professional task is (cp. Otto and Schnurr 1999):

1. *Contingent*, that means diffuse, „badly structured", complex and hard to comprehend as a whole.
2. *Related to values* (i.e. integrity, autonomy of life practice, justice etc.). Furthermore, there is a drift to situations where different values and maxims, which are often conflicting and antagonistic, have to be given equal attention and to be balanced against each other.[3]
3. *Fraught with risk*
   This dimension is reflected in the paradox of professional action "patiently waiting vs. intervening" (Schütze 1996; Hansbauer and Schnurr 2002).

Because of these characteristics, the professional task cannot be clearly defined through prescriptive routines or codes of practice. Insofar, we consider discretion as a basic and constitutive precondition for decision-making in professional social work. It is needed when

[3] Taking the example of child welfare: the child's right to education versus the protection of familial privacy.

one can not clearly derive an *explicit* treatment – as usual - from one's diagnosis (Handler 1992).

Hence, we are interested in how professional discretion as a link between organisational governance and the interaction-orientated professional work is shaped by case management systems. In short: Is there a changing nature of case perception and social work intervention? Obviously, IT can be very helpful for the application of classification systems. But what about IT and the reconstructive logic?

Evans and Harris did a great job displaying the myth of discretion, that is not to fall into "all-or-nothing" formulations and not to consider discretion as a positive condition per se. Space for discretion can be created either reflexively or arbitrarily (for a basic discussion c.p. Lipsky 1980). Moreover, Evans and Harris argue that "(t)he existence of rules is not inevitably the death-knell of discretion. Rather, by creating rules organisations create discretion." (Evans and Harris 2004: 883)

At this point it is necessary to take a closer look at the concept of rules. In short: We are focusing on rules and their inherent formalisation.[4] According to current results from organisational research, there are at least two types of formalisation: enabling and coercive formalisation (Adler 1996; for the subject matter of quality management in social services: Beckmann et al. 2007). The coherence of discretion and formalisation can be displayed as follows:

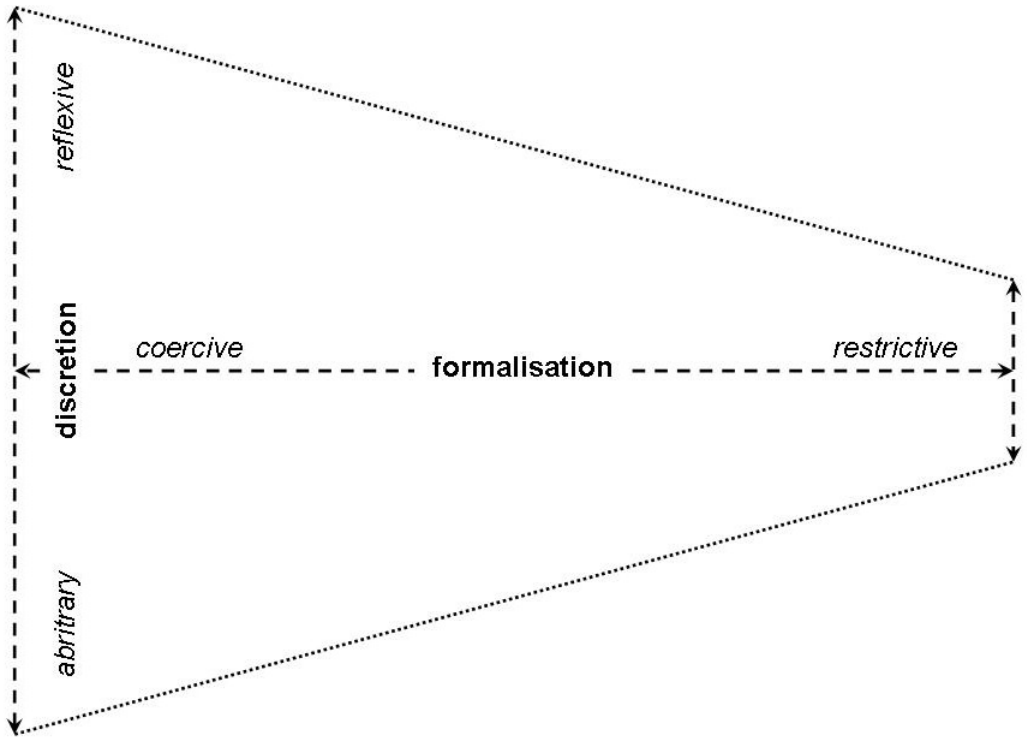

Figure 2: Formalisation vs. Discretion

[4] According to Giddens' theory of structuration (1992), several proponents of science and technology studies (STS) expand a broad concept of rules (and the diverse practices of these rules), which is then differentiated into the duality of routines and resources. (Orlikowski 1992, Schulz-Schaeffer 1999)

If we adapt this heuristic framework for analysing software in social work, a deterministic view on software can be handled. Formalisation of social work through software is not in itself a bad thing. On the other hand, empirical evidence is still lacking that software in social work "supports reflexive professionalisation".

To get an answer to the sophisticated question of how IT-applications exert influence on social work, it is necessary to have a look at the systems themselves and their formal structure. In a next step, their embedding (or non-embedding) in organisational (and societal) contexts has to be analysed. We want to conceptualise the whole process of informatisation through this "double character" of software (Gürtler 1997), that is the dimension of the formal structure on the one hand and the dimension of signification on the other hand.[5] We focus on the formalising character first and will refer to the second layer at the end of this paper.

4 Does IT matter? About the (non)sense of formalisation

To re-present 'reality' in software, information about clients and interactions – that is between client and social worker as well as between client and other people connected to the 'system of help' - has to be transformed into a new *formalised order*.

First of all, this seems to be a process of documentation within the "traditional" work patterns of social services, which are about collecting/gathering, structuring, recording/holding and finally valuating information. After that, the process of file management is decisive.

Transformation of pedagogical actions into technical artefacts requires the reduction of complex realities to abstract categories. This process is characterised – as the computer scientist Arno Rolf notes – by the steps of 'semiotisation', 'formalisation' and 'algorithmisation' (Rolf 2003).

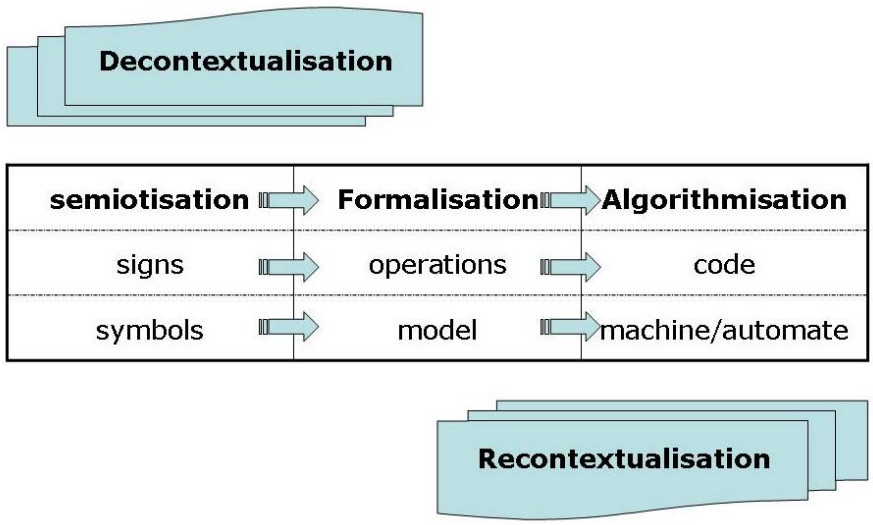

Figure 3: The process of informatisation

[5] Research of computer scientists shows that software assigns the user the necessity to arrange, organize and configure on the one hand. On the other hand however, there is scope for autonomous acquirement (in German: Gestaltungszwänge vs. Aneigungsspielräume). The term "Soft – Ware" itself is a good metaphor for this, because in an epistemological and theoretical dimension, there are two concepts involved: the mouldable, enabling Media (soft) and the structuring, restrictive machine. (ware) Insofar, software can be understood as a "soft creator of structure". (Degele 2000)

- *Semiotisation* means the attribution of signs – such as language – to things or actions. It is the prerequisite for the understanding of contexts and communicating and acting in social environments. One could contend that it is in fact the basis of every culture.

- *Formalisation* means the transformation of action into operation. Actions are characterised by uniqueness and dependent on context and situation. Operations describe routine actions which have been repeated many times. Transformation of action into operation has to be described and defined by an observer. His/her perspective and aims inevitably influence the description. In this context, Stephen Webb declares that "the information architectures and classification tools that underlie many of the new technologies impacting on frontline practice are designed by a small elite, with decisions on what is represented and what is not." (Webb 2006, p. 165) It is the power of naming and defining which is inherent to the exclusive access to constructing the software.

- Werner Sesink describes the basic process of formalisation as follows: "Through formalised abstraction, a part of reality is reduced to its (essential?) structures. From the outset, only causal (formal) references can appear as being essential. (…) All aspects of the reality to be modelled which defy this kind of formalisation, that is all material, individual, singular and exclusive aspects, appear to be inessential/ insignificant. (…) Formal models are free of meaning and have not a soul in sight (computer scientists would probably say "devoid of context"), respectively meaning is replaced by function." (Sesink 2003 S. 59, analogously translated by the authors[6])

- In order to implement these formalised models into software, at last *algorithmisation* takes part: the transformation from operation to algorithm, i.e. a precise, final description of a (step-by-step) solution to determine certain factors. Algorithmisation is the last step in the process of reduction of and abstraction from reality. Due to the implementation of case management systems, the observer fixes the described operations in computer systems.

In the words of Suzanne Regan, these steps of transformation can be described as a process from *narrative to code* (Regan 2003). This transformation implies important consequences: The process of mapping actions into software leads to the splitting, standardisation and de-personalisation of social processes. Again, in the words of Bruno Latour: Social actions are inscribed into technical artefacts (Latour 1994). Jobs formalised in this sense then become countable and accountable (Burton and van den Broek 2008), especially from the perspective of organisations.

[6] original quote: „Ein Weltausschnitt wird durch formalisierende Abstraktion auf seine (wesentlichen?) Strukturen reduziert. Als wesentlich können von vornherein nur formale Bezüge erscheinen. Was als wesentlich gilt, ist also auf dieser fundamentalen Ebene nicht etwa ein Ergebnis des Modellierungs- und Formalisierungsaktes, sondern eine Entscheidung, die ihm bereits zugrunde liegt. (…) Alles am zu modellierenden Weltausschnitt, das sich der Formalisierung entzieht, also was daran material ist, was individuell und einzig ist, erscheint von vornherein als unwesentlich. (…) Formale Modelle sind sinnfrei und menschenleer. (Informatiker sprechen vielleicht eher von Kontextfreiheit.) Bzw. Sinn ist in ihnen ersetzt durch Funktion." (Sesink 2003, S. 59)

The act of formalisation is indeed a process of objectivation and subsumtion. This leads us to discuss apparent problems of 'labelling' concerning the perception of the client.[7] As Geoffrey Bowker and Susan Star write in their book "Sorting things out – Classifications and their consequences" (1999): "We have a moral and ethical agenda in our querying of these [classification, T.L./U.S.] systems. Each standard and each category valorises some point of view and silences another. This is not inherently a bad thing – indeed it is inescapable. But it is an ethical choice, and as such it is dangerous, not bad, but dangerous." (pp. 5-6)

5 Technology *or* profession? - Technologies of Care

Focussing on the topic of formalisation, several authors point out its coexistence and even coproduction with a new managerialism. From the beginning of the 1990's, there was a change on the *macro level* which can be roughly described as a transition "from the welfare state to the managerial state" (Rüb 2003), which became manifest in recent theories and strategies such as new public management and new managerialism on the *meso level*. Furthermore, this lead to profound changes in the ambivalent relation between "organisation and profession" on the *micro level* (cp. Otto and Schnurr 2005; Messmer 2007).[8]

In different papers it is argued that this new managerialism is transforming the foundations of social work: Stephen Webb as a sophisticated proponent of this debate defines current developments such as standardised risk assessment, evaluation, evidence-based practice, decision pathway models, a tickbox culture and networked communication technologies as "an emerging constellation of techniques, methods and apparatus in social work that combine to de-skill practitioners and reduce their professional autonomy. Technologies of care typically entail processes whereby local skills are expropriated into abstract systems and re-organised in light of technical methods and knowledge. As top-down instruments they impose on social work the character of a function, with practitioners as low-level administrators dealing largely with assessment." (Webb 2006, pp. 21-22)

This shift from a narrative to a database way of thinking and operating (Parton 2006) represents the case in a specific way. The client is reduced to (standardised) risk factors, which in turn enforces strategies of profiling which conflict with a holistic view onto to the client.[9] Similarly, Garett combines social work's "electronic turn" with the governmental remaking of social work in England and Wales (Garrett 2004, 2005). If we follow this line of reasoning, the bundle of these "technologies of care" will lead to a de-professionalisation of social work.

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[7] Anticipating the following argumentation of this paper, social work education needs a (normative) concept of reflexive informatization. This implies to confine software – at most - to the sphere of mediation. This could enhance professional autonomy through the insights gained by its use, by means of abstraction from characteristics of the single case. However, arrangements have to be made which avoid the danger of a technocratic application in terms of programming decisions and degrading (professional) autonomy.

[8] The problem is less one of managing organizations, which is indeed necessary. It rather is the attempt to manage the profession which seems to be problematic. This is not to be understood as an argument for acting arbitrarily (and the other way round again nonprofessional).

[9] See again subsumtion vs. reconstruction

However, all of these positions are running the risk of ending in conceptualising technological change as technical determinism or even as seing it as prefiguring the stadium of a technocracy (as Helmut Schelsky already wrote in 1965).[10]

In addition, and somehow in contrast to this discourse on technologies of care, which also means inherently arguing against an emerging rise of neo-liberalism in social work, there are a few ethnographic papers focussing on the basic gap between the organisational claim of standardisation and formalisation on the one hand and the practice of daily, bulky front line social work on the other hand (cp. Peckover, White and Hall 2007; Regan 2003 also regarding to the before mentioned differentiation of "slow motion social work" vs. "fast evidence based practice" named by Kreuger et al. 2006).

Firstly, Suzanne Regan drew attention to the paradoxes of the government's modernisation agenda: "Embedded in the everyday practices of workers, routinely using computers to order the referral-taking process, were examples of inefficiency, duplication of effort, variability, fragmentation and ultimately new forms of disorder and unreason. Instead of producing order, efficiency and uniformity, technology driven customer services sites were observed embedding their opposites." (Regan 2003, p. 106)

Secondly, Peckover, White and Hall explore the introduction of a local child index: "Nevertheless, there is, quite simply, a tension between 'putting (data) in' and 'going out' to see families. Often this is resolved in favour of 'going out', which may leave practitioners at risk of being blamed for failing properly to record their involvement. Sometimes, however, when there is clear, non-negotiable instruction from managers about using the Index, it is resolved in favour of 'putting in'." (Peckover, White and Hall 2007, p. 25)

While Regan focuses on the vulnerable implementation process, Peckover, White and Hall show the contradictory requirements directed at social work practice from the organisation. However, both field studies emphasise the usage (or non-usage) of IT without a clear conceptualisation of IT itself. Thus, they run the risk of ending in a position of social determinism.

6 Conclusions

Whilst positions of technical determinism can be characterised by their stance that social work is more affected by IT rather than by professional methods and habitus, positions of social determinism argue that IT misconceives the complexity of social work, has no (positive) effect on frontline work and therefore is only used as a symbolic innovation.[11]

To our knowledge, there is still a research desideratum in terms of how the knowledge base of professionals and the perception of the clients are shaped by these technical surroundings.

[10] Werner Sesink outlines the characteristics of a technocracy: "If the reference to human existence is lost, then the consideration of needs and capabilities could disappear; the representation of objects and human beings is exhausted in their data. (…) Instead of (human) development there would be the derivation, the automatic rule." Original quote: „Geht der Bezug zu ihr (der menschlichen Existenz, Anm. TL,US) verloren, dann droht die Rücksicht auf die Bedürfnisse wie Fähigkeiten verloren zu gehen, welche darin gegeben sind; dann gelten die Dinge wie auch die Menschen als in ihren „Daten" erschöpfend dargestellt. (...) An die Stelle der Entwicklung träte die Ableitung, die automatische Folge." (Sesink 2002: 31)

[11] For detailed reconstructions of the contrariness of technical and social determinism: Latour 1998, Degele 2002, Belliger/Krieger 2006. According Bruno Latour, this boils down to the confrontation of materialism and sociologism.

How is the case constituted in computerised work sites? How are processes of knowledge acquisition and decision-making accompanied or ignored? According to workplace studies especially in the field of medicine (Timmermann and Berg 1997; Kissmann 2007) it seems obvious that in the process of obtaining "local universality", these technoscientific scripts feed of previous standards, routines and practices. Furthermore, in the process of translating standards into action, these scripts are necessarily changed and partially reappropriated (Timmermann and Berg 1997).

Not falling behind technical or social determinism, we should have a look at these technoscientific scripts (Akrich 1992; Timmermann and Berg 1997) and how they are mediated in those new arrangements of computer-"assisted" professionals in organisations. That is why we finally want to emphasise the importance of empirical workplace studies, viz a research programme "technology in action" (Heath and Luff 2000) in social work. The question *how technical systems - like case-management-software – are induced to act* takes center stage of such research. Technology here acts as a catalyst, ensuring or rather (un)settling the continuity of social rules (Latour 1998). In this respect, technical determinism and social determinism are resolved by the analysis of the processes of mediation between human and non-human actors.

But if we are taking this amalgamation of professionals and technoscientific scripts seriously, what does that mean for the positioning of reflexive social work? Professional action is imaginable neither without nor within technology.

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