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Peeling the CIS onion
The Looking After Children system in an international perspective

Introduction

1996 is in many ways a special year. Not only has it seen shock waves caused by British mad cows or Belgian paedophile rings, but it is also the 200-anniversary of the birthday of Adolphe Quetelet (1796-1874). He was the first director of what is currently the Belgian National Institute of Statistics, founder of modern sociology and as such very much occupied with the gathering, processing and dissemination of governmental statistics. He developed the notion that societal developments occurred with a certain regularity and could be predicted by monitoring other societal indicators, e.g. that one was able to predict the level of criminality.

Quetelet is one of the grandparents of the current hype around client information systems and as such illustrates that the theme is certainly not a new one. It has been present from the very beginning of social welfare when leading professionals such as Mary Richmond have argued for the careful collection of, processing and use of information regarding clients, their problems, treatments and the consequent results. Henry VIII, in an act from 1531, ordered local authorities to register names of aged, poor and impotent persons in a bill or roll, of which one part was to remain with the local authorities and the other part to be centralised (Schreiber, 1965). As long ago as 1874, participants at the first Conference of Boards of Public Charities in the USA, advocated using standardised statistical reporting and the necessity to compare needs and services. Since then, there have been continuing calls for the systematic use of client information to improve the knowledge of human services.

If one considers the number of publications and conferences on the subject, client information systems also appear to be a relatively new and growing area of attention. At least two different developments give lead to this renewed attention. The first one is the present 'quest for accountability' that social service providers increasingly have to deal with. Client information systems are an important instrument in the respect that they provide more and better data on numbers and characteristics of human services. The second development is the introduction of information technology, which has introduced a naive optimism that all challenges regarding information systems can easily be won.

As one could expect from a theme that is both very old and very new, a substantial tradition of research and publication on client information systems is available. As such, it is necessary to outline the boundaries of the concepts.

A first refinement is necessary to distinguish between different client information systems, as used in social services. At least three types of information systems need to be distinguished. We will use the labels client file, client form and client register to circumscribe these types. The *client file* is the collection of information about a specific client and everything that is related to that person. It is often a folder with paper forms and notes in it, but can equally be a computerised folder, either structured or a collection of word processor files. Often, one uses the words *client record* to refer to the same as a client file (Kagle, 1993; Kagle, 1991; Monnickendam, Yaniv & Geva, 1994). In UK English, record seems to refer mostly to computerised files, although in American English record equally refers to paper based files. With increased application of information and communication technology in this area, both labels will become interchangeable.

A *client form* is a condensed translation of the information on a specific client, often in a highly structured and coded format. It can take the format of a paper-based form, or be part of a computerised database. Client forms most often are the basis of statistics used for managerial or policy purposes. Professional staff are required to fill in these forms, adjacent to their own client files.

Lastly, a *client registration* or the *registering of a client*. This is the labelling of a client case with a tag that implies special, formally defined procedures of monitoring and service provision. This is e.g. done in several countries in cases with (alleged) child abuse and neglect (e.g. the child protection register in UK), in order to give the case higher priority and prevent further damage to the involved child.

When talking about client information systems, we do not in the first place talk about computer systems. As new information technology is gradually making its way into human services and the term information systems more and more refer to computerized systems, this would be a misunderstanding, easily being made. When we talk about client information systems, we do refer to every kind of systematic, planned gathering, processing and use of data about clients, their characteristics, their problems, strengths, needs and the services provided to them within the context of social welfare services, as well as the impact of these services as seen from the vantage points of service providers, clients and the general public. The technology being used is of no importance in this definition, but the functional aspect the more so. These functions include the use of the information for clinical purposes, for organisational management and for policy making.

This contribution will describe the results of research into the usage of statistical data based on client forms systems in Flanders, the Netherlands and Israel. The usage of client files and client records has been the subject of other research activities (Kagle, 1990; Monnickendam et al., 1994; Prince, 1996; Timms, 1972). The benefits and disadvantages of client registers has also been subject of other research and publications (Miller, Fisher & Sinclair, 1993; Miller & Fisher, 1992). This text will outline the current state of affairs in the social services and elaborate on the existing bottlenecks. Having thus shed light on the present, it is our aim to look into our crystal ball and give indications of currently emerging trends. Finally, we will discuss these findings in the light of the *Looking After Children's* initiative.

Current state of affairs

Browsing through the literature, one can find different authors assessing the value of client information systems. For example, Ernest Burgess wrote "I find that many if not all the more progressive and discerning social workers are dissatisfied with their present methods of record keeping for the purposes of social diagnosis and treatment" (Burgess, 1928). In the United States, Jill Kagle writes more recently on the results of her social work records project: "case recording is a long-standing problem for the profession. It is frequently a source of conflict between the direct-service worker and the manager" (Kagle, 1983). Yet another more recent publication has as title a rethorical question: "Data collection, are social workers reliable ?" (O'Brien, McClellan & Alfs, 1992). The authors write, based on the results of a survey amongst 244 social workers, the following: "Three-fourths of the social workers questioned the accuracy of information recorded about clients" (p. 96) and "social workers indicated dissatisfaction with the large amounts of perceived irrelevant information they are required to collect" (p. 97). Only this summer, the UK academic book scene saw the publication of a book entitled "boring records", of which the publisher claims it to be a best-seller (Prince, 1996).

All these quotes have a common pessimistic, down-hearted undertone. Starting from the contradiction between these negative research results and the seemingly contradictory optimism of current developments, both in social policy and technology application, we researched the current usage of client information systems in social services. As attention for policy and managerial developments dominate the current academic and societal debate, the client forms type of client information systems were our main focus. The research we did in Flanders (Steyaert, Maes & Smekens, 1994), the Netherlands and Israel (Steyaert, 1994) has generated an ideal-type description of the present use of client information systems, based on a number of semi-structured qualitative interviews. This ideal-type has been discussed with experts from other European countries and has been validated in that way (Steyaert, Benbenishty & Silon, 1995).

A first significant observation is that the overwhelming majority of social welfare services maintain some kind of client information system. The *scope* of these systems is to gather data on clients and services on a continuous base, this is on all clients throughout the working year. The notion of using sample techniques regarding the number of organisations gathering data or the time periods is hardly being considered, let alone being used.

The stated *aims* for having client information systems are situated both on an internal and external level. On the internal level, systems are aimed to provide profile information on clients and services and feedback on the clinical activities of the service organisations. On the external level, the systems are to provide data for accountability and control, mainly towards funding organisations and agencies cooperating on the service provision level.

The *procedure* used to gather the necessary data is mainly based on paper-based registration forms. Even in sectors where the introduction of new information technology has advanced considerably, the registration form remains the most important tool for client information. As an exception to this rule, some agencies have developed and implemented a computerised information systems that is being used by service providers in their daily work, thereby virtually disguising the existence of a quantitative client information system for these workers. In these cases, the paper-based registration forms have disappeared.

The intention of using paper-based registration forms is that these forms are initially filled out during the intake of the client, find their place in the clinical file on the client and 'grow' as the treatment process evolves. In practice however, these forms are rarely linked with the clinical file but are filled out at the end of the 'booking year' during tally-weeks, when the work of the agency has to be accounted for to the funders. This implies that a considerable amount of data is lost because of the time distance between the actual intake and provision of the service and the completion of the forms. This time distance is less of a problem in those services where treatment is limited in time (e.g. telephone assurance services, hospital social work) and those services using computerised clinical files. In

Flanders, only one kind of services (child abuse and neglect centres) introduced semestrial assembly of data forms in an attempt to diminish the time distance. All other services work on a yearly base.

The *data* gathered deal with a range of characteristics of the clients such as socio-demographic data (gender, age, income situation, ...) and data on their problem situation and needs. As a general rule, data on the services provided and treatments given is far less substantial and data on the effect of the services, gathered at the closure of the treatment process or a certain time period afterwards, are nearly always missing.

The gathered data are also characterised by a high degree of diversity. This is partly due to the fragmented nature of the Flemish social welfare system both along lines of specialisation and ideological ones and the myriad of private organisations actually providing the services. Guidelines on which data to gather and which categories to use are sometimes developed at the level of a federation (an 'umbrella'-organisation within a certain field of services and within a certain ideological framework) but seldom go beyond this level. In those case that they do, they tend to follow the ideological lines rather than the lines of specialisation. Diversity of data items and categories are of a historical, methodological and substantial nature.

The data entry, processing and *analysis* of the data is not done by the social welfare agencies themselves, but by external organisations such as the umbrella-organisation, the Ministry, universities or volunteers. The agencies provide the data on the level of clients, mostly just by handing over the pile of registrations forms. The data are 'beheaded' by not gathering or centralising the identification data on clients, thereby protecting their privacy. The time delay caused by these external analyses is considered to be problematic and may amount from several months to more than one year.

The output of the client information are presented to the agencies as a range of frequency distributions and cross-tabulations on their own clients, often of an overwhelming number and complexity far beyond the interpretation capacity of clinical professionals and most managers. The interpretation of the data is left to the agency, however without providing reference data or hints for use of the information.

A humourous account, would it not be for its realistic nature, of the way client data are analysed and presented is given by Rapp & Poertner (Rapp & Poertner, 1986). They headline the basic characteristics as 'give them more', 'don't tell them how well they are doing', 'don't speak English' (to be understood as : don't use narratives), 'aggregate to the max' and 'never use graphs'. Apart from the aggregation item, these characteristics can also be found in the Flemish situation. The availability of data presentation software provides a substantial challenge to overcome the issue of 'never use graphs', but their use by social welfare services has been minimal and remains behind opportunities.

The *usage* of the analysed data by the social welfare agencies, given the mentioned characteristics, is limited to the inclusion of some quantitative information in the annual reports. These reports are distributed and mailed to members of the board of the agency, other agencies, agencies to which or from which clients are referred and policy makers. The use of these reports by these recipients is virtually non-existent. Although the aims for having a client information system involve internal use, there are very few signs of this actually happening. Staff meetings, team meetings as well as supervision seldom rely on the data of the client information system. This situation of external and internal use (or rather, non-use) has introduced the notion of 'data-cemeteries'.

Bottlenecks

Elaborating on these findings on the actual and potential use of CIS in social service organisations, we need to look into some of the issues raised by practitioners and policy makers and specifically at the different layers of the issues that emerge from these remarks. They come from practitioners, managers as well as policy makers. Examples of statements include the following :

- we've been obliged to gather data for several years, but have never received any results in return; Why should we spend time on data ?
- we don't need quantitative data, we have other information tools
- why does government bother ? If they pay, we will do the caring
- our work is not to be captured in figures. It's far too complex for that
- it is an invasion of our clients' privacy
- existing CIS have no impact whatsoever on our work
- Government only is trying to control us by getting data on our work
- Caring is an art, not a science
- the picture emerging from those data is a distorted one. It doesn't reflect what we're actually doing
- our main tool is our personality, not fixed procedures of recipes from the manual

These statement reinforce the already gloomy picture of client information systems. However, they enable us to distinguish several layers of issues involved. We are thus able to uncover layer after layer, much alike to peeling an onion, perhaps including tears. The layers we distinguish can be labeled the methodological layer, the functional layer, the policy layer and the professional layer.

Methodological layer

Elaborating on the ideal-type of present-day use of client information systems, the information gathered through our interviews and international literature, a number of substantial issues can be described. These can be considered to be shortcoming to be resolved in order to reach a minimal level of quality of client information systems. They include the issue of accuracy and reliability, falsification, cost-benefit balance, symbolic use, interpretation of the data and privacy.

Reliability

For the discussion on the issues of client information systems, we would like to make a distinction between accuracy and reliability of data, thereby indicating that there are both methodological and deliberate errors in data. We use the term accuracy to reference methodological errors, caused by unclear categories, vague procedures, etc. We use the term reliability to reference deliberate errors.

On numerous occasions, the issue has been raised that the room for interpretation by the practitioner during the activity of gathering data is to large and allows for errors to be made and a discrepancy between reality and data. This has been empirically tested by Auslander & Cohen

(Auslander & Cohen, 1996), Sabbe (Sabbe, 1991), De Graaf (de Graaf, 1982), Harrod (Harrod, 1988) and Barnes (Barnes, 1993). The first group of authors (Auslander, Sabbe & De Graaf) worked with a group of practitioners that received fictitious case descriptions in the form of 'case vignettes' with the requests to fill out registration forms for these cases. Reliability regarding case reporting proved to be between 65 and 80 %, reliability on items with high face validity between 70 and 100 % and on those with low face validity between 43 and 81 % (for full details, see Auslander & Cohen, 1995).

The second group of authors (Harrod & Barnes) compared the data of the client information system with the data from the clinical files. Here also considerable differences were found. For each data item (e.g. address, age, ...), an average of 19.5 % of the data differed between the registration and the clinical file. This average differed from 0.7 % for a data item such as 'gender' to 54.7 % for the data item 'living situation at the end of treatment'. To our knowledge, no similar comparison has been done between client file data and client's real situations. Reliability levels would probably drop even further.

As reasons for this low level of accuracy, several elements are put forward. Firstly, the quality of the registration form and the accompanying manual is often very poor. Descriptions of data items are not clear, categories are not elaborated upon and seldom defined in operational terms. Training of practitioners for their 'concurrent roles of respondent, interviewer and coder' (Auslander & Cohen, 1995) is limited or missing. Secondly, registration data are the result of a construction process that can be influenced by social factors. There is a long way between a given fact and the data actually representing it. This long way involves transition of data through the stages of perception, definition, reporting, redefinition and recording. Before a certain event as e.g. child abuse becomes represented in data, it has to be perceived by someone. Beyond that, it has to be defined as such by those persons. Once this has been done, it has to be mentioned to one of the professional social welfare agencies. Not everyone relies on professional agencies with his or her social needs, but may instead rely on family or friends supporting networks. Once a given fact becomes known to professional agencies, it has to be redefined into 'clinical' languages after which is can be registered. In each of these phases, numerous factors can cause no registration (high workload, unclear administrative organisation, ...) or an unreliable one (insufficient training, unclear categories, clinical biases, ...).

One can clearly describe this process from fact to data as an elimination race. From the several facts, only a number of them will find their way to the professional agencies and into their client information systems. Moreover, different facts and data have a different 'survival rate' in this elimination rate.

One example from the medical field can clarify the importance of this process. In Belgium, general practitioners have the obligation to report occurrences of a number of infectious and venereal diseases to officials on the provincial level. The low quality and degree of reliability of these data however cause the resulting data on infectious and venereal diseases to decrease rather than increase knowledge on the health status of Belgian citizens. If we take the example of venereal diseases, we can assume that most people will be aware of their disease (phase one) and define is as such (phase 2). We can also be quiet secure that these persons will contact a general practitioner in order to get rid of their pains and agonies (phase 3). General practitioners being professionally trained an experienced, it is safe to assume all of them will be able to redefine the burdens of their patients as being caused by a venereal disease (phase 4). Up to now, most facts survive the elimination race quiet good.

The last phase however causes great problems. Research has shown that data on the occurrences of a venereal disease such as ghonnorea have to be multiplied by a factor 50 to 70 in order to estimate the actual number of occurences. Moreover, this factor is not a stable one in time or space. For instance, the data on ghonnorea from 1980 showed that 62 % of all occurences came from only one province, even coming from mainly one hospital. One can start wondering about the medical reasons for such a high degree of occurences in such a limited geographical area, but it is apparent that the sense of duty of one team of general practitioners as opposed to the lack of it of their colleagues causes the differences in data to be of an administrative nature, rather than a real one.

Not only in this last phase of this 'survival race', data perish. It is well known that during the fourth phase of 'redefinition', data are mutilated due to low interrater reliability and organisational influences. Also the phase of reporting poses its threats to the survival of data. Several organisational and societal influences have an effect on the number of 'cases' known to professional social welfare agencies and the unknown 'dark figure'. A change in statistical trends therefore does not necessarily imply that there is an underlying change in society. A clear example of this phenomena is given by the sharp increase of child abuse and neglect statistics in Flanders. There is no reason to believe that these changing figures represent an actual increase in cases. Rather, the fact that in each province, a professional child abuse and neglect centre was established and media campaigns gave them a high profile accounts for the increase in *known* cases. Ditton identifies at least five different forces that influence the number of reported cases of a social phenomenon, and the number of actual cases is only one of these forces (Ditton, 1979)!

Integrity

Apart from the methodological errors causing low accuracy, there are also a number of deliberate errors, lowering the reliability of the data. E.g. a practitioner can create a number of fictional clients or client contacts to induce a more profitable image of himself. A team of practitioners of a certain centre can, explicitly or implicitly, take a creative attitude towards their data in order to reach certain thresholds or impress funders. Only last month, a social service agency in Drenthe, in the Netherlands, was accused of fraud in their client statistics. They allegedly substantially raised the number of suicides and suicidal thoughts amongst young people, so as to gain more funding from commercial organisations.

These deliberate errors are caused by a (presumed) link between data in the client information system and the use of these data as an instrument of control by funding organisations. Whether this link exists or not is not really the issue here. The issue is whether practitioners in social welfare agencies perceive this link. The theorem of Thomas applies here: 'if people perceive situations as real, they will be real in their consequences'. In other words, if the agencies or the practitioners believe there is a link between data on clients and control/funding, they will have an incentive to try to boost these very data.

cost-benefit balance

Regarding client information systems, there is a strong imbalance between the costs and the benefits for the clinical practitioners. A practice of working with client information such as the one described in the ideal-type, brings with it a structural inequality between those who bear the burden for such a system, and those who harvest the benefits. The clinical practitioners are the ones to bear the burden, not only because they have to free some of their time to carry out the necessary administrative work, but also because they have to do the 'translation' between the complex and often very nuanced reality of a client into a series of rigid and quantitative categories. It are however these same clinical practitioners that are least interested in the aggregated, quantitative information that their data are to generate. Instead, managers and especially policy makers harvest the benefit. By using the information, they plan the organisational strategy and the social policies.

This imbalance is often disregarded, by assuming that the practitioner should see that eventually what is good for his organisation is good for him. Unfortunately, the number of practitioners actually following this argument is not too high. Others refer to the potential benefits of the same data for clinical feedback and improvement of treatments. Again, unfortunately, not every practitioner has the possibilities and interest not only do conduct his daily work, but also to be a thoughtful practitioner devoting some of his time to R&D activities.

The imbalance between the carriers of the costs and benefits is a significant importance because social welfare services are characterized by a high degree of professional autonomy. The hierarchical relations found in commercial organisations are manifestly lacking in social welfare services, thereby giving the practitioners considerable power in the daily activities of these organisations.

symbolic use

Reading handbooks and research studies on how to use data in decision making at a clinical, managerial or policy level, one could easily come to the conclusion that decision taking follows a process of problem analysis, search for and evaluation of possible solutions, decision on which solution to implement following cost/benefit analysis, implementation and evaluation. Within such a process, the value and benefits of data and information is prominently clear. However, decision taking not always follows this process.

Daily, we experience that time and resources to look into costs and benefits of alternative solutions to problems is limited and does not allow for a complete analysis. Resources are lacking, or the efforts to be made are out of proportion with the issue considered. Decisions therefore are not always the most rationale ones, but are characterised by a 'bounded rationality'.

Moreover, even the sequence of the steps in the prescribed model of decision taking does not represent reality. Problems not always get clearly defined and solutions do not always come after problem definition and analysis of solutions. Just as children come up with a vast range of arguments not to go to sleep on time, certain solutions are selected on latent reasons before the appropriate problems and cost/benefit analysis are outlined to legitimate the decisions. The introduction of computer systems offer numerous examples of this phenomena.

This daily reality of decision taking leads to questions about the value of data and information. Is information always a substantial ingredient of decision processes, or does it rather serve symbolic purposes (Feldman & March, 1981)? Are statistics to the modern policy maker and manager significantly different from the chicken entrails to the shamans (Devons, 1961)? These questions are not without importance because there may well be a negative correlation between the symbolic use of data and the importance of their reliability. Data that are used in a symbolic way do not really have to be reliable, as long as they serve as a legitimation for decisions taken on other grounds.

interpretation of data

Another issue concerns the interpretation and use of the information by practitioners and managers. This is problematic for at least two reasons. Firstly, most practitioners and managers have a limited capacity to interpret statistics. Although every curriculum of social workers' education and training includes a compulsory course on elementary statistics, this is far from a popular course. Moreover, it often is given by an external staff member associated with a department of sociology rather than social work. The approach used therefore bears little direct relevance to clinical practice or care-coordination. Secondly, the limited interpretation capacity is caused by a sheer lack of reference data. If one receives a frequency distribution on the age or income situations of one's clients, how is that to be interpreted when there are no reference data on similar information from other agencies, due to diversity in data gathering activities or lack of structures that centralise and distribute these reference data ?

privacy

A last issue, although not of minor importance, involves the privacy of clients and their family. The protection of privacy is often considered to be contradictory to the needs for data and information. However, this argument starts from a limited notion of privacy, focused on the individual. Indeed, it assumes that there is some private life to protect (van Hove, 1996). However, in order to establish this private life, is often is necessary to gather and process personal and sensitive data. Where would our private lives be without the results of e.g. epidemiological or social studies ?

The answer on the issue of privacy therefore should not be a total forbiddance to invade one's personal privacy, but a constant awareness of not gathering unnecessary data and not distributing these data beyond the limits of its scientific or policy purposes. Unfortunately, this awareness is not always incorporated in the development and implementation of information systems.

Moreover, the issue of privacy is often used to disguise one's fear and uncomfortableness with new information technology. When raising the question of privacy of paper-based information, the issue suddenly becomes much less important.

Functional layer

Delving a bit deeper into the actual and potential use of CIS, we come unto functionality. It is directly linked with remarks such as:

> 'we don't need figures, we have other inf. tools'
> 'existing CIS have no impact on our work'.

These and similar remarks leave us wondering what the precise expectations of CIS are and what function we want them to fulfill within the social services. Surely the existence of CIS is not technology driven ? It's not because there happen to be computers who are good at processing quantitative information that we are developing and implementing CIS ? Of course not, there is a clear function to be fulfilled. From the stereotype outlined earlier, the function of CIS has been described as the provision of

relevant data for professional quality and social policy.
In order to assess the usefulness, either in today's reality or in social and technological feasible CISs, we need to develop a clearer view on what the information needs in social services precisely are and what information tools are available to address those needs. Only then can we assess the usefulness of CIS and judge their comparative cost-benefit in relation with other information tools.

Emerging from the interviews we did over the past years, a picture of these information needs began to crystallise. It distinguishes six different kinds of information needs in an average human service organisation, providing care for individuals. Those information needs are grouped into two main categories depending on whether they are related to clinical information needs (daily practice) or to organisational/professional needs.

The clinical information needs are four. They follow the normal sequence of the professional caring process, and are : information on client, care repertoire, care procedures and care evaluation. The non-clinical, non-daily information needs are the management information, both on a managerial and a policy level, and the professional information need, providing a base for the development of new caring methods, better matching of methods with clients and development of quality standards.

Following these different information needs, it is clear that human services have traditionally used information tools other than CIS, often for many decades. These tools include assessment interviews used during intake and diagnosis, interdisciplinary team-meetings during care decision making, professional experience during care giving and a combination of assessment interviews and team meeting for continuous evaluation.

Over the years, other information tools have been developed, such as structured questionnaires and scale techniques or decision support systems, but these have been slow in being adopted.

Regarding the non-clinical information needs mentioned, tools such as management-by-walking-around and informal communications are important for managerial information while case conferences, professional training and supervision are most important for professional information needs.

Following these picture of different information needs and available information tools, surprisingly CIS do not feature in it. It wasn't mentioned and is not clearly matched with one of the inf. needs. So one is left wondering what precisely is the function, the place of CIS. One would assume that it's most likely place is in providing management information, as well as professional information. Above all, these are typically aggregated data sets.

Policy layer

Moving beyond the technical and functional layers of discussing CIS in human services, we come upon a policy layer. This layer relates not only to the contents of CIS, but especially to who has the right what to do with what data. It relates to quotes such as :

- why does government bother ? If they pay, we will do the caring
- Government only is trying to control us by getting data on our work

These attitudes lead us to the issue of ownership of data and the question whether government as a policy maker can take up a steering role making use of data. In contrast to the statism of the UK or the liberalism of the USA, the social welfare setting of most European countries is dominated by the concept of subsidiarily: no responsibility or initiative is given to a higher form of government unless lower forms do not have the capacity to take up the responsibility. Applied to social welfare, this results in an important contribution of non-professional networks and non-profit organisations as main care providers. As such, it is a situation towards which the UK is rapidly evolving within the context of the implementation of the community care policy.

The past decennium has seen major developments in the relationships between state and social service providers. These developments have been triggered by the criticisms of the eighties on efficiency and effectiveness of social welfare services, by the changing political attitudes towards state responsibilities (neo-liberalism) and the issue of manageability of the welfare state. The ingredients of the developments are de-professionalisation (more attention for volunteers, family networks and the like), more focus on demand side of social welfare, introduction of business sense, reification of the different functions of service provision and a retreating government.

This cocktail of policy developments has a substantial impact on the information needs of government, professionals and clients. This gives ground to a quest for a uniformity of coding and classification language amongst different social services (see special issue of New Technology in the Human Services, 1996). It also results in client forms systems being expanded to contain not only information about clients and their problems, but also about staff, budgets and institutions in an integrated way. Another significant result is the emergence of sector-specific statistical offices, very similar to the National Institutes of Statistics that most Western countries have. These data-warehouses gather, process and distribute data on social welfare services and offer an opening to extensive data usage.

Within this renewed relationship between state and welfare services, it is vital to pose the question whether the newly emerging situation is one of recalibrated subsidiarily with a new allocation of responsibilities or rather a refined cybernetic control situation relying on powerful data collection tools.

Professional layer

The discussion about the methodological, functional and policy layer of CIS leaves us with a few remarks not yet classified. These include :

- our work is not to be captured in figures. It's far too complex for that
- our main instrument is our personality, not fixed procedures of recipes from the manual
- Caring is an art, not a science

While these and similar remarks can often be heard from practitioners, they seem to find their background in the epistemological debate about social work and other caring professions. This debate has been launched by Heinemann in an article in 1981 in the Social Science Review, and has since caused many publications. It appears to be that two main positions dominate this epistemological debate. On the one hand, there is the position that beliefs social work and other caring activities should comply to strict scientific rules and be part of a completely rational process. On the other hand, there is the position that caring is an art, not to be subjected to process of accountability or rationality.

Both positions are well illustrated in a painting by P. Picasso, sciencia y caridad (1897, Museo Picasso, Barcelona) where a sick elderly woman is assisted at her bedside by a pitiful nun offering a cup of coffee (personalising charity, the empathic relation between a care-giver and his/her client) and a earnest looking doctor taking the pulse (personalising the professional, analytical, distantiated from the problem situation).

Within this tension between social work as art or as science, the last decade has seen a substantial grow of interest for the empirical foundation of service provision. This not only results in more academic or policy interests in outcome evaluation but also in a substantial increase of empirical research activities (see e.g. the journal Social Work Research or British Journal of Social Work), the importance of research methods in social work training and education and the current interest in the development and implementation of protocols in service delivery. This development naturally also initiates a counter-development in the form of an epistemological debate. This debate dominates a lot of the professional publications of the eighties and leads to fierce debates. Unfortunately, it transformed to an academic mud fight between fundamentalistic proponents of conflicting and irreconcilable positions. The viewpoints taken become caricatures of Habermas' life-world and system-world and are as such useless both as descriptive categories or normative models. The acquiescent realism of the nineties is therefor more than welcome.

This realism consists of distinguishing at least three different roles for science and information processing within the professional of a social worker. A first, most tangible role is that of *care provider*, the daily confrontation with problems and the ordeal to apply whatever knowledge is available to establish improvements. Within this context, aggregated client data are pretty useless.

This same social worker is however not only a care provider, but also a developer of knowledge. Through his or her daily practice and through research and development activities, the body of professional knowledge is incrementally corroborated and new knowledge emerges. Although in principal aggregated data are extremely useful within this context, in practice they are not. They lack not only reliability, but also validity by not taking into account enough detail on the problems of the clients, the social context, the provided care nor the outcome of the services provided.

Lastly, the social worker is also transmitter of knowledge, in his/her role of lecturer or trainer. Knowledge not only needs to be developed and tested, it also needs to be disseminated. Within the context of social work education and training, this dissemination is strongly focused on learning through practice. Again, the importance of aggregated client data is minimal.

Looking after Children

The findings described so far are based upon research in Flanders and to a minor extent in the Netherlands and Israel. These findings have been validated internationally at several conferences as well as a special expert meeting (Steyaert et al., 1995). The question needs to be asked to what extent the UK situation in general and the *Looking After Children* initiative in particular confirms or adjusts this description of client information system usage ?

The *Looking After Children* (Ward, 1995) and the accompanying Looking After Children Computer

System (Kerslake, 1996; SSradu, 1995) is the label referring to a project monitoring the quality of services provided under the Children Act (1989). Tangible products of the projects are a set of forms for different age groups and different aspects of a child's care, a computer program and a form (903) for the annual return of statistical information to the Department of Health.

The first observation to make is that, probably because of the high involvement of the state in social service provision in the UK and the scale of social service departments, there is a much higher involvement of computer systems for administrative support in the UK than in other European countries. The landscape of social services in e.g. the Netherlands, Germany or Flanders is of thousands of small scale non-profit organisations funded by local or central government but without substantial coordination amongst them. Average size is often just a few professional staff with little or no administrative neither managerial support. Comparing this with the UK situation, one can only be amazed by the huge differences within neighbouring countries.

Following this situation, the information technology infrastructure in social services in mainland Europe is less disseminated (as there was less need and resources for small organisations to involve technology), less networked but more modern (as they did not buy big systems but went for cheap personal computers) (Steyaert, Colombi & Rafferty, 1996). However, it is highly amazing that professionals are not the prime users of the computer systems in the UK.

Information technology being more commonly available and social services departments being such large-scale organisations, it is no wonder that client information systems in the UK are generally more structured and more automated than in mainland Europe. Recent findings suggest a level of electronically available client files to an extent that is far beyond that of other European countries: "The 1996 survey found that, with very few exceptions, basic information is held on a computer record for all groups of service users."and "The number with 'basic data' on 'children at risk' has increased from 38 % to 44% and the proportion holding 'extensive' information went up from 52% to 56%" (Barnes, 1996, in press)

This has as a consequence that the use of client forms within the UK has largely disappeared from the social workers' point of view and has been replaced by the automated extraction of the required data from electronic client records.

The LAC's system is consequently a hybrid between a client forms system and client files. As such, it allows the statistical information needs of managers and policy makers to be embedded into an information system that addresses the information needs of the service provider. In that way, it is an integrated information system (Benbenishty & Oyserman, 1996). This is likely to increase reliability of data. It reflects the findings of Rami Benbenisthy, who claims that reliable data on an aggregated level can only be obtained if and when they are rooted in useful information systems for clinical social work: "if you want to harvest the fruits, you have to tend to the roots" (Steyaert et al., 1995). Although personally this author has doubts about clinical information systems being a necessary condition for sound statistical information, it is beyond doubt that the presence and usage of these systems are a sufficient condition. In this respect, and to the degree that Looking After Children and LACCS actually fulfill their promise of being an information tool for direct social service providers, it will prove to be an excellent basis for the gathering of annual statistical returns that can be used for professional, managerial or policy purposes. If however Looking After Children remains to be just structured files and forms that are imposed upon service providers and bear no relevance to them, the information system is doomed to be flawed by unreliability and lack of integrity. The potential synergy between managerial/policy needs and professional needs will grind to a complete stop and rapidly transform into a bureaucratic burden for all involved. It is evident that the research and development team behind LAC and LACCS are well aware of this threat.

Apart from a project addressing quality assessment in child care, the Looking After Children initiative is also a noteworthy effort to standardise the coding and classification of information in a specific area of social services. This matches the current international trend (see special issue of *New Technology in the Human Services*, issue 9.3, 1996) that can be seen in the Netherlands, Flanders, Japan, Finland and other countries. As such, it enables data to be comparative above the level of the individual social service department. It therefor enables the child care aspects of the UK social services to become subject to the developments of targeted statistical offices and social indicators, as outlined earlier in this contribution.

Earlier on, we outlined that on average, client forms systems gather and process data on clients, problem situations, treatments and outcomes. Unfortunately, these areas receive attention in a strongly decreasing order. Data on treatments is seldom available, outcome information almost never. It is a major achievement of the LAC and LACCS systems that they explicitly address the area of treatment outcomes and even do this by introducing non-categorical variables. However limited this attempt might be compared to a full-scale psychometric assessment throughout the whole service provision process (Hudson, 1996), it is within the logistical and organisational constraints of today's social services a significant innovation.

While LAC and LACCS harmonise and support the gathering of data in a relatively easy and structured way, the issue remains what happens with those data. Statistical information is assembled through the use of the 903-forms and returned annually to the Department of Health, but what happens with it afterwards ? The LACCS help file claims: "The Children Act 1989 provides the statutory framework for collecting information about how local authorities carry out their duties in relation to the provision of social services for children. Section 83(3) of the Act requires local authorities to transmit to the Secretary of State any information that is required about the performance of these duties or about the children concerned. In turn, the Secretary of State has a duty to place before Parliament a yearly abstract of this information (Section 83(6))" as well as "The information collected through the 903 returns is compiled to produce national overviews. These are used to monitor trends, formulate and evaluate policy and account to Parliament. Figures for each local authority provide comparative information on patterns of provision for looked after children.". However, the LACCS system does not enable a local social service department to perform an analysis on its own data or compare those to the statistical profiles of other social service departments. Is the situation created here different from the one found in our research, characterised by the creation of data-cemeteries ? Is LAC and LACCS just another, more efficient way of 'feeding the beast' ? (Phillpotts, 1996, this volume). The return of data by the DoH to local SSD's in the form of the key indicator expert system is certainly an indication that return of comparative accessible data is one of the objectives. It is unfortunate that this key indicator expert system is not integrated with LACCS and substantially less user-friendly.

The data collection organised by LAC, LACCS and many similar systems is, because of its embedidness in social service provision, restricted to a view on social welfare reality through the glasses of the social services and therefor necessary results in a partial, distorted picture (see earlier remarks on reliability of data). When the Social Service Inspectorate reported last year on the findings of an inspection exercise into the implementation of section 17 of the Children Act 1989 and stated that "SSDs had little knowledge of the level or type of need in their areas because management information systems were poorly developed", it is crucial to understand the information needed to acquire knowledge of the level or type of needs in specific (geographical) areas will never be fully available through composite analysis of client information systems. These information needs call for data collection through other means, as e.g. illustrated in other work done by SSRADU (Wright & Gould, 1995).

Finally, one has to make clear that the LACCS computer software to accompany the LAC system is clearly not a technology-push approach to client information systems. Although of course the latest technology has been used to produce the software, the whole LAC approach originated and developed long before the technology became an ingredient of the project. If one looks at other projects, even this minimum critical success factor for quality is often lacking.

Conclusion

Could proper information management have saved Rikki Neave ?

Rather than summarise the information and arguments given earlier on in this text and reflect on them, it is intriguing to see what the implications of them would be in the daily life of a service provider. On Thursday 31st October 1996, the first day of the IMISS 2 conference, the UK newspaper headlines are dominated by the case of Rikki Neave. This six year old boy was found murdered in 1994 after a short life full of misery. The mother of Rikki Neave was found not guilty of murder but sentenced to seven years for cruelty to her son. The case was known since 1991 to police and social service department. Rikki was on the risk register of the local social work team. Many questioned the role social services played in this case. The government even ordered "a social service hit squad into ... to shake up child protection procedures" (the Guardian, 31-10-1996, page 1). What impact could proper information management have had on this case ? If we cannot identify the positive contributions information management can have on service provision in cases such as that of Rikki Neave, our concern with information management must be a wastage of intellectual energy.

The case of Rikki Neave is a perfect illustration of a dilemma that every social worker faces in every case, day after day. The dilemma is that between finding the right balance between the risks of making what social researchers call type 1 or type 2 errors. In social research, a hypothesis is either validated or rejected by the facts gathered through e.g. a survey. Two mistakes can happen, that is the hypothesis can be rejected while it is actually true (type 1 error) or the hypothesis can be accepted while it is actually wrong (type 2 error). A social worker in child protection has to assess each case and make a decision on whether or not to take the child out of the family and into care. If the criterium to take a child into care is that the child is at danger, the social worker is put into a similar position as any social researcher: a type 1 error would imply that children actually in real danger are not taken out of the family, resulting in cases like Rikki Neave. A type 2 error would imply that children are taken out of their family and into care, while they were not really in any danger. Social workers are daily confronted with these choices and assessing the risks of either making type 1 or type 2 errors. Elimination type 1 errors is within that context the aim of every social worker, but has some rather impractical consequences if taken seriously. As social workers have no crystal ball to predict accurately which child is in danger, reducing the risk of a type 1 error would imply an increased amount of type 2 errors and as a result an explosion of the budget for child care. Within other human services, it has been shown that practitioners prefer to accept a higher degree of type 2 errors rather than risk their own reputation by making a type 1 error (Scheff, 1966). This however either results in increased budgets or in long waiting lists for care provision. The standards currently being used within LAC cannot be reasonably used as assessment criteria as probably a majority of families would have to be considered for substantial care. It is only through inefficiency of the assessment procedures that social work can survive and achieve some of its aims within its allocated funds.

Could proper information management involving instruments like LAC and LACCS have had an influence on Rikki Neave and have influenced this type 1/type 2 error dilemma ?
Yes, beyond any doubt information management could have an impact but not through providing a control mechanism for social work supervisors, as the UK newspapers suggest. However information management could have a positive impact by providing social workers with a framework to collect structured information about cases, thus easing the transition of cases from one worker to another, by providing a framework to monitor cases and take due action, to establish a tool that provides social workers, supervisors and managers with detailed facts to legitimize their requests for proper resources for the tasks they are facing.
Unfortunately, proper information management will never be able to save all Rikki Neaves, because we don’t live in a perfect world and never will. Other cases similar to Rikki Neave will happen but proper information management will substantially reduce the risk of these tragedies. To our regret, prevented tragedies are hard to pinpoint and have a low media-sensitivity. undoubtedly, UK newspapers in future will be reporting on tragedy cases and thus induce an unbalanced assessment of social work effectiveness.

References

Auslander, G., & Cohen, M. (1996). Reliability issues in the development of computerized information systems. In J. Rafferty, J. Steyaert, & D. Colombi (Eds.), Human services in the information age . New York: the Haworth Press.

Barnes, C. (1993). Collecting accurate information about child abuse, revistited. In B. Glastonbury (Ed.), Human welfare and technology (pp. 157-171). Assen: Van Gorcum.

Benbenishty, R., & Oyserman, D. (1996). Integrated information systems for human services: a conceptual framework, methodology and technology. In J. Rafferty, J. Steyaert, & D. Colombi (Eds.), Human services in the information age .

Burgess, E. (1928). What social case records should contain to be useful for sociological interpretation. Social forces, 6(4), 524-531.

de Graaf, H. (1982). Pas op je tellen. 's-Gravenhage: Nimawo.

Devons, E. (1961). Statistics as a basis for policy, Essays in economics (pp. 122-137). London: Allen & Unwin.

Ditton, J. (1979). Controlology, beyond the new criminology. London: MacMillan.

Feldman, M., & March, J. (1981). Information in organizations as signal and symbol. ASQ, 26, 171-186.

Harrod, J. (1988). Collecting accurate information about child abuse. CUSSnet news, winter, 24-27.

Hudson, W. (1996). Professional practice for the 21st century: information implications. In J. Steyaert (Ed.), Information technology and human services, more than computers ? (pp. 117-144). Utrecht: NIZW.

Kagle, J. (1983). The contemporary social work record. Social work, 149-153.

Kagle, J. (1990). Social work records. California: Wadsworth.

Kagle, J. (1993). Record keeping: directions for the 1990s. Social Work, 38(2), 190-196.

Kagle, J. D. (1991). Essential recording: a new approach to teaching practice and recording. Arete, 16(2), 28-33.

Kerslake, A. (1996). The Looking After Children Computer System: developing social work sensitive databases. New Technology in the Human Services, 9(2), 10-14.

Miller, L., Fisher, T., & Sinclair, I. (1993). Decisions to register children as at risk of abuse. Social work and social sciences review, 4(2), 101-118.

Miller, L. B., & Fisher, T. (1992). Some obstacles to the effective investigation and registration of children at risk - issues gleaned from a worker's perspective. Journal of Social Work Practice, 6(2), 129-140.

Monnickendam, M., Yaniv, H., & Geva, N. (1994). Practitioners and the case record: patterns of use. Administration in Social Work, 18(4), 73-87.

O'Brien, N., McClellan, T., & Alfs, D. (1992). Data collection: are social workers reliable ? Administration in social work, 16(2), 89-99.

Prince, K. (1996). Boring records ? Communication, speech and writing in social work. London: Jessica Kingsley.

Rapp, C., & Poertner, J. (1986). The design of data-based managment reports. Computers in human services, 10(4), 53-64.

Sabbe, H. (1991). Cliëntregistratie onderzocht. , Catholic University of Leuven, Leuven.

Scheff, T. (1966). Being mentally ill: a sociological theory. Chicago: Aldine Publishing Company.

Schreiber, P. (1965). Statistical data in social work and social welfare, Encyclopedia of social work (pp. 853-859). New York: NASW.

SSradu. (1995). Looking After Children Computer System. Bath: University of Bath, Ssradu.

Steyaert, J. (1994). The use of client information systems in Israel. (Vol. 3). Jerusalem: Ministry of Labour and Social Affairs.

Steyaert, J., Benbenishty, R., & Silon, L. (1995). Developing comparative social welfare statistics (49). Vienna: European Centre for Social Welfare.

Steyaert, J., Colombi, D., & Rafferty, J. (Eds.). (1996). Human services and information technology, an international perspective. Arena: Avebury.

Steyaert, J., Maes, M., & Smekens, E. (1994). Verplichte cliëntregistratie in het algemeen welzijnswerk . Antwerpen: Universitaire Instelling Antwerpen.

Timms, N. (1972). Recording in social work. Boston: Routledge and Kegan Paul.

van Hove, E. (1996). The legislation on privacy protection and social research. In J. Rafferty, J.

Steyaert, & D. Colombi (Eds.), Human services in the information age . New York: the Haworth press.

Ward, H. (Ed.). (1995). Looking after children: research into practice. London: HMSO.

Wright, J., & Gould, N. (1995). Developing a decision support computer model for population needs assessment and resource allocation in community care. New technology in the human services, 8(1), 10-13.