11 Dance Macabre

The fortunes of integration and segmentation

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Introduction and abstract

The subject of this article is the change in characteristics of clerical jobs in insurance companies, considered as a consequence of recent technological and organizational developments.

The content of this article is merely derived from results, obtained in a research project 'Clerical Work', carried out by members of the department of Sociology, Nijmegen University, in the period 1980–1984. The aim of this research project was to collect and to analyse data on the effects of recent technological and organizational changes on skills and work situation. Detailed descriptions were made of the clerical process (process analysis), the task structure, the decision structure and the cooperation structure of some clerical functions (task analysis), the knowledge and skills required to perform these functions (qualification analysis) and the management strategies to adapt the work organization to environmental influences (management analysis). Research has been done in five firms, four of them insurance companies, the fifth a regional office of a bank. In this article we focus on the insurance cases. Although the results cannot be generalized in valid statements concerning different kinds of clerical processes, we do have indications that clerical organizations of a relatively large size, recently involved in automation processes or automating at this moment, largely show the same managerial problems and the same organizational solutions as described in this article.

In short we found that after automation, the remaining fragments of former functions are *integrated* and, together with some new activities arising from computerization, reformed into all round functions. These functions encompass all the tasks to be done in the production process of insurance contracts. Sometimes rather autonomous work groups are responsible for these tasks. Integration oriented policies may result in functions of qualitatively high levels. However, integration doesn't fill a solo part. In a smooth and imposing duet with *segmentation* it leads to a split-up within the totality of all round functions. Top all round functions, on the one hand, are created to deal with the complex, difficult and extraordinary tasks. These functions become the 'property' of an elite within the firm. On the other hand one can registrate the formation of simple, though all round, functions. The greater part of the work within these functions consists of data input by terminal, mostly done by (less educated) women. That is real *terminal* work: work performed at a terminal and a dead-end-job.

The clerical process in insurance companies

Like any clerical process, the work process in insurance companies is a process of transformation of information. Information, inadequately structured with regard to the specific (sub)aim of the firm, has to be transformed into adequately structured information, whether or not by means of mechanical and/or electronic equipment. This structured information has to be filed in a corresponding way. In insurance companies, information before transformation consists of letters, request documents, notes, claims, etc. The first thing to be done is to *registrate* this rather contingent information as 'items in treatment', meanwhile keeping record of the work unit dealing with it. At the same time the material required for treatment (for instance the files of the customer) is transferred to this work unit. This means that, dependent on the 'degree' of automation, a person has to collect some dossiers from the archives, or that someone has to look for a set of microfiches, or that the required information is transported from the central data base to a temporary data base. Subsequently the work material is sent to one of the processing departments, dependent on the nature of information and the type of insurance. We shall describe the most important ones.

In any case a judgment is to be done, whether or not the specific request, mutation or declaration can be *accepted* considering the commercial, technical or financial policy of the firm or considering the terms of insurance. Parts of this judging process have been formalized and routinized. Some of these standardized judgments are automated. However, unexpected and consequently irregular situations will always arise. In other words, there might be a rather strong process specific resistance against standardizing (and automating) this acceptance process.

The next step is the *calculation* process: various parameters, such as premium, commission, profit, capital, interest, etc. are being fixed. In most loss (damage) insurance companies, the majority of these parameters have been standardized and fixed for a long time. Calculation, therefore, forms only a small part of the process. In life insurance companies these calculations form the hard core of the clerical work process. In spite of the fact that calculation has always been the application of structured calculation rules, until recently calculation has not, or only to a low degree, been automated, due to the complexity of these rules. Nowadays software is developed for most of the calculation. This process shows little resistance against automation.

Benefits are made in case of damage or loss. Particularly in the processing of life insurances it is a matter of applying already fixed rules for plain cases such as death or expiration. However, for most loss insurances one has to consider a set of criteria to judge whether benefits can be made or not, to what extent, etc. Treatment of claims, consequently, constitutes the core of the production process in loss insurance companies. But even this treatment is object of recent standardization and automation and a great deal of it appears to be standardizable.

Finally we can distinguish the process of clerical *finishing off* (in a specific way). Policies and announcements of mutation or benefits have to be produced and sent to the clients. Besides this, mutations concerning acceptance, calculations, etc. have to be recorded and filed, in order to update the data bases.

A *checking* process runs parallel to these processes. Every judgment, every calculation or registration has to be checked, since a mistake could have gigantic consequences. This is a bad risk for insurance companies and they do not want to take it. So it used to be quite normal that all the work was done twice. Every worker checked upon the work of his or her colleagues. At present a large amount of checks have been standardized and automated.

This description can be represented as follows:

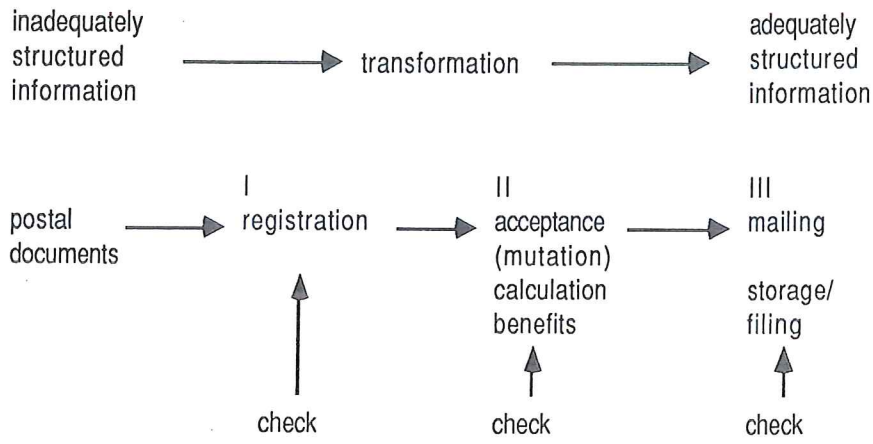

Figure 1.

In most large-scale clerical offices the data storage at the end of the work flow (III) has been automated for a long time. The data, produced in the processes of registration, acceptance, mutation, calculation and benefits were transported to a data entry department, where preparation for recording (like punching) took place. From the midst of the seventies insurance companies started to automate the transformation processes (I and II). This actually meant the introduction of terminals (displays and keyboards, manuals) within the transformation departments as instruments for registration of produced data, for the search of registered data and for the execution of automated operations. In this article we are dealing with the automation of the transformation process and its consequences for the distinct functions in clerical processes in insurance companies.

The specialist organization

'Traditionally' the processing of information in insurance companies took place in a work organization based on the specialization of clerical workers. In the first place, departments were specialized in different 'products' (several insurances) or specific groups of customers. Besides this, there were departments for each part of the production process (f.i. acceptance departments, calculation departments). This last form of process segmentation implied a busy traffic of documents and files between the different departments. Documents and sometimes complete files got lost that way. Another problem was that it was not always clear in what part of the process a request was treated at a certain moment.

Apart from departmental specialization we can recognize a functional specialization. Every specialist had his or her own work space and everyone performed individually. Although the output was regularly checked, within the limits of the task, there was room for autonomous decisions regarding the sequence and pace of work, the time and energy to be spent to the different activities. Most of the specialists had their own small archive containing exceptional cases and their own working methods in dealing with the several parts of the job. Arrangements with clients were made, following own judgements, of course within the limits of the company policy.

This specialist organization leads up to remarkable differences between the processing in the different departments, even between the ways in which the work was done by persons with the same formal task. One could label this situation as a chaotic one. But most of the time no one bothered: service was sufficient, production costs were not regarded as too high, and the time needed to do the job was not regarded as too long. Management had no reason to change the work organization. This situation was taken for granted as long as the insurance market remained quiet and stable. And this state of affairs lingered on until some 15 years ago.

In those days insurances weren't seen as commodities. Insurance meant a kind of moral obligation for every household. Competition between insurance companies hardly existed and was regulated by agreements on prices and the division of market segments or regions. This lack of competition was favoured by a passive or humble attitude of clients towards the choice of type of insurance or insurance company. Neither premiums nor insurance conditions were criteria for these choices, the advice of the insurance agent or the good name of the company was sufficient. Companies did not need any acquisition or active commercial policy.

This market situation affected the policy of the company with regard to the work process and the work to be done: production costs and required work time were not thought as important as the quality of the insurance contract and the good name of the company. Insurance contracts, solid in a juridical and/or financial way, were aimed at. Money didn't matter.

The birth of the all rounder

In the early seventies a change came upon the consuming market for insurances. In consequence of the economic recession, among other things, the demand for insurances stagnated on the market, flooded by now. In addition, banking companies and even multiple stores started to offer insurances. Consequently, insurance companies were confronted with a stagnation or even a decline in premium income. Reacting upon these developments, the Dutch companies not only proceeded to foreign markets (especially in the USA), they also tried to keep or gain a market share at home as large as possible by making splendid offers to (potential) customers. This dance for the customers' favour resulted in an improvement of service, in more favourable terms of insurance and in the underbidding of prices. This underbidding in turn decreased premium income to an even larger extent.

These changes on the consuming market, by imposing both cost reduction and improvement of service, importantly affected the structure of clerical processing within the firms.

First, the preservation of the market share makes high demands upon efficiency. Only by reducing production costs is it possible to induce a cutback of premium and to offer more favourable terms of insurance without a diminution of profit. Profit may even be increased. Cost reduction is always a matter of efficiency. In order to discover where and how costs can be reduced, an *intensive scanning* of working methods and organizational shape took place. All the distinct parts of the process, the sequential activities within them, the different ways to cluster activities in tasks and work units had to be explored by the management. For the first time management had interest in sound knowledge of the work process, in which until then specialists were doing their jobs in a rather autonomous way. The scanning was done not by applying the traditional criterium (the quality of the insurance contract), but from the perspective of the new criteria 'time' and 'money'.

This scanning indicates the urge for management to obtain detailed knowledge of the production process. It results in an expropriation of workers' knowledge. In this we recognize the first Taylor principle.

> "This first principle we may call the dissociation of the labor process from the skills of the workers. The labor process is to be rendered independent of craft, tradition, and the workers' knowledge. Henceforth it is to depend not at all upon the abilities of workers, but entirely upon the practices of management"
> (H. Braverman, *Labor and Monopoly Capital,* New York/London, 1974, p. 113)

Besides cost reduction, the need to improve service by means of an increased 'customer kindness' of the company plays an important part in the assessment and reorganization of the work process. Above all, this means an increase in the

accessibility of the work process. When a customer or an insurance agent calls for information, a quick and reliable answer must be given. Therefore, the access to the source of information must be made easy.

All companies under investigation tried to solve both problems (cost reduction and service improvement) mainly by automating important parts of the transformation process and by adopting a more integrated organizational structure. By reducing required labour, processing time, search time and waits, automation realizes cost reduction. The improvement of service springs from the increased accuracy and accessibility of the data requested. Important conditions, however, determine the success of automation.

Automation, the creation of autonomous technical courses of processing, seems only possible and suitable under the condition of both standardized or standardizable activities and operations, and an appropriate regrouping of remaining activities in a new organizational structure. We will go further into this matter.

Before 1970 most parts of the clerical process had not been standardized: they weren't transparent, calculable or predictable. Automation straight on therefore was impossible, due to the resistance against automation of non-standardized parts of the work process. Sometimes this resistance is inherent to certain parts. Within the function of acceptance, as noticed before, the judging of a complex set of data plays an important role. However, the number of data is not finite, as little as the variability of the data. So entire automation of acceptance is impossible. Room must be left for perception and treatment of the unexpected.

Other parts of the process, for instance calculation, are indeed complex but at the same time transparent and calculable. These parts have always been standardized to a high degree. Resistance against automation is not due to a lack of standardization. More likely this resistance is a result of the specialist departmental and functional structure and the peculiar working methods, known only to the functionaries.

Anyhow, the management not only had to investigate the exact working methods and operations in the various departments, it also had to *interfere* with the existing methods and operational structures (by means of standardization and strict orders), preparing automation.

This in fact is an application of the second Taylor principle.

> "This should be called the principle of the separation of conception from execution, (–) The first implication of this principle is that Taylor's 'science of work' is never to be developed by the worker, always by the management." (H. Braverman, o.c., p. 114)

Given the resistance against automation, standardization is never absolute. So automation is always and only partial. This leads up to the fact that after automation scraps of former processing units and functions would remain. These scraps do not constitute a proper work organization. So, automation forced the insurance companies to reorganize the work. A widespread, almost 'natural' way

to reorganize is to regroup these fragments into new tasks, together with new activities (such as dealing with the new equipment). *Integration* became the guiding principle of the new developing organizational structure. The former specialist departments have been dissolved and replaced by integrated departments, in which all activities with respect to a specific insurance are performed. Within these departments integrated work units are installed likewise. These forms of integration imply that the functionaries not only have to carry out the remnants of their own former tasks, but also the remnants of other functions. New functions, new names are created: the birth of the '*all rounder*' in insurance companies is a fact.

As a result of both automation and organizational integration, the aims of cost reduction and service improvement are actually realized . From the perspective of the employees the new situation also promised to be an acceptable situation, if not an attractive one. An all rounder may deal with several aspects of the insurance process, with different problems and solutions and may consult colleagues within the group. This group determines, within certain limits, the work pace, the work sequence, etc. Integration, thus, seems to label the work of the all rounder in advance as high quality work. In many company reports and policy documents this labeling can be noticed. The picture and the perspective of high quality work have played an important role in the legitimation and acceptation of automation and reorganization, as a seductive dance for co-operation. Seduction succeeded, the mirrored picture however didn't become reality. A set of factors induced a *segmentation* within the all round work.

Segmentation of the all round work

There are drawbacks to everything. The perspective of high quality all round work is confronted with several problems arising in the new work organization. In all cases these problems are stated as qualification problems: would there be people enough and appropriately trained to do this all round work?

But qualification is not only a problem of education or training. It implies problems of motivating and mobilizing the personnel. It also implies problems concerning the complexity of appointed tasks or concerning the flexibility required by the work organization in order to tackle technological developments or developments on the consuming market. In short, qualification problems always ally with problems of management control, although this control aspect is neither emphasized in discussion or discussion notes nor in policy notes on the subject of qualification. A further analysis is needed to describe the functioning of control.

Control issues do not always appear on the surface of the ongoing discourse or semantics of qualification, but they do in the actions and measures of management with regard to qualification. This requires elaboration. The concept of managerial control is often presented as follows: By hiring workers, management doesn't

purchase the very persons, of course. Management purchases their labour-force or labour-power, i.e. the potency to turn out work. But purchasing this potency doesn't guarantee that the workers — having other interests than profit increasing — perform in a way appropriate to the aims of management. So management has to take additional measures to control the work performance. This control has always been the most essential managerial problem, indeed. In other words, management control always stands for handling workers' autonomy. This handling could not mean entire destruction of autonomy, for the very existence of labour in organizations implies per se room for independent decisions of the workers. Otherwise work would be completely mechanical. And in that case, why not mechanize them out? A particular way of handling this autonomy is often found in clustering the necessary decisions in some elite functions, in order to gain or maintain direct control over the work of all the other workers.

Qualification, as our research showed, offers such a way of handling autonomy. By means of a particular distribution of qualification possibilities, management ascertains a particular distribution of loyalty. When, thereupon, degrees of loyalty are associated with degrees of autonomy, then problems of control are being solved by qualificational strategies. Qualification as a sauce for both goose (qualification) and gander (control)! In short, it is the very 'divide et impera'-rule or *segmentation*. Segmentation, as a first step in an ongoing process of management control can be recognized, although not on the surface, in many actions (and sometimes non-actions) on the point of qualification.

Qualification problems surface in several ways. Local management often calls attention to the waning of knowledge and specific skills, due to automation of parts of the process. Within a few years, they fear, no one will be able to submit a decent quotation for a life insurance or to handle a damage claim, without the auto - mated system. So, no one will know what to do when 'the system has broken down'!

Besides, the all round function in prospect seems to be a heavy one. It includes fragments of different former jobs. Every all rounder has to acquire to a more or less extent new skills and knowledge of distinct aspects of the clerical process. The new function would compel to courses and in-service training for new insurance topics. Not everybody, in the opinion of most people, is able or willing to make these educational endeavours.

Both definitions of the problem determine the materialization of the slowly developing segmentation of the all round functions as a matter of course. This segmentation comes more or less into being in a 'natural' way. The best qualified and trained functionaries are getting hold of the more difficult cases (sometimes at the instance of the local management). More simple cases remain for the employ - ees, who start with an arrearage in knowledge and skills. The better educated are preserving their qualifications and motivations in that matter and learn, besides, a number of new skills. In consequence, the less qualified are hampered in their educational possibilities, also missing the motivation to learn and execute the difficult activities. In this way an ever larger distance comes about between the

two forms of all round work, between the top all round work and the less difficult all round work. In most of the investigated companies this segmentation is not only the result of a quasi natural process, it is also promoted by a set of measures from the side of management. Located at the interstice level, these measures do not form an integral part of the automation and reorganization plans. They are to be characterized as ad hoc measures, quite obvious solutions for unforeseen problems. It is not necessarily cunning management that plays on the sly some fishy tricks upon the personnel. Things happen that way. No one is to blame: blame it on the bossanova. But all these measures do have, one way or another, segmentational effects. Moreover, no measures are taken to prevent segmentation. And soon a situation arises, from which the consolidation and promotion of segmentation emerge, just like in the situation, in which contingently emergent, but continually occurring events have to be regulated 'eventually'.

These measures take different forms. In most companies we observed the creation of various levels of all round functions within the group. Management determines in that case which parts of the activities belong to each all round level. In order to fill these differentiated all round functions with adequately skilled workers, the companies are creating a new training system. Before automation most employees were trained in branch specific training courses. But these facilities appeared to be more adequate to the former specialist organization. After automation, the insurance companies developed indoor firm specific training systems. Modules of the branch specific training programs are used in training programs adjusted to the new function levels. The management, after having appropriated the knowledge about the various actions and operations in the clerical process (the first Taylor principle) and after having defined and imposed in turn the activities of the functionaries by means of standardization and automation (the second Taylor principle), now also has the opportunity to use this monopoly over knowledge to control. This is the third Taylor principle.

> "Thus, if the first principle is the gathering (–) of knowledge (–), and the second is the concentration of this knowledge as the exclusive province of management (–), then the third is the use of this monopoly over knowledge to control each step of the labor process and its mode of execution."
> (H. Braverman, o.c., p. 119)

This monopoly over knowledge implies a monopoly of the management over the distribution of knowledge by means of determining who, at what moment, has to be trained for what activity.

Together with the regulation of differences in the skill levels required by the various all round functions, the new work organization as well as the new training system are creating conditions for the management to fill new functions with appropriately skilled and motivated persons. By doing so, management is able to control distinct groups of functions and workers in a different but adjusted way. This differential policy even led to a form of work unit segmentation in one of the companies. People working on simple tasks only are gathered in separate groups,

apart from those groups in which the more complicated tasks are executed. There hardly exists any link between both groups. The groups performing complex tasks are filled with skilled and motivated, often male, workers. In the other groups one particularly finds unskilled women, also adequately motivated: not motivated by their interest in insurances, but motivated by the money earned and by the attractive working time schedules.

One effect of this way of grouping tasks is the managerial possibility to practice two forms of control openly. In the groups performing simple tasks we observed so-called 'direct control': the functionaries have no autonomy in their work; sequence, speed, quality and even quantity are imposed and supervised. All they have to do is to handle the terminal in order to put already standardized information into a data base. But they have to do it as quickly and accurately as possible. It really is terminal work. Only one or two of them will enter the elite group. Most of them will leave the company within a few years. Other, unskilled, persons take their places at the terminal desk.

In the other elite groups the tasks do imply a certain degree of autonomy on the side of the workers. This autonomy is regulated by means of the control strategy, called 'responsible autonomy'. In this regulation the attractiveness of the work, the possibilities for training and promotion and the selection of workers who are expected to be motivated as loyal and flexible workers, play a crucial part.

So within this complex of strategies, tactics and measures concerning automa - tion and reorganization, one can trace a combined function of integration and seg - mentation. Integration and segmentation refer to the splitting, respectively to the combination (junction) of distinct objects (such as activities, parts of the produc- tion process, etc.). In the sociology of work and organization, these concepts are commonly used in order to identify different global policies of management with regard to the work organization. These policies are, currently at least, connected with some moral judgment concerning 'good' or 'bad' management. Integration policy stands for 'good' management, a well planned organization, the creation of high level jobs and motivation. The humanization of work dances to the music of integration. Segmentation is wrong, Taylor-like, it implies a big, lumbering organization with great system losses, and it creates unattractive jobs.

In our research project, we couldn't find such a dichotomy. Instead we discov - ered a more complex management policy, in which integration and segmentation appear to be useful, though not as indications for adverse types of policies. They ought to be regarded as ordering devices and technics, used *at the same time* with regard to different aspects of the work organization. In fact, they are components of the same organizational policy. This policy, therefore, includes the positive and negative effects of management mentioned above. It's a choreography for both Taylor and Tavistock.

While integration (the humanization of work) is placed in the centre light, segmentation (unattractive work) is hardly noticed. But the promises of integration will be erased by the practices of segmentation. When these effects become perceptible, however, the process is irreversible.

Conclusions

Of course standardization, automation and reorganization of the clerical processes are not finished at the moment we stopped to describe them. For the near future management is already thinking about the possibilities of applying optical reading and laser controlled data bases. Besides, new products are being designed and new legislation forces adaptation of the products, and the expansion impulses of the companies will evoke mergers. The implementation of new technologies, together with environmental influences and scale effects, will imply anew a reorganization of the work process. Standardization, automation and reorganization are ongoing processes in the near future. We only described some main lines of this ongoing development and gave some plausible interpretations of the factors stimulating this development and of the consequences for the workers.

Recapitulating we demonstrated in the first place the changes in management control over clerical work processes. Control became acute in the last years as a consequence of developments in the consuming market. Management control advanced decisively by standardization, automation and by new policies of control of work organization and workers, in accordance with the emerging needs of new systems of clerical work. Above all, standardization, making activities transparent and finite, seems to play a central role in this development. Therefore it seems inappropriate to indicate recent technological developments with the concept of technical automation only.

In the second place our description of management policies showed that it's still possible to interpret present management strategies as taylorist ones. This, however, under condition that taylorism is not seen as a blue print for the organization of work, but as a set of abstract rules, guiding the *re*-organization of work. The three Taylor principles we mentioned were perceived by a management, designing and implementing a new production process.

A remaining question seems to be: "What does all this have to do with the work of system analysts, operators and other participating individuals?" We would like to state in this place that every approach towards "integration" deserves a touch of thorough suspicion. For the way to segmentation is often paved with "good" semantics. The bait will hide the hook.

Computers and Democracy

A Scandinavian Challenge

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