

University of Groningen

Thought and action

Mobach, M.P.

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:
1999

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Mobach, M. P. (1999). *Thought and action: change to the customer in community pharmacy practice*. [Thesis fully internal (DIV), University of Groningen]. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Chapter 2 Design of the Study

2.1. Introduction

In **chapter 1**, one of the main preliminary research questions was: ‘What problems does a pharmacy manager face if he/she ‘travels’ to the customer mix?’. This question is the central theme of this thesis. Since we would like to discuss some methodological issues in this chapter, we will start with a methodological discussion about quantity and quality. Furthermore, within this chapter we will consider what other information we might need in order to find a decent answer to this research question. This involves a description of research questions, design of the study and applied methods in detail. Soft Systems Methodology (SSM) will be used in order to model and structure this study; we will illustrate the main ideas in presenting a so-called ‘root definition’ and ‘activity model’ of this study.

2.2. Why real men collect soft data¹

Before a presentation of the theoretical background of this thesis, and before our ‘dive’ into the pharmaceutical field, we would like to give you an impression of a relevant scientific debate. Whilst some researchers prefer quantitative research, others do prefer qualitative research; sometimes labelled respectively soft and hard research. The title of this section suggests that this debate about quantitative and qualitative analyses is rather intense. As was mentioned earlier, this thesis contains both forms of analyses. But the main interest of this section is a general one: ‘Why would we select a quantitative method rather than a qualitative one, or vice versa?’

In their recent work Miles and Huberman (1994) illustrated the contrast between quantity and quality with a quotation of a fairly extreme quantitative researcher: “There’s no such thing as qualitative data. Everything is either 1 or 0” (1994: 40). In addition, Gherardi and Turner (1987) argued that “quantitative work is courageous, hard biting, hard work. Collecting hard data means making hard decisions, taking no nonsense, hardening one’s heart to weaklings, building on a hard core of material, using hard words to press on hard won results which often carry with them promises of hard cash for future research and career prospects. By contrast, soft data [are] weak, unstable, impressible, squashy and sensual. The softies, weaklings or ninnys who carry it out have too much of a soft spot for counter-argument for them to be taken seriously, they reveal the soft underbelly of the social science enterprise, are likely to soft-soap those who listen to them. They are too soft-hearted, pitying, and maybe even foolish to be taken seriously, so that it is only right that they should be employed on soft money” (Miles and Huberman 1994: 49). In contrast, Miles and Huberman also illustrated the argument of qualitative research with another quotation:

¹ Freely rendered from Gherardi and Turner (1987) *Real Men Don’t Collect Soft Data* (compare also Miles and Huberman 1994: 40).

“... all data are basically qualitative: To a raw experience, we may attach either words or numbers. Or as Campbell (1974) remarks, all research ultimately has qualitative grounding” (1994: 40).

These statements seem rather blunt. Although this debate is rather intense, we prefer to give you a more refined account of this discussion. Miles and Huberman (1994) argued that “fierce battles have been fought in this topic ...” (1994: 40). However, they counter that “the quantitative-qualitative argument is essentially unproductive” (1994: 41). They see “no reason to tie the distinction to epistemological preferences. The question is not whether the two sorts of data and associated methods can be linked during study design, but whether it should be done, how it will be done, and for what purpose” (1994: 41). They also added: “the fact [is] that numbers and words are *both* needed if we are to understand the world” (1994: 40). We agree with this argument. In this context, it might be noted that much work has been done in order to synthesize qualitative and quantitative analyses (compare for example, Fielding and Fielding 1986, Bryman 1988, Cook and Reichardt 1979, Brewer and Hunter 1989). Miles and Huberman gave an example of the productive use of both approaches: “the careful measurement, generalizable samples, experimental control, and statistical tools of good quantitative studies are precious assets. When they are combined with the up-close, deep, credible understanding of complex real-world contexts that characterize good qualitative studies, we have a very powerful mix” (1994: 42). They also advised us to think about the purpose of the study ahead: “In the light of my research questions and the audiences for my study report, will qualitative information be enough, or should it be complemented by a numerical data set of some kind?” (1994: 43). Moreover, Yin (1994) provided us with an overview of relevant situations for the various approaches (**table 2.1.**).

strategy	Form of research question	Requires control over behavioral events?	focuses on contemporary events?
survey	who, what, where, how many, how much	no	yes
experiment	how, why	yes	yes
case study	how, why	no	yes

Table 2.1. Relevant Situations of Different Research Strategies (Yin 1994: 6).

He argued that these approaches must be used in different situations. For example, “‘what’ questions, ‘who’ and ‘where’ questions (or their derivatives - ‘how many’ and ‘how much’) are likely to favour survey strategies These strategies are advantageous when the research goal is to describe the incidence or prevalence of

a phenomenon” (1994: 6). The investigation of prevalent political attitudes would be a typical example, or, as in our study, the investigation of applied pharmacy mixes in practice. In contrast, he noted that “‘how’ and ‘why’ questions are more *explanatory* and likely to lead to the use of case studies, histories, and experiments as the preferred research strategies. This is because such questions deal with operational links needing to be traced over time, rather than mere frequencies or incidence” (1994: 6). Since, we would like to visualize problems in organizational change in this thesis, and since most changes take some time, we can safely argue that the experiment and the case study seem appropriate for our purpose.

Hutjes en Van Buuren (1992) gave examples of mixes of these three forms of research: a mix of case study and (quasi) experiment, and a mix of case study and survey. “In combination with the (quasi) experiment, the case study improves the visualization of causal relations and unforeseen and unintentional side effects, furthermore it is flexible, it can easily be adapted whenever necessary. In addition, the survey illustrates how the case study is embedded in the general picture, and the case study improves the rather superficial image which is provided by the survey” (1992: 26-27). Consequently, this would make us conclude that combinations could improve the quality of this thesis. In this thesis, a quasi-experimental design, in which both a survey and some case studies were involved, seemed rather interesting in order to draw some solid conclusions.

In addition, we note that the discussion about ‘hard’ of ‘soft’ approaches within systems theory is related to the debate about quantitative and qualitative research previously referred to. Checkland and Holwell (1998) gave a usable distinction between ‘hard’ and ‘soft’ for our purpose here (**table 2.2.**).

	the ‘hard’ tradition (Simon)	the ‘soft’ tradition (Vickers)
concept of organization	social entities which set up and seek to achieve goals	social entities which seek to manage relationships
underlying systems thinking	‘hard’ systems thinking: the world assumed to be systemic	‘soft’ system thinking: the process of inquiry into the world assumed to be capable of being organized as a system
process of research and inquiry	predicted upon hypothesis testing; quantitative if possible	predicted upon gaining insight and understanding; qualitative

Table 2.2. Two broad traditions within system theory (Checkland and Holwell 1998: 48).

They argued that the ‘hard’ systems approach had its roots in the 1960’s. In this approach the “human and organizational behaviour was seen as decision making/problem solving in pursuit of goals” (1998: 46), which was associated with the

work of Simon (1945). The 'soft' systems thinking originated in the 1970's and 1980's and was related to the work of Vickers (1965). In connection with this approach, Checkland and Holwell argued that "Vickers (1974) started to reject this goal-seeking model of human behaviour as being too poverty-stricken to match the richness of life as we experience it" (1998: 46-47). Furthermore, they argued that standards or criteria were not given from outside, but were generated by the previous history of the system itself, and actions were perceived as relationship maintaining (or eluding) rather than as a striving to achieve goals (1998: 47). Earlier, Wilson (1984) related the difference between 'hard' and 'soft' approaches to *how* and *what* questions in research. He argued that "the well-defined problem of a flat tyre is a hard problem, whereas the situation in Northern Ireland is extremely soft" (1984: 7). He added that "a 'hard', or structured, problem is one which is exclusively concerned with a 'how' type of question" (1984: 7). This kind of problem is exemplified in the domain of the design engineer who seeks effective and economic answers to the 'how' type of question. In contrast, "a 'soft', or unstructured, problem is one which is typified by being mixtures of both 'what' and 'how' questions" (1984: 7). This was exemplified by a manager facing the problem that production performance could be better. "This statement of the problem gives no guide to *what* he should investigate to identify areas for potential improvement, or *how* he could then introduce change to realize that improvement" (1984: 8). He continued by arguing that in order to help managers to tackle these 'soft' problems we should enable them to convert mixed questions of 'what' and 'how' into ones only of 'how'.

2.3. Methodological base

Before we start to model, we will again introduce a statement of Wilson (1984): "The best we can achieve is to derive conclusions which are defensible (and hopefully appropriate to the situation). The defensibility can be argued on the basis of the intellectual constructs used; the appropriateness comes from the selection of the intellectual constructs themselves" (1984: 5-6). Within SSM, the creation of CATWOE, root definition, and activity model are well-known and form a basis of the modelling process (we refer to **chapter 6** for an elaborate discussion). Checkland and Scholes (1990) argued that the CATWOE mnemonic refers to customers, actors, transformation process, Weltanschauung, owners, and environmental constraints respectively. "The 'customers' are the victims or beneficiaries of T. The 'actors' are those who would do T. The 'transformation process' is the conversion of input to output. The 'Weltanschauung' is the worldview which makes this T meaningful in context. The 'owner(s)' are those who could stop T. The 'environmental constraints' are the elements outside the system which it takes as given" (1990: 35). Furthermore, they argued that a root definition can be seen as "a system to do X by Y in order to achieve Z" (1990: 36). With these descriptions we can start to sketch an activity model in which we "aim to express the main operations to bring about the

transformation (in the light of the CATWOE) in a handful of activities. The guideline is 7 ± 2 activities. If this seems sparse, there is no problem: each activity in the model can itself become a source of a root definition to be expanded at the next resolution level” (1990: 37-38).

Let us, for example, formulate a root definition of this thesis: ‘A community pharmacy study system (X) which analyzes the community pharmacy sector with the use of management science (Y) in order to describe managerial problems of the pharmacy manager in the change to the customer mix (Z)’.

A possible CATWOE could be:

C	Customers	researcher, pharmacy managers
A	Actors	researcher, pharmacy managers
T	Transformation process	community pharmacy → studied community pharmacy
W	Weltanschauung	it is possible to describe managerial problems in organizational change of pharmacies by using management science
O	Owner(s)	researcher, Faculty of Management and Organization, University of Groningen, stichting VNA, SAL Apotheken
E	Environmental constraints	cooperation and motivation of pharmacy managers

Based on this root definition, and following CATWOE, we can start to build an activity model. Within the construction of an activity model it might be helpful to use ‘backwards modelling’. We argue that the assessment of ‘problems of pharmacy managers in the organizational change to the customer mix’ (cell 8) was a core activity, contingent upon many other activities (**figure 2.1.**).

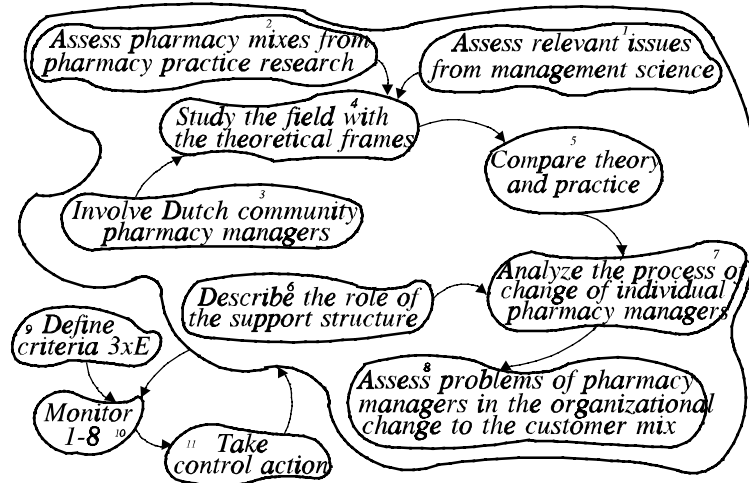


Figure 2.1. Activity model for the design of the thesis.

For example, before we can assess problems, the process of change should be analyzed (cell 7). In **chapter 1**, we noted that we would prefer an individual approach, since the managerial problems should preferably be described at the micro level. In addition, it was noted that stichting VNA and SAL Apotheken were involved in this project. They were interested in the role of their support structure in this organizational change. Consequently, the role of the support structure in the change to the customer mix would obviously have to be described and studied (cell 6). Furthermore, it was assumed that it would be convenient to know where we are now, if we intend to ‘travel’ with an organization to a new position. Ideally, a comparison between theory and practice would be made (cell 5). It was decided that in order to make a broad sketch of the pharmaceutical field, a survey would be performed (cell 4). With the result of this survey, the pharmacy mixes distilled from pharmacy practice research, would be refined. In such a survey we would, of course, be in need of the participation of Dutch community pharmacy managers (cell 3). Their involvement would be vital for the feasibility of this part of the study. In order to be able to compare theory and practice, a theoretical study of management science and pharmacy practice research was introduced (cell 1 and 2). We thought that it would be wise to prepare ourselves with a point of departure and a destination for the pharmacy organization, which should be described from the pharmaceutical perspective. The analytical description of this perspective originated mainly from pharmacy practice research (cell 2). In addition, this study described some relevant issues from management science with respect to organizational change (cell 1).

Moreover, in using SSM, we would be in need of the criteria 3xE (cell 9). The criteria 3xE consist of effectiveness, efficacy and efficiency. These criteria would enable us to monitor the research process (cell 10) and intervene whenever necessary (cell 11). With the criterion for effectiveness we can monitor in what way the longer term aim, expressed by Z (a description of organizational problems of the pharmacy manager in the change to the customer mix), is achieved. The general expression of this criterion is: 'Is the transformation (community pharmacy→ studied community pharmacy) meeting this longer term aim Z?'. In this study, 'a thesis describing managerial problems of pharmacy managers in the change to the customer mix' would be such a criterion. As can be seen, the description of these managerial problems has become tangible. With the criterion for efficacy we can monitor whether the means chosen (cell 1-8 in the model) actually work in producing the output of the transformation process (studied community pharmacy). The general expression of this criterion is: 'Does the means work?'. In this thesis, there is monitoring via frequent consultations with the supervisors in order to check if the modelled activities would provide us with sufficient relevant data to study the community pharmacy. We argue that enough data have become available to conclude that the community pharmacy was studied. With the criterion for efficiency we can monitor whether the transformation (community pharmacy→ studied community pharmacy) is being carried out with a minimum use of resources. The general expression of this criterion is: 'The amount of output divided by the amount of resources used'. In this study there is monitoring with regard to time and money: 'can the modelled activities be performed in four years without overrunning the budget?'. Although the study was completed within four years, the budget was exceeded and the faculty paid our debts. With the description of this activity model, a sketch of the study was made.

In terms of this chapter we suggest that the activities in cell 1 '*Assess relevant issues from management science*', cell 2 '*Assess pharmacy mixes from pharmacy practice research*', cell 4 '*Study the field with the theoretical frames*' and cell 7 '*Analyze the process of change of individual pharmacy managers*' are the most vital, since they would involve some methodological choices. These research activities will be elaborated in the design. So far, from the presentation of this model, we can easily distil our research questions.

2.4. Research questions

The aim of this study was to visualize managerial problems of the change to the customer mix. With this aim some related activities, which can be translated into sub-questions for this thesis, have been distilled. With the coming research questions and the activity model from above we will try and construct a design for our study in the next section.

Management Science

1. What problems can be expected in the analysis of actions of pharmacy managers? (chapter 3)
2. What problems can be expected in the analysis of organizational change? (chapter 3)

Pharmacy Practice Research

1. What theoretical pharmacy mixes can be distinguished? (chapter 3)
2. Why is there a change to the customer mix? (chapter 3)

Point of Departure

1. What methods can be best applied in a survey? (chapter 4)
2. What is the empirical use of the three pharmacy mixes? (chapter 5)
3. What is the correspondence between *thought* and *action*? (chapter 5)

'Travel' to the Destination

1. What problems does a pharmacy manager face if he/she 'travels' to the customer mix? (chapter 6)
2. What is the role of the support structure in this change? (chapter 6)

2.5. Design of the study

For the presentation of our design we will go back to the main activities of our activity model. Since we would like to prepare ourselves for the 'dive' into the empirical field, a literature study was made, both with respect to management science and pharmacy practice research. These two activities will be described in **chapter 3**. In this chapter the term 'activity' will be used most. We refer to the modelled world, where, in the context of this chapter, activities relate to analytical descriptions of the activities of managers, and specifically of the activities of managers in the community pharmacy sector.

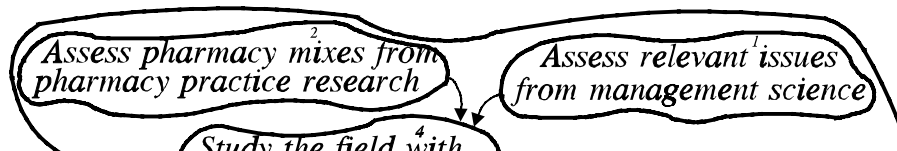


Figure 2.2. Cell 1 and cell 2 of the activity model; a description with relevant issues from management science and pharmacy practice research.

The activity of cell 1, 'Assess relevant issues from management science' implies that the relevancy of the issues within management science can be determined. Let us try and do so, by using the main research question: 'What problems does a pharmacy manager face if he/she 'travels' to the customer mix?' A process of organizational change could be compared with a train travel. In general, it would be convenient to have a point of departure and a destination in such a travel. Some other activities would be helpful also, for example, we could cycle to the station and purchase a

ticket. Furthermore, it is likely that the railway company would enable us to determine whether we have arrived in the right place; for example, by using signs on the platform of a station. However, this modelled example appears rather simple when compared with the real-world action of organizational change. If we use our common sense, we would expect some managerial problems of quite a different order. For example, determination of the point of departure and destination could be more complex, and would consequently be less evident in organizations. We would also expect differences to be present between intention and realization (within this thesis labelled as *thought* and *action*). In the example, the intended activity ‘cycle to the station’ will change if the neighbour offers a lift to the station, or the train travel could even be skipped if the neighbour offered a lift to the final destination. In addition, evaluation could also be more complex in an organization. It may be hard to define and perform an evaluation, for example, if the destination is not clear. If this description is to be taken seriously, the process from strategy formulation to real-world action could be of interest here. Within this context, the issues of intention and realization were distilled from management science. Furthermore, the issue of evaluation could be of major importance; for the manager it could be helpful to determine the contribution of the activities in the light of the destination (for a more elaborate discussion compare **chapter 3**).

In cell 2 ‘*Assess pharmacy mixes from pharmacy practice research*’ of the activity model, we will describe what pharmacy mixes can be expected in the community pharmacy. A mix relates to a selected set of activities by the pharmacy manager. Earlier, we assumed that such activities would relate to pharmaceutical issues, financial issues, and customer issues. The nature of these issues and the according pharmacy mixes will be elaborated in further detail in **chapter 3**. In addition, it was argued that there is a general tendency to change in the direction of the customer mix. The content of this tendency will be refined also.

One of the other main activities was cell 4, which comprised ‘*Study the field with the theoretical frames*’ (**figure 2.3**). Earlier, it was decided that we were in need of a point of departure if we wanted to sketch a process of change. The empirical description of the point of departure is described in **chapter 4** and **chapter 5**, and is labelled *phase one*. In these chapters, the term ‘action’ will be used most. We refer to the real world, where, in the context of these chapters, actions relate to an empirical description of the importance and use of the pharmacy manager’s actions. In this thesis, the point of departure is

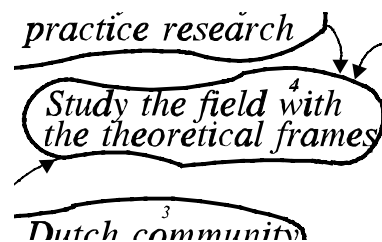


Figure 2.3. Cell 4 of the activity model; three pharmacy mixes in practice.

to flesh-out the nature of actions in Dutch community pharmacy practice; by means of a description of the product mix, the process mix, and the customer mix. Because we aimed at solid comparisons between theory and practice, and because of the usability of the material in the debate in the field we decided to make a broad sketch of the field. For that purpose, a survey was constructed and performed. However, we thought that it would be wise to make a pilot study and test some questionnaires first, since no usable validated methods were available. For the purpose of the pilot study, 24 community pharmacy managers were selected. Twelve community pharmacies were randomly selected from the twelve Dutch provinces, one pharmacy out of each province, and twelve pharmacies were selected by stichting VNA and SAL Apotheken. We expected a gap to be present between intention and realization, and it was also expected that people would *say* that they were acting in one way while they acted in another way (Mintzberg 1978, 1979, 1994, Argyris and Schön 1978, Argyris 1992); for a more elaborate discussion compare **chapter 3**. In addition, the results of a pre-pilot showed that the participating pharmacy managers experienced most of the three pharmacy-mix actions as being very important. As a result, there was hardly any difference between the scores per pharmacy mix. We could of course have agreed with these results, but we were interested in the difference between these mixes and the finer points between them. Consequently, we introduced separate methods for *thought* and *action*. In the methods for *thought* we tried to ‘catch’ what actions pharmacy managers perceived as being important. In the methods for *action* we tried to ‘catch’ what actions pharmacy managers actually performed. In the pilot, a total of seven methods were tested; four methods to visualize *thought* and three methods to visualize *action*. At each pharmacy two methods for *thought* and at least one for *action* were tested. The combination of the methods and the pharmacies was made randomly, with the precondition that 50% of the selected pharmacies were pharmacies of stichting VNA and SAL Apotheken (VNA/SAL pharmacies), and 50% of the selected pharmacies were additional pharmacies, for all individual methods. Two methods were selected, one for *thought* and one for *action*. The two selected methods for *thought* and *action* were then ready-for-use in the survey. The design of the survey consisted of a study with a relatively large sample in order to provide broad information on the subject, and in order to use this information for a more detailed study of individual pharmacies later. A total of 333 out of 1521 Dutch community pharmacy managers were invited to participate in the survey (1996). A file of the KNMP was used for the selection of a random sample of 300 pharmacies. There was no overlap present between the pharmacies of the random sample and the selected pharmacies of the pilot, in order to prevent learning effects. The remaining 33 community pharmacies were VNA/SAL pharmacies. We invited all responding pharmacy managers for a follow-up of the survey (1997).

Having decided upon our design for our point of departure, we ought to say something about our design for the process of change. This activity was described in cell 7 'Analyze the process of change of individual pharmacy managers' (figure 2.4). The empirical description of the organizational change to the customer mix is presented in **chapter 6**, and is labelled *phase two*. In this chapter the term 'activity' will be used most. We refer to the modelled world, where, in the context of this chapter, activities relate to the modelled customer activities by the pharmacy manager. In addition, control action of the pharmacy manager was described in response to the implementation of the modelled activities in some cases. A substantial part of the strategies and activities of the pharmacy manager were expected to emerge (Mintzberg 1978, 1979, 1994); for a more elaborate discussion see **chapter 3**. They would evolve 'along the way', as it were. Consequently, the organizational change could be hard to 'catch' in a model. Furthermore, also based on the material of **chapter 3**, we would expect that the strategy of the pharmacy manager would be implicit (Mintzberg 1979). In this case we might very well have to deal with personal beliefs and/or the personality of the manager: complexity and subjectivity were at stake here. SSM is a methodology which could enable us to unravel 'knots' related to subjectivity and complexity (Checkland 1981, Checkland and Scholes 1990, Checkland and Holwell 1994). Within SSM, subjectivity was defined as the crucial characteristic of human affairs. Again, we stress that we were interested in the individual pharmacy manager and his/her problems in the organizational change. Subjectivity was a core issue in this part of the study. Moreover, SSM was most frequently applied to complex organizational problems; 'messy' problems. We argue that most organizational processes of change are complex, and therefore SSM could be suitable for our purpose. In addition, we note that the role of the support structure in the organizational change to the customer mix had to be visualized. Some additional methods (a mix of quantitative and qualitative methods), were introduced in order to describe the role of the support structure.

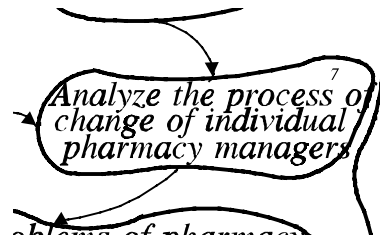


Figure 2.4. Cell 7 of the activity model; the organizational change.

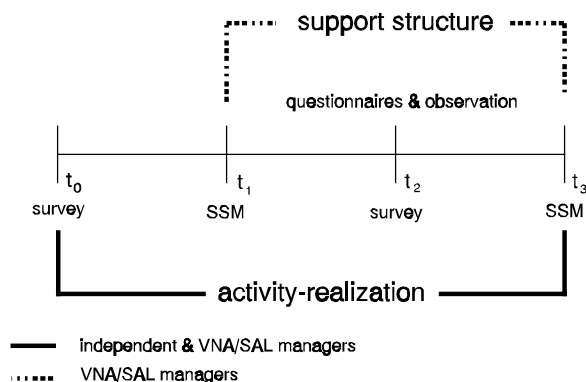


Figure 2.5. Four moments of time used in the analysis of organizational change.

Within the organizational change, measurements at and between four moments in time t^2 : t_0 , t_1 , t_2 and t_3 , were used (**figure 2.5**). A time series is involved when we have multiple observations over time (Cook and Campbell 1979). The observations can be of the same units, as when particular pharmacy managers are repeatedly observed, or they can be on different units, but with a certain similarity, as when pharmacy managers in a particular postgraduate course are observed over a number of years. In this latter case, different pharmacy managers are in the course each year. In this thesis, the same units were used for the observations; particular pharmacy managers were studied in a time frame of 1½ years.

At time t_0 , May 1996, the differences between *thought* and *action* were studied in a broad survey (**chapter 5**). The questionnaires for *thought* and *action* were sent separately at t_0 . The separation was made to minimise mutual influence of the questionnaires for *thought* and *action*. The second part of the questionnaire was sent if the first part had been received correctly. The sequence of sending consisted of sending the questionnaire for *action* before the questionnaire for *thought* for the first half of all pharmacy managers; vice versa for the second half of all pharmacy managers. Later these results of the survey were refined and they facilitated the study of organizational change.

At time t_1 , October 1996, a description of the intentions of customer activities and related monitor activities was made with the use of SSM (**chapter 6**). What kinds of activities do pharmacy managers model if they intend to ‘travel’ to the customer mix? How do pharmacy managers intend to monitor direction and final destination before this ‘travel’? With the use of SSM in an interview the intended customer

² t relates to a time period expressed in half years.

activities and related monitor activities were modelled.

At time t_2 , May 1997, the survey was repeated with a group of 63 pharmacy managers. The surveys of May 1996 (t_0) and May 1997 (t_2) were used to compare the general results and the group results over time (**chapter 6**). What was the general difference of the results of 1996 and 1997? Did a support structure affect these results? As with the survey at t_0 , the questionnaires for *thought* and *action* were sent separately at t_2 .

At time t_3 , September 1997, the model constructed at t_1 was evaluated. The results of these SSM interviews were compared with the ones made at t_1 . A description of the use of the modelled customer activities and related monitor activities was made (**chapter 6**). What kinds of modelled activities were actually used in the 'travel' to the customer mix? How did pharmacy managers monitor direction and final destination during the 'travel'? Here we concentrated on evaluation of the model; in addition, control action of the pharmacy manager was described in response to the implementation of the modelled activities in some cases.

Between time t_1 , October 1996, and t_3 , October 1997, a description of the role of the support structure of stichting VNA and SAL Apotheken was made (**chapter 6**). What kinds of modelled activities were supported during the 'travel' to the customer mix? How did pharmacy managers qualify the use of the support structure? What were the differences between the outcome of the pharmacy managers with support structure, and that of pharmacy managers without support structure? Using questionnaires and observations during meetings of the support structure, the actual use of the support structure was studied.

The design for the analysis of the process of change of individual pharmacy managers involved four groups of 16 pharmacy managers. We decided to introduce a quasi-experimental design in which a survey and some case studies were involved. Cook and Campbell (1979) were of the opinion that "all experiments involve at least a treatment, an outcome measure, units of assignment, and some comparison from which change can be inferred and hopefully attributed to the treatment. *Randomized experiments* are characterized by the use of initial random assignment for inferring treatment-caused change. However, random assignment is more difficult with individuals or larger social groups than with objects, and is more difficult with humans in the field than in the laboratory. Consequently, random assignment will be less frequent with humans than with objects, and less frequent with humans in the field than in the laboratory. The field researcher is often a guest at the sites where he or she works while the laboratory researcher has almost complete control over the setting and acts as the respondent's host" (1979: 5-6). In addition, Swanborn (1987)

also considers that “a random distribution of units is well possible in a laboratory, but rarely applied in social reality. *Quasi-experiments* do not use random assignment to create the comparisons from which treatment-caused change is inferred” (1987: 255-256). Cook and Campbell defined quasi-experiments as “experiments that have treatments, outcome measures, and experimental units, but do not use random assignment to create the comparisons from which treatment-caused change is inferred” (1979: 6).

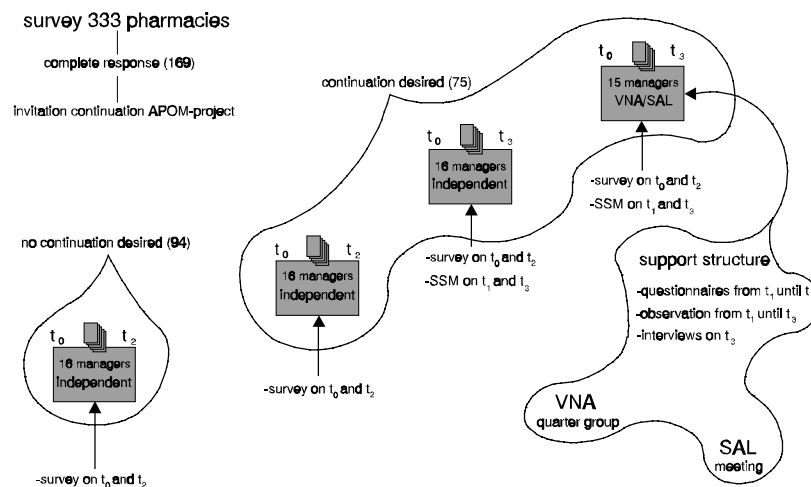


Figure 2.6. The design of methods for the organizational change.

For reasons of practicality, a specific group size within our project was determined. The number of individual pharmacy managers in the support structure of stichting VNA (10 so-called VNA pharmacy managers → one nonrespondent → 9) and SAL Apotheken (6 so-called SAL pharmacy managers) determined the size of 16 pharmacies per experiment group (**figure 2.6**). All 169 pharmacy managers with results for both *thought* and *action* were invited to participate in this part of the study. The selection of independent pharmacies was made after the first survey. In the invitation a text was added describing the requirements: independency and a start or continuation of a ‘travel’ to the customer mix. The selection of 16 VNA/SAL pharmacies was made before the first survey. The 10 VNA pharmacy managers were all members of the so-called ‘quarter group’ (a group which met and exchanged ideas quarterly). The six SAL pharmacy managers were all members of the so-called ‘SAL meeting’ (a group which met and exchanged ideas monthly). A total of 75 pharmacy managers, 59 pharmacy managers of the random group and 16 pharmacy managers of stichting VNA and SAL Apotheken (VNA/SAL pharmacy managers), were interested in further participation. In addition, a total of 94 pharmacy managers were not interested in further participation.

Three groups of 16 pharmacy managers were selected using criteria which were based on the results of the survey in **chapter 5**. The 15 responding VNA/SAL pharmacy managers were a separate fourth group. The criteria applied for the selection of the first three groups were, in order of importance, independence of the pharmacy manager, correspondence of *thought* and *action* and cluster membership of *thought* and *action* (compare **table 2.3.**). The groups were similar with respect to these criteria.

group	applied criteria	response support structure	correspondence clustermembership	final selection
continuation desired (16+59)	stichting VNA	10→	9→	15
	SAL Apotheken	6→	6→	
	independent	36→	32→	16
	supported	23		16
no continuation desired (94)	negative response	58→	8→	16
	no response	36→	8→	

Table 2.3. Selection of pharmacies from the survey.

The first criterion applied was independence of pharmacies. A total of 59 pharmacy managers of the random sample were interested in further participation and were put in the category ‘continuation desired’ (**figure 2.6., table 2.3.**). However, 23 pharmacy managers were related to a support structure and were therefore not selected. A total of 36 pharmacy managers of the random sample were used for further selection. A total of 94 pharmacy managers were *not* interested in further participation, of which 58 pharmacy managers responded negatively to the invitation, and 36 pharmacy managers did not respond to the invitation at all; this group was put in the category ‘no continuation desired’ (**figure 2.6., table 2.3.**). It was assumed that this group might have another score with respect to *thought* and *action*. It was decided that these pharmacy managers should again be invited in a telephone call. The group would comprise eight pharmacy managers with negative response and eight pharmacy managers with no response. Most managers reacted with surprise, but positively to this second invitation. Within this group, a total of 15 out of 94 pharmacy managers were related to a support structure and were therefore not selected. Consequently, a total of 79 pharmacy managers of the random sample were used for further selection.

The second criterion applied was correspondence of the results for *thought* and *action*. Two groups of 16 out of 36 ‘continuation desired’ pharmacy managers were to be selected by using this criterion. For example, the observed percentage in the random sample of the survey was 16% (28) with complete correspondence. Consequently,

about 16% of the pharmacy managers in each group would have complete correspondence (3 respondents → 19%). The distribution of the ‘no continuation desired’ group was made in the same way as the ‘continuation desired’ group.

The third criterion applied was the statistical calculated ranking and cluster membership for *thought* and *action*. The selected pharmacies would involve a maximum of the observed seven clusters. In these four groups of 16 pharmacy managers finally selected, various combinations of interviews, observations and questionnaires were used.

Summarized, this means that we will apply both ‘hard’ and ‘soft’ methods within this study. The ‘hard’ approach relates to the investigation of pharmacy mixes in Dutch pharmacy practice. The ‘soft’ approach relates to the central theme of this thesis and ought to visualize problems in the organizational change to the customer mix. Now that we have illustrated some of the discussions in the methodological field, and illustrated some of our own decisions, we invite you to the theoretical background of this thesis, in which management science and pharmacy practice research are entwined, and which may be of interest before we ‘dive’ into the pharmaceutical field.