Behavioral Patterns of Controllers in the Formation of Control

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1. Introduction
Most research in management accounting is concerned with the functioning of disembodied accounting instruments and the connection between organizational features and these instruments (Dent 1986, Otley 1983). Although there are studies analyzing how institutions shape and influence accounting instruments and the actions of accountants and controllers, less attention is paid to how accountants and controllers themselves change or introduce (new) institutions (Burns and Vaivio 2001). Studying how these elements operate jointly is even more unusual (Burns and Scapens 2000). Barley and Tolbert (1997) presented a recursive model hypothesizing the relationship between individual actions and the institutional characteristics of an organization. Their model combines elements from institutional economics and structuration theory. The latter is mainly a process theory that describes, in an abstract way, how individuals structure their position in their surroundings (Barley and Tolbert 1997, Giddens 1984).

In the research project described below we focus on the way in which organizational members, called actors, and institutions interact in the shaping of control, as control mechanisms become institutionalized in a firm. It will be clear that the control mechanisms and instruments that eventually emerge in an organization are the result of a number of interrelated factors and processes. The design and construction of the control instruments, the communication about these, the way in which the instruments are used, the processes of institutionalization that lead to the procedures and routines that are entrenched in an organization, and the processes of accounting change are just a few of these factors. Of special interest to us is the behaviour of management accountants and controllers. These actors are not only of importance for the shaping of the control mechanisms themselves. It is also in their interest that the control mechanisms they design, develop and alter are actually used in a firm and function properly. Furthermore, it is part of a controller’s core-business to handle the link between management information and accounting and control change.

Of particular interest to us are behavioural patterns of management accountants and the way in which these patterns get institutionalized in an organization. The patterns will be studied in terms of scripts, a concept that will be formally introduced and discussed in Section 2. More specifically, we are interested in detecting behavioural patterns that may be considered –to some extent– standard behavioural patterns in an organization, as individual behaviour will not always get institutionalized per se. Standard behavioural patterns serve a number of purposes. In the first place, they enable actors to choose a certain line of behaviour and act in a routinely fashion, without thinking about every decision that has to be made along the way. For example, when one always takes the same route from home to work, one knows after some time at which points traffic jams may be expected, dangerous crossings occur, etc. Sometimes, one does not recall having passed a certain point on the route anymore, since the travel has become common practice and one knows when attention is absolutely necessary (to watch out for other traffic, etc.) and when it is not. Secondly, standard behavioural patterns have a communicative function. Other actors can infer from witnessing an actor starting a standard behavioural pattern what to expect from him. For instance, when an applicant for a vacancy enters the interview room, the behaviour of the personnel officer who conducts the interview may inform the applicant what type of interview it is going to be (inquisitive, aggressive, etc.), thus giving the applicant the opportunity to choose a certain line of behaviour himself. These purposes of behavioural patterns also hold for controllers (Burns and Scapens 2000).

One of the important aspects of behavioural patterns is that they generally cannot be mixed. A certain pattern will mostly not be blended with elements that are part of another pattern. If someone uses an aggressive line of questioning in a discussion, one will not suddenly jump to a
more informative style for a question or two and return to an aggressive style thereafter. That would confuse other actors. As another example, when a waiter in a restaurant would first display the behaviour of an attentive servant in the background, and would then suddenly start asking attendants whether his services are needed every three minutes, this would create serious misunderstandings and bewilder or even offend guests.

This is a reason why choice points exist for an actor with respect to the behavioural patterns he may enact. For a given situation a line of conduct has to be chosen from a set of alternatives. When a choice is made, a complete line of behaviour is determined for as far as the standard pattern runs. Such a choice node, from which a limited number of lines of behaviour originate, can be visualized as branches of a tree. When at the end of a standard behavioural pattern a new choice point exists specifying further behaviour, the combination of branches may be depicted as (a part of) a decision tree with different layers, which gradually become more specific (Lord and Kernan 1987). When an actor makes a decision that turns out to lead to unintended effects, he may have to return to the point where he made this decision, and analyze if alternative choices are possible to (partially) redeem the effects, and act again.

The aim of our research is not to provide fully tested hypotheses as one may typically find in statistical analyses. Instead, we firstly try to trace some standard behavioural patterns that controllers use in the shaping of control. We also want to point out for which part of the shaping of control these behavioural patterns are relevant. Secondly, we want to detect the choice points between behavioural patterns that connect the branches of the aforementioned decision tree. Thirdly, we try to look for strings of behavioural patterns that are interconnected through sets of choice points, thereby generating a part of the entire ‘behavioural tree’ that controllers tend to apply in the shaping of control.

As stated, we try to do all of the above by using scripts, which is a conceptual term that highlights the interaction processes between personal preferences (institutions) and organizational preferences (institutions) when making a decision. In the literature on scripts, which is discussed in Section 2, direct questioning or interviews are listed as the preferred method of analysis. Section 3 sets out how we applied this method to discover the scripts used by controllers in the shaping of control. Section 4 describes the scripts actually found, and examines if and how far there are interrelationships present between them. Thus, we can see if choice points are contained in the scripts we deem to have discovered, and if and how strings of these can be formed. Finally, when summarizing our analysis and listing a number of caveats, we briefly turn to the issue of institutionalization.

2. Scripts
When studying the link between the behaviour of actors and the institutional environment of an organization, the model proposed by Barley and Tolbert (1997) may be used as a frame of reference to analyze the shaping of control. Barley and Tolbert think that institutions both arise from and constrain social action, and that day-to-day operations involving institutions can be regarded as ‘scripts’. Scripts describe the sequencing of events involving observable, recurrent activities and patterns of interaction characteristic of a particular setting (Gioia, Donnellon and Sims, Jr. 1989, Lord and Kernan 1987). In Figure 1, an overview is given of the series of steps, distinguished by Barley and Tolbert (1997), which portray the recursive nature of the shaping and evolution of institutions.
According to Barley and Tolbert, the process of institutionalization involves several stages. These stages are:

- **Encoding**: this happens as an actor internalizes values, norms or rules, and the implementation hereof becomes common practice to him. Thus, scripts are formed;
- **Enacting**: this occurs when an actor, deliberately or not, acts upon the scripts he has encoded in the previous step;
- **Revision/replication**: actual behaviour may modify the scripts that have been acted upon in the previous phase, because for example resistance was encountered, which one wants to circumvent in the future;
- **Objectification/externalization**: in the final step of institutionalization, scripts and the behavioural patterns connected herewith are no longer tied to specific actors. They acquire a ‘factual’, normative quality. When actors work together, coincidence in their actions will occur over time, leading to the objectification of these actions (Poole, Gray and Gioia 1990).

Scripts may be organized in a hierarchical means-end structure, linking higher-level goals to lower-level actions by identifying the choice points at which a certain action is undertaken to achieve a particular goal. This is the decision tree that we mentioned in the previous Section. Higher-level goals explain why lower-level actions are performed. In a script, there are several paths that lead to a certain outcome, so that flexibility in behaviour is possible. These paths are called the ‘tracks’ of a script (which we labeled the ‘strings of choices’ connecting all layers of a decision tree in Section 1). A track is an alternative version of a script that possesses the same general characteristics as other tracks stemming from the script—that is, it is expected to lead to the same general outcome—, but differs in actualized form (Gioia, Donnellon and Sims, Jr. 1989). By gathering information on initial states and paths, it can be seen how hierarchies of goals may be translated into behaviour (Lord and Kernan 1987).

Empirical research is necessary to give content to scripts. Gioia and Poole (1984) discern several types of scripts, namely:

- Cognitive scripts;
- Behavioural scripts (comprising performative and inferred scripts);
- Protoscripts.
Cognitive scripts consist of known courses of action that a person may choose between in a certain situation. An outsider may detect these by means of free elicitation. A behavioural script is an activated cognitive script: that course of action one finally opts for. Behavioural scripts can be subdivided into performative and inferred scripts. Performative scripts contain an actor’s perceptions of his own behaviour. Inferred scripts entail the inferences a researcher makes about the detected behavioural scripts, which are discovered through either observation or by talking to an actor.

Gioia and Poole also introduce protoscripts. These are stereotypical patterns of action. Given a certain recurring situation an actor may look for an appropriate protoscript that can be activated to suit the situation, without analyzing all aspects of the situation before choosing a certain course of action. For example, a human resource manager may have a protoscript for lay-off decisions, which he adapts solely on the basis of his personal feelings towards the person(s) he has to bring the bad news to. Thus there are scripts that can be used in, or more formally, can be transferred to various types of situations. According to Lord and Kernan (1987), protoscripts may help to generalize scripts from familiar, recurring situations to unfamiliar situations. As was argued already the communicative function of scripts comes to the fore when speaking about protoscripts.

Ultimately, a protoscript may become institutionalized in a firm. The frameworks and research agendas proposed by Barley and Tolbert (1997) and Burns and Scapens (2000) can be used to study institutionalization. With respect to the institutionalization of management accounting principles, Anthony and Govindarajan (1995), among others, assert that management accounting is heavily based on consensually developed conventions about appropriate behaviour (both in the application of accounting rules and in the interactive behaviour among accountants and controllers). If there is an agreed upon definition of desirable practices, the social consensus provides the basis for acceptance and repetition of certain behavioural patterns. When such acceptance and repetition occurs, therein lies the basis for the development of individual and collective behavioural scripts. Scripted behaviour may then become structured, which is the basis for institutionalization (Gioia 2003).

Institutionalization is however not at the heart of this paper, although we will briefly turn to it at the conclusion (as stated in Section 1). In the remainder, we will mainly describe the procedure and outcome of the collection of a group of inferred performative (proto)scripts that management accountants and controllers use in various types of problem situations. More specifically, we will try to distinguish patterns of action that we deem stereotypical for controllers in the shaping of control. We think that the personal impressions and opinions of controllers are sufficient to provide us the information we are looking for, as performative (proto)scripts are concealed in their actions. There is therefore no need to scrutinize business-

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1 A good example of a cognitive script is given by Gioia, Donnellon and Sims, Jr. (1989) in the context of an appraisal talk. Lord and Kernan (1987) present a possible (cognitive) script in case of a proposed budget cut.
2 In the Netherlands, as opposed to management accountants, controllers roughly perform similar tasks as those described by Granlund and Lukka (1998) for Finnish controllers.
3 Note however that patterns of behaviour that are not stereotypical for a firm as a whole may still become institutionalized. For example, if two managers have developed a (for them, stereotypical) working routine that would be completely inappropriate for a firm as a whole (for example, since it involves a lot of yelling), this routine can nonetheless be called an institution.
4 As Trow (1969) says: “Our progress in social science will come not through an effort to get ‘closer’ to the source of data, and thus try to minimize or do away with the process of inference by dissolving it back into data collection and somehow apprehending reality directly. … The inferences we make from data … may indeed be nothing more than
units or entire organizations, as one would do when conducting case research. Completeness of observation would be crucial in assessing the institutionalization of tracks of a protoscript, as institutionalization typically involves business-units or even organizations as a whole. Then we would have to resort to case research as an appropriate method of analysis (Yin 1989).

3. Set-Up

3.1 Interviews

To start our research, four experienced controllers were selected who we had come to know through their thesis and MBA assignments that they had completed some years ago, in which the shaping of control was a featured subject. One of the controllers held a MSc degree in Accounting and Finance from the Open University of the Netherlands, while the other three held MBA degrees in Controlling from the Erasmus University Rotterdam. We knew the controllers had strong opinions on how they should behave in the shaping of control, and would be very open and constructive about their job and the way in which they function. When we approached them for this project, they were employed at a business-unit level in both large profit and non-profit organizations in the Netherlands. We chose these controllers to get a rudimentary flavour of the behavioural scripts that they used in their daily practice. The way in which we selected them conforms to what Glaser and Strauss (1967) call ‘theoretical sampling’.

Two rounds of individual interviews were scheduled with the controllers. The first round was of an orienting nature, in order to assess how they perceived—in general terms—the shaping of control, and how it took place in their organization. More specifically, we wanted to find out what controllers meant when they used terms like ‘control’, ‘controller’, ‘control systems’, ‘being in control’, ‘decision-making’, ‘values’, ‘conscience’, ‘trust’, ‘ethics’, and ‘performance’. Although the interviews were semi-structured, there was room to disclose information and explore unexpected angles. Free elicitation thus formed an important element of the interviews. The interviews led to the identification of a set of six dimensions that included the most relevant aspects the controllers distinguished in the shaping of control at a business-unit level. The controllers later confirmed in writing that they deemed these dimensions to be of crucial importance in organizing control. Therefore, for this group a set of common themes was discerned. These common themes formed the background against which their behavior was discussed. The dimensions are:

◊ How does one interact with one’s surroundings in an organization? How should a management accountant or controller position himself within the context of control?;
◊ How does one design a control system within these surroundings?;
◊ How does one interact with other decision-makers (most notably, the management) in the context of a control system?;
◊ How does one behave with respect to trust and the disclosure of information, given a control system?;
◊ How flexible can one become in implementing control? How far does the concept of ‘control’ contradict with flexibility?;
◊ How does one derive values and norms that one can base decisions on?

‘educated guesses’ … Our aim is to make them increasingly highly educated guesses.” (p. 337). We believe that controllers can provide the basis for such highly educated guesses in the current context.

5 Wilber and Harrison (1978) label this step the ‘socialization phase’ of qualitative research.
6 Wilber and Harrison (ibid.) call the dimensions the ‘themes’ around which the understanding of the behaviour of (in this case) controllers can be centered.
Thereafter, a second round of individual interviews was organized, serving two purposes. Firstly, we wanted to calibrate the image of the shaping of control that we had found in the first round of interviews by re-examining the six dimensions in more detail. Secondly, our attention shifted to the ways in which the controllers undertook concrete action on the six dimensions and more specifically, to the ways in which the institutional characteristics of their organization (like the prevailing culture, rules and norms) intermingled with their personal preferences in certain characteristic situations (like review rounds or a change of directors). These interviews were of a more structured nature than those in the first round. They were also videotaped for further analysis. We thus searched for (hypothesized) performative scripts, which, according to Gioia and Poole (1984), can only be obtained through direct questioning. 

Then we took the video fragments of the hypothesized performative scripts and arranged them into a order that made sense to the research team with respect to the formation of control. We then we analysed the arranged selection of fragments and came to inferred performative scripts, to hypothesized protoscripts and to an initial interrelationship between the protoscripts.

The group interviews created some methodological problems. As the actors themselves could only uncover performative scripts, we had to be careful in drawing inferences from the interviews. Although we could infer scripts from the interviews, we could not label the courses of action involved as ‘stereotypical’. We tried to circumvent the problem of classifying actions as stereotypical by considering the scripts we inferred from the interviews as hypothesized performative protoscripts. This meant that an additional research step was necessary to judge if there was indeed some form of transferability of the hypothesized scripts taking place in a controller’s operations – that is to say, if the discerned courses of action could be deemed stereotypical. We therefore decided to discuss the hypothesized protoscripts with two groups of controllers. The controllers were selected from a group of over 700 former students of controller programs from the Open University of the Netherlands. Prerequisites were that they had at least five years of experience, were interested in the relationship between personal behaviour, communication and the shaping of control, had preferably held various positions in various firms before their current position and were available at the dates we wanted to conduct the interviews. To assure an equal balance between controllers from profit and non-profit organizations, we also handpicked a couple of controllers.

Two group interviews were organized, in which controllers of varying age, experience and work settings participated. In both interviews, seven controllers operating at a business-unit level jointly participated. By organizing the discussions in this manner, we could assess if the hypothesized scripts were only typical for the four controllers we had initially selected, or for more controllers at a business-unit level. The fact that we worked with two groups and seven controllers per group is in accordance with Hedges (1985), who finds this the optimal group size and the minimal number of group interviews needed to avoid atypicality of the results and groups that are too large to handle.

The selected controllers were of course part of their organization and therefore had to be regarded as informed observers. However, they certainly were no independent observers, as researchers sometimes like to think of themselves. Actually, the controllers functioned as

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7 Poole, Gray and Gioia (1990) use surveys in their analysis of cognitive and behavioural scripts, while Gioia and Poole (1984) suggest direct questioning to detect these scripts. This may have been caused by the fact that the research set-up followed by Poole, Gray and Gioia was not their own, and prescribed the use of surveys instead of interviews.
8 Just like the controllers originally interviewed.
participant observers. In the literature on participant observation it is often stated that those functioning as observers should be complete strangers to a situation in order to remain objective (McCall and Simmons 1969, Friedrichs and Lüdtke 1975, Spradley 1980). This is not the case when letting controllers be participants, as they are already completely integrated in the environment they work in. However, we feel they are best equipped to assess and describe their own behaviour and (in particular) their deliberations, as well as the impact of certain occurrences on their business-unit, division, or organization as a whole. Even when an observer comes to a certain situation (for example, a business-unit) as a complete stranger, he will bring to bare his own thoughts, ideas and theories in interpreting the occurrences he witnesses, so that objectivity can never be assured, even in the constellation preferred in most of the related literature (Kuhn 1970). Besides, one may question whether someone, being a stranger, will ever be fully accepted in the setting he participates and can fully value everything that happens. Furthermore, in the literature on participant observation it is suggested that a researcher should be a completely different person than an observer (Friedrichs and Lüdtke 1975). The researcher must then articulate clearly what he wants from the observer, which focuses his research, while the latter can group his thoughts and observations without getting lost in technical or theoretical details. Since the controllers were briefed before the interviews on the topics to be discussed and the level of generalization we would like to do this on, we firmly believe that a sound distinction between the researcher and the observer has been created, the more since the controllers declared after the interviews that the issues addressed had been handled thoroughly and that their statements had been interpreted correctly

Because we could compare the information given by the controllers with one another, we could discover possible distortions in their accounts, which in fact enhanced the overall objectivity of their statements (McCall and Simmons 1969).

3.2 Method of Analysis

In distilling the various types of scripts that were involved in our research, we employed the interpretation step of a research approach called ‘interpretive interactionism’ (Denzin 1989). Although Denzin’s approach is tailored to exposing problematic personal life events (like the effects of alcoholism, aggressive behaviour, etc.) given the social context in which a person operates, we feel that the basics of his approach can be applied to more forms of qualitative research. We used Denzin’s research methodology to reveal important events in a controller’s professional life, as we think that we can safely label the shaping of control as such an event in the life of a controller or management accountant.

The interpretation step of interpretive interactionism tries to determine why certain phenomena occur in a person’s life and why an individual interprets a certain event in a certain way. This is achieved in a sequence of six steps, of which we have followed the final four

- Capturing;
- Bracketing;
- Construction;
- Contextualization.

9 This was confirmed after both the individual and the group interviews.

10 The first two steps encompass the framing of the research question and the deconstruction and critical analysis of prior conceptions of the phenomenon. The research project itself did not do the cover these steps. The research question (here, if the behaviour of controllers could be scripted when looking at the shaping of control) had been formulated before the project began, while, since the behaviour of controllers has—to our knowledge—never been analyzed in this manner before (using performative and inferred scripts), there were no prior conceptions to set our results against. Of course, there have been previous attempts to detect performative and inferred scripts in other settings, as indicated by Poole, Gray and Gioia (1990).
Capturing involves collecting multiple stories around common themes. All the steps taken up until the analysis of the second round of interviews comprise Denzin’s conception of this term, as they entailed the selection of the initial four controllers, the determination of a group of common themes (the six dimensions), and the collection of a number of stories (courses of action) around these themes (in the second interview).

Dissecting the courses of action taken by the controllers on the various dimensions, through a careful analysis of the interview tapes, conforms to what Denzin calls ‘bracketing’.

Trying to place the interview results against a conceptual background (the shaping of control), and trying to assemble and relate the behavioural patterns we found in the controllers’ actions to one another, using this background, constituted the construction step.

Contextualization takes what has been learned about the behaviour of controllers on the six dimensions and fits that knowledge to the (business-unit) environment they operate in. In this step, we tried to determine if there were stereotypical elements present in the selected patterns of behaviour. It is here that the group interviews became relevant. According to Easterby-Smith, Thorpe and Lowe (2002), group interviews are a valid approach to enhance the insights gained through individual questioning. Thus, the results obtained in the latter type of interview could be more firmly supported (or not), the more since it might have been the case that the interactions taking place between controllers in the group interviews led to certain lines of discussion (in terms of scripts or situations in which scripts are applied) that would have been difficult to disclose if only individual interviews or surveys had been used.

Experienced controllers will probably exhibit more patterned responses than less experienced controllers, as the latter will not have had much repeated exposure to specific types of problems and have as of yet been unable to develop stereotypical patterns of behaviour. Therefore, less experienced controllers are likely to display a greater variety in their courses of action, although the number of actions a controller may choose between on the basis of a cognitive script is generally larger for the experienced controller (Poole, Gray and Gioia 1990). This is the reason why we selected controllers of varying age, experience and backgrounds for the group interviews.
<table>
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**Figure 2** The steps in the research process related to interpretative interactionalism principles.
In the first group interview, the hypothesized performative protoscripts that we (thought we) had discovered through our analysis of the interview tapes were discussed. Not all the hypothesized scripts were considered stereotypical by the controllers. However, in addition to the scripts that were found stereotypical, they gave us an indication of other courses of action they regularly resorted to when tackling a problem, which were (in our view) not contained in the individual interviews\(^\text{11}\). Thus there was added value in having interaction between the controllers. The communicative function of the scripts is an important indicator of their stereotypical quality.

By combining the original hypothesized scripts with the ones addressed by the controllers in the first group interview, a revised collection of hypothesized performative protoscripts was established. In the second group interview our attention shifted to (the identification of) situations in which the newly formulated protoscripts were actually used. Thus we could paint a more full-fledged picture of the situations in which controllers (may) act stereotypically, and the courses of actions they are, in such a case, likely to choose between than if we had solely focused on the collection of protoscripts. The insights we gained are important for they highlight, on the one hand, how far the shaping of control in an organization contains institutional elements and, on the other, how far the control process itself may yield new institutions through re-enacted patterns of behaviour by those who essentially shape control: management accountants and controllers.

4. Results
What do the scripts we found look like? First, we will present the inferred performative scripts that, according to us, were contained in the individual interviews. Thereafter, the performative protoscripts we inferred will be discussed. To start off the discussion however, we need to consider the level of detail that should be used to define scripts.

4.1 Level of Detail
Unfortunately, there is no agreement in the literature on the level of detail that should be considered. Should scripts be very detailed, containing descriptions of every single activity undertaken, or not? We think this is an important issue to bear in mind, for some level of detail has to be sacrificed for (cognitive and behavioural) scripts to become protoscripts, so that they may be deemed stereotypical and can be transferred to more situations. If scripts get overly detailed, it is difficult to see what part of the script may be stereotypical. Although inference plays a crucial role in distilling protoscripts from cognitive and behavioural scripts, this task gets very complicated when scripts contain both elements that are stereotypical and elements that are only typical for the persons and situations at hand. For example, we feel that it is almost impossible to obtain protoscripts from the scripts presented by Schank and Abelson (1977), who describe virtually all activities waiters perform to get an order to a table. Although it is suggested by Gioia, Donnellon and Sims, Jr. (1989) that scripts should be very detailed, their own description of a (proto)script for appraisal talks is not really detailed: only six general phases that are covered in each talk are distinguished (like ‘information exchange’ and ‘pep talk’), which are described in a few lines. Lord and Kernan (1987) present their scripts in a tree diagram that allows for feedback mechanisms, in which the branches of the trees connect the choice points at which certain actions are performed. These points are described only briefly, in order to get a feeling what they entail. As feedback is possible at every choice point, one may

\(^\text{11}\) Of course, this was done without using the term ‘scripts’ as such. Terms like ‘performative scripts’ or ‘protoscripts’ were never used by the research team in their contacts with the controllers.
return to previous branches in the tree if certain actions did not result in the desired effects. We followed Lord and Kernan’s set-up in our own research, and thus did not make our scripts overly detailed. Nevertheless, we felt that we could not identify an entire tree, but only certain branches or sub-trees, as the individual interviews did not reveal a complete tree as such (although we could presume its presence from the answers given). As it turned out, the controllers participating in the group interviews could identify with the given scripts and provided useful information on the presence and subdivision of (other) sub-trees, branches, and the stereotypical nature of the actions contained therein.

4.2 Inferred performative scripts and protoscripts
In all we discerned nine inferred performative scripts. A brief description hereof can be found in Appendix 1. Five choice points emerged between the nine behavioural patterns, generating five combinations of patterns connected to different choice points. In case of three of the five choice points, the resulting combinations of branches could be regarded as layers in a tree structure. This tree structure visualizes the shaping of control from, firstly, a general level that depicts the choices involved in the foundations of a control system. Secondly, a more specific level is distinguished, encompassing the degree of flexibility that should be applied in the shaping of control. Finally, an even more specific level was uncovered, concerning the possible forms of management reports given the decisions made at the previous levels. The other two choice points between behavioural patterns could not be interconnected to this tree, as they constituted other dimensions of the shaping of control (namely the issue of trust in disclosing information and the way in which feedback is given when targets are not attained).

In Figure 3 and 4, the inferred performative protoscripts we found are shown:

![Figure 3](image_url)

**Figure 3** Inferred performative protoscript on the shaping of management control. The script itself is shown on the right; on the left hand side the content of each layer (stage) is briefly described.
Figure 4  Inferred performative protoscripts on the functioning of management accounting and control and cybernetic feedback. The scripts themselves are shown on the right; on the left hand side the content of each of the layers (stages) is briefly described.

As stated, Figure 3 concerns the shaping of management control in the context of management accounting change. We contend that the Figure should be interpreted as an abacus: every branch between the dotted lines may be connected with each of the choice points at the previous level of the script. More specifically, after ‘long-term planning’ –the choices with respect to the structure of the control system and the ways and points in time it may be revised– and/or ‘financial control’ –the choices with respect to the concrete instruments that will be used in the system and the measures that will be employed to give content to these instruments– have been shaped, there comes a point when the ‘flexibility of control’ is considered. This may either entail discussing certain measures of control at a business-unit level, leading to an acceptable solution for all concerned, after which implementation follows, or forcing all managers to use certain measures first and allowing for differentiation thereafter, based on the comments received. However, the concepts that play a role at the level of ‘flexibility of control’ may also be put into practice after ‘financial control’ has been shaped. The same holds true for the actions at the level of ‘management accounting change’. These may follow at some point after any of the choice points at the level of the ‘flexibility of control’ have been enacted.

We already noted that there is a decreasing level of abstraction moving from the ‘foundations’ level to the level of ‘management accounting change’. Although we are fairly certain that management accounting change starts with a stage like ‘foundations’, we could not judge from the individual interviews that the ‘flexibility of control’ stage directly followed thereafter, or that one of more intermediate stages should be discerned first. The presence of intermediate stages was something that we wanted to discuss in the group interviews. Besides, we could not say of any stage whether we distinguished all possible actions that are relevant or not. That is why a branch labeled ‘??’ is present at all stages (which may be in fact more than one branch). Of course, detecting these branches became an important element of the group interviews too.

In the group interviews the various levels depicted in the protoscripts of Figure 3 and 4 were discussed one at the time. Although a strict planning was made, both discussions moved quite
autonomously from ‘the foundations’ of management accounting change to ‘management accounting change’ itself, as proposed by Figure 3. This may indicate that, looking at Figure 3, no interconnecting levels are needed to construct a (fairly) complete decision tree of management accounting change.

The first script in Figure 4 plays a role at the background of each of the stages shown in Figure 3. After all, the way in which information is processed and presented to for example a business-unit’s top management or instead, to junior controllers, affects the actions that may be undertaken at a certain point and the concrete implementation hereof. The common opinion on the ‘functioning of management accounting and control’ with respect to trust or accommodation in sharing information is that controllers need not pose as a supervisor or inspector of information sharing. It is a matter of general interest to share information in an organization in all candor. In doing so, it is important that an organizational culture exists in which people do not get into trouble when they report a failure. It is the task of the controller to share information on a ‘need to know’ basis. This means that one usually does not share all information, but that one paints an aggregated or simpler picture of the issue at hand, so that recipients can (hopefully) grasp the underlying (and mostly problematic) message. One of the controllers called this type of behaviour ‘tactical openness’. Of course, one should not withhold relevant information, most certainly when direct questions are posed by higher-level managers. The idea of an information stop in case previously given information has been misused, as suggested in one of the behavioural patterns depicted in Appendix 1, was not supported by either group. Support was only found for the ‘dose information’ node. However, complete openness may ultimately result nevertheless, depending on the questions stemming from higher-level managers.

The cybernetic feedback script that is contained in Figure 4 is however of a completely different order than the script on ‘trust or accommodation’. This is the reason for the presence of two dotted lines between the two scripts. ‘Cybernetic feedback’ may be contained at some level below the ‘management accounting change’ stage or not, for it may also –at a different level of abstraction– be relevant for the entire tree in Figure 3, as feedback is implicitly contained therein (Lord and Kernan 1987).

One may claim, following a more general outline presented in Brown (1998), that the more distant the relationship between a controller and the management of a business-unit is, the more likely it is that a choice will be made for actions like ‘dose information’ and ‘begin with standardization and allow for differences thereafter’. On the other hand, in more open relationships there may be a tendency to opt for actions like ‘complete exchange of information’ and ‘presenting the problem as a shared one in the management team’ instead.

4.3 Determining factors
Many controllers intuitively made a distinction between accounting for external financial statements (like annual reports) and (more flexible) management accounting procedures for business controls. This was in fact the main criterion the groups used to discern between ‘long-term planning’ and ‘financial control’, emphasizing the necessity of a flexible design that is – under certain conditions– (partly) open for discussion. The basics of a control system are formed in accordance to the requirements imposed by law, whereas specific control measures are set up using data stemming from the system that is thus installed. Nevertheless, it was acknowledged that the behaviour of (people in) business-units might lead to rules or targets that are difficult to compare to the generally set foundations. ‘Translating’ the foundations of a
company-wide control system in such a way that it fits all units was seen as an extremely complex task.

On the contrary, several group members found that ‘the foundations’ of management accounting change may well be rigid, as they are related to strategy – which is per definition fixed for a number of years, and only reconsidered when the market changes rigorously. When strategy changes, the foundations of a control system may have to change too. This was thought by some to be the only instance that the foundations of control systems are critically (re)evaluated.

Legal rules and financial reporting standards also seemed to dictate a large part of the standards controllers used in their control systems, so that acceptance or negotiation may often be no issue at all in the determination of control standards. This points to the circumstances determining the choice at the ‘flexibility of control’ level in Figure 3. Controls should and will in such a case be uniformly dictated, and organizational commitment to them is ensured by definition.

The discussions on ‘management accounting change’ itself all focused on the issue if controllers must have the discretionary power to signal problems that may be overlooked in situations in which the formally set targets are (likely to be) attained, and report them to the top management. In the discussions, it appeared that the action of signaling problems centered around two questions:

◊ How do you know (as a controller) what the most important problems are?
◊ How do you get these problems accepted as a problem of (interest to) the top management?

With regard to the first question, it was argued that being a controller, one should have a ‘deep knowledge’ and ‘understanding’ of an organization and the business it is in. One must develop a ‘gut instinct’ for trouble and be able to pinpoint and analyze distorted information. Besides your own instincts, objective instruments have to be used to signal problems, in which benchmarking with competitors may play a role. Otherwise, you may have difficulties creating legitimacy for a problem.

4.4 Caveats and discussion
As far as that part of the control system that is not dictated by legal rules or financial reporting standards is concerned, two general choices could be distinguished with regard to the ‘flexibility of control’, namely:

◊ The management is ultimately responsible for determining control standards, but the controller is the person who composes the set of alternatives the management may choose from. The controller thus is a facilitator;
◊ The management states what should be controlled, and the controller then picks or designs a set of standards that may accomplish this, and is thus responsible herefor. In this case, the controller is a decision maker (in his own sphere of influence).

Usually there is informal deliberation in a management team about the choice that is to be followed, and in practice the two ways of setting control standards may look alike to an outsider.

Nevertheless, to create commitment for control standards that are not imposed by legal rules or the like, the consultation of managers who have to work with these controls was found to be the
only possible way in which commitment may be obtained. If managers are committed, this may lead to the acceptance of control standards at lower levels in an organization as well.

If a problem is signaled, how does one get support and acknowledgment from the top management to tackle it? A step-wise procedure was proposed to handle this issue. Firstly, being a controller, it is (most) important to invest in relationships with managers and other stakeholders at all levels in an organization anyway, whether there is a problem or not. This makes that in case of an actual problem, the relevant managers can be easily informed. It is necessary to share information about a (perceived) problem with the stakeholders who are involved. It will implicate them, and make them responsible. In no way should one pass by managers in sharing information. This is thought to have only short-term effects, and will probably undermine your status as a controller in the long run. Thus, ‘management accounting change’ is not only or just about adapting management reports but also about information sharing with stakeholders in order to get support to tackle a problem. Therefore, there is a link between this level and the first hypothesized protoscript in Figure 4, covering the ‘functioning of management accounting and control’ with respect to trust or accommodation in sharing information.

On the issue of cybernetic feedback in case targets are not reached, controllers found themselves to be, first and foremost, signalers of problems. In this role, one firstly informally meets with the manager(s) who fail to reach their targets. Thereafter, manager(s) are formally confronted herewith in the management team. Depending on the personal relationship between the manager and the controller, and the attitude of the manager, one of two lines of action can be undertaken. That is, one of two scripts can be followed. At least one controller indicated that the second script was actually no more than a revision of the first (so that there is only one script to choose from). Others made a specific choice between the two scripts. The scripts are:

- Management team members, as well as (or including) the controller, stress that the problem of not reaching a target is to be solved by the responsible manager. The controller and separate management team members help to find solutions, but they only do so passively (through reflection). The responsible manager has to take initiative;
- Management team members, excluding the controller, stress that the problem of not reaching one’s targets is to be solved by the responsible manager. The controller is subsequently a facilitator, and is actively involved in finding solutions, helping the manager to design implementation plans.

In each case it was made clear that the manager is ultimately and solely responsible, so the option that a problem is shared in a unit was not supported in either group of controllers that was interviewed.

The group interviews led to a revision of the hypothesized performative scripts, the connection between its layers and the choice nodes contained herein, leading to the scripts depicted in Figure 3 and 4. Consequently, we found a set of inferred performative protoscripts. The ‘string of behavioural patterns’ that we wanted to discover through this analysis seems to cover the entire Figure 3, with no additional interlacing levels. The dotted lines between the various layers in the Figure may thus be skipped. The hypothesized protoscript on cybernetic feedback was also recognized, although one of the choice nodes (on problem sharing) was dismissed as a ‘standard’ behavioural pattern. Thus we have identified a decision tree that management accountants or controllers typically go through when they are involved in a situation of
management accounting change, in which the various choice nodes and the corresponding choices they (may) encounter have all been pinpointed.

5. Conclusions
How far can the results we obtained be generalized? The aim of our research lied in the provision of insights and ideas that may help in establishing a theory of institutionalization of accounting and control principles. The foundation hereof stemmed from linking the shaping of control to the actions of management accountants and controllers. Following Yin (1989), we think that the method of generalization we applied is ‘analytic generalization’, in which two previously developed theories (Barley and Tolbert 1997, Gioia and Poole 1984) are used as a template with which we compared the empirical results we obtained from the various interviews. According to Wilber and Harrison (1978), the inferences that have been drawn are contextually valid, given the set-up of our research. What we ended up with is a set of behavioural patterns that controllers tolds us about that have been selected and arranged by the research team. These patterns have subsequently been recognized and (partially) expanded by other controllers. Thus we deemed the resulting patterns to be ‘standard’ in situations of management accounting change.

The results we presented can be viewed in a few manners. They might be seen as a phase in the process of hypotheses formation (that is a part of an empirical cycle). However, this is not our intention. We think that, as a next step, it may prove fruitful to see if and how (tracks of) the inferred performative protoscripts have become institutionalized in a firm, in order to get an idea how the institutionalization of accounting processes and instruments actually takes place – a topic that is as of yet (almost) unexplored in management accounting studies although it is attracting more and more attention (Burns and Vaivio 2001). There is likely to be a greater tendency for institutionalization of stereotypical behavioural patterns than for atypical patterns, since the latter are not common (Gioia 2003). Scripts may therefore be a useful tool to study how the institutionalization of accounting processes (which by definition involve stereotypical behaviour) comes about. This project may be regarded as a first step towards an exploration of the institutionalization of accounting principles through those who shape and implement control: management accountants and controllers.

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Appendix 1  Description of the inferred performative scripts

Long term planning
A part of the control system should be fixed for a longer period of time, independently of the dynamics of the business. Usually it will be fixed for a few years. However, this does not entail single measures or variables, but merely the general structure of the control system. Thereby, continuity is assured. An example would be using the balanced scorecard to measure performance. Thereafter, periodical, for instance yearly, additions and specifications are made that will be discussed. These are about the selection and measurement of individual variables, and thus concern the flexibility of the control system.

Financial control
A part of the control system is figuratively speaking cemented – it will not be touched after it has been fixed. This holds true for so-called “financial controls”. These are administrative processes for which a sound procedural description suffices. The counterpart of the financial control system is comprised of so-called “business controls”. These are designed in a more flexible manner, after various organizational members have been consulted. If you were to design business controls solely behind your desk, they would by definition not work because no one followed your line of reasoning. You should strive for the best possible solution and accept that what you desire as a controller may not be in accordance with the desires of your organization. In such a case, enforcing your own design is useless.

Discussion and acceptance
Standards that are introduced should be flexible and be determined through discussions with your management. You also talk to other managers and organizational members to see if and how standards are actually being used. In case they tell you about the problems they encounter, you subjectively these in importance and decide what you will do about (some of) them. In this you will surely make mistakes.

Begin with standardization and allow for differentiation after complaints
At first, standards are obligatory - for everyone in the organization they are the same. Thus, standards are initially enforced. After their introduction, business-units will discover if and to what extent the standards can effectively be applied or not. This will give rise to objections that you had already foreseen. Since you knew before the standards were introduced that some business-units were to be treated differently than others, you knew some problems were bound to emerge and therefore, you had already come up with various solutions beforehand (but kept silent). By implementing these solutions, there will ultimately be some flexibility in the standards used, and business-units will think that they have caused the flexibility. In fact however, the ideas originated from you – the controller.

Changing management reports
When internal or external conditions make that the accounting system should be changed (for instance in case of a take-over), the control department must ensure that the necessary changes are carried through. However, the department must also have the discretionary power to signal problems that may be overlooked in situations in which the targets are (likely to be) attained, and report them to the top management. This can be accomplished by adding attachments to periodically required reports.
Complete exchange of information
Business-units provide complete information to higher-level departments in the organization. It should be clear whom you are working for, and whose side you are on. You and your manager follow this principle when higher-level stakeholders hold you accountable. Nothing is withheld, although you may sometimes question whether it is sensible to provide complete information. If one takes advantage of your openness however, you will immediately stop behaving that way. A complete exchange of information is also expected within the business-unit itself, in particular between the top management and lower-level parts of the unit.

Dose information
A business-unit will only partially pass on the information they have to higher levels in the organization. This is not extraordinary – people behave the same way when they inform you and you yourself act accordingly. You dose information within the limits of what is allowed.

Present the problem as a shared one in the management team
When a department manager does not meet his targets, this will be discussed in the management team. The responsibility for his failure will be shared. After all, whenever a manager fails the whole business-unit suffers. Thus, we jointly search for solutions to redeem the failure. If no improvement is witnessed, even after various solutions have been implemented, the manager will only be held personally accountable if his negligence can be shown.

Discuss the problem with the manager in charge beforehand and announce the resulting decisions in the management team
When a department manager does not meet his targets or is not expected to meet them, he will be informally informed hereabout. This is done on time. He gets the chance to implement a number of solutions, and may present these in the management team. If no solutions are found, or if these do not lead to improved results, his failure will be reported to the business-unit manager and the department manager will be held personally accountable by the management team.
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