

Goal-dependent Automaticity in Organizational Decision Models

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Abstract

The base line model in scholarly research on decision-making has usually been a rational model where the inherent ideology is value maximization through efficiency and effectiveness. However, other decision models have been needed to explain those organizational choices that do not satisfy the conditions of rationality. In this paper automatic decision making, or automaticity, is argued to be one way in which organizations deviate from the rational decision models. Specifically, the presence of automaticity in four different decision models, the rational model, the bureaucratic model, the decision process model, and the political model is described from a conceptual point of view. The author argues that the rational and bureaucratic models are the ones likely to be characterized by automaticity, while the benefits of automatic behavior are less likely to manifest itself in decision process models and political models.

Keywords: Automaticity, Organizational decision making, Decision Models

1.0 INTRODUCTION

While the ways in which different decisions are made within organizations have been of focal interest to economists, psychologists and organizational researchers for decades, the base line model in scholarly research has usually been a rational model where the inherent ideology is value maximization through efficiency and effectiveness. These rational decision models are characterized by their step-by-step procedural framework. Typically, a decision starts with an identified goal or need, is followed by a search for alternatives, these alternatives are then assessed on a number of attributes, before the alternative expected to maximize goal achievement is chosen (Edwards, 1954; Schiffman, Kanuk and Hansen, 2008). However, other decision models have been needed to explain those organizational choices that do not satisfy the conditions of rationality. For example, since rational models is normally associated with a centralized power base able to make a decision that maximizes utility, they are less able to satisfyingly predict the outcomes of a decision problem when the power and control of the decision varies with shifting coalitions and interest groups. In these instances other models are more applicable, and Pfeffer (1981) specifically discuss three alternatives to the rational choice models; the bureaucratic, the organized anarchy and the political power.

While organizational decision-making has undoubtedly been of interest among researchers, even more attention has probably been devoted to individual decision making and choice. Equivalent to their organizational counterparts, researchers on individual decision making has also focused on different departures from rationality. For example, Howard (1963) described how consumers through learning and experience move from an extensive kind of problem solving, to more limited problem solving, before they eventually end up in automatic response behavior. This process applies to repeated decisions or choices, where the individual implicitly assumes that the same alternatives are available at each decision point. Hence, maximization of output is achieved as the (assumed) most beneficial alternative is chosen repeatedly with a continuously decreasing amount of cognitive resources spent on assessing available alternatives. However, as the consumer moves into the automatic phase, the minimal information search make him unable to detect alternatives introduced successive to his initial evaluation and choice. Thus, as the process develops, the rationality assumptions related to maximizing output might no longer be met. As the level of consciousness or cognitive efforts decrease as the decision maker comes within reach of the automatic phase, automatic response behavior is in many respects strikingly similar to what psychologists would call automaticity, or automatic processes.

In social psychological research, the concept of automaticity has won an increasing amount of attention as the scope of its applicability has been broadened through conceptual reasoning (e.g. Bargh 1997) and empirical research (e.g. Devine, 1989; Bargh and Gollwitzer, 1994; Aarts and Dijksterhuis, 2000).

Somewhat equivalent to Howard's (1963) automatic response behavior, automaticity defines a situation where the individual performs an action (e.g. putting on the seat belts) without being consciously aware of it, and without allocating cognitive resources to the process (Mittal, 1988). Equivocally speaking, automaticity is the end goal of James' (1890) suggestion that man should automate all processes possible, and thus "rationalize" cognitive resources. The purpose of this paper is to integrate the notion of automaticity and automatic decisions and choices into different organizational decision models. In so doing, three major questions will be particularly addressed. *First* is the question of how an individual level psychological concept is found applicable in the analyses of organizational level phenomena. *Second*, the likely presence of automatic processes in different organizational decision models is discussed. *Finally*, some brief reflections of the potential pros and cons of automaticity in organizational decision making are presented. Before turning to these questions, the paper departs with a brief description of the concept of automaticity and automatic decision making. Then an equally brief portrayal is given of the four organizational decision models presented by Pfeffer (1981). Successive to these introductory paragraphs, and also most important, is the analysis and discussion related to the three questions presented above.

2.0 AUTOMATICITY AND AUTOMATIC DECISION MAKING

In everyday discourse the concept of *habit* usually implies that a chosen course of action has taken place due to its frequent previous execution. More theoretically speaking, Hullian learning theory (Hull, 1943) suggests that habit strength reflects the extent to which behavior has been reinforced in the past. Hence, one may say that habitual behavior is actions that has become automated due to experience and learning, and that it develops as individuals realize that a certain kind of behavior meet valued goals (Ouellette and Wood, 1998). However, when a course of action becomes habitual to such an extent that the individual is no longer aware of it being carried out, the specific action has reached the phase of automaticity (Mittal 1988). The initial definition of automaticity requires that an automatic process (i.e. behavior) should be unintentional, involuntary, effortless, autonomous and occurring outside of awareness (e.g. Shiffrin and Schneider, 1977). Hence, suggesting that automaticity possess all these features is what distinguishes the concept from its defining qualities (Bargh, 1989). However, Bargh (1989, p. 6) suggests that automaticity exists in different forms, and that the defining features do not occur in an "all-or-none fashion". More specifically, he presents the varieties of Preconscious, Postconscious and Goal-dependent automaticity, of which the latter is the one of interest within the boundaries of this paper.

As an all-embracing explanation of the three kinds of automaticity, and their sub-varieties, are outside the scope of this paper, the reader is recommended to see Bargh (1989) or (1997) for more detailed depictions. However, the kind of goal-dependent automaticity employed in this analysis is defined as an autonomous procedure where there is an awareness of the instigating stimulus and where a specific goal is in place, and where the behavior that occurs is also intended. However, there is no allocation of focal attention (i.e. cognitive resources) to the process, neither is there any conscious guidance to its completion (Bargh, 1989). Think for example of a man passing a cigarette vendor machine. The vendor machine is a stimulus that, given that the persons stock of cigarettes is sufficiently low, will activate the goal of acquiring more cigarettes. Hence, an intention to buy cigarettes is present, and the execution of the act may then well run without any focal attention or no conscious guidance. The cigarette purchase is in this situation driven by goal dependent automaticity [1]. Hence, this process is autonomous and does not require a significant amount of cognitive resources, and is thus labeled automatic. As the limits of this paper do not allow a broader delineation of automaticity, let us leave this concept for a moment, and turn to organizational decision models.

3.0 ORGANIZATIONAL DECISION MODELS

As mentioned in the introductory paragraph, the baseline model in research on how organizations make decisions has typically been a rational model. As also mentioned, Pfeffer (1981) describes four different models applicable to decision research at the organizational level, of which the rational model is all but one (although used as the base line). Due to the wide-ranging application and common understanding of the rational model, the following paragraphs will provide some brief portrayals of the contrasting models only.

3.1 Bureaucratic models

Bureaucratic models are, compared to rational models, characterized by much less extensive information search, less resources spent on decision making and alternative evaluations, and more profoundly relying on rules, precedent and standard operating procedures (Pfeffer, 1981).

Hence, decisions are made based on experience and learning, and the organization adapts and establishes repertoires of actions that are activated in certain situations. Hence, the outcomes of a decision process are presumed to be a function of previously determined procedures. For example, decision-makers may decide that the goal for a certain group of activities should be to maximize market share, all though this may not be the most rational end in terms of utility maximization. To ensure that lower level officers pursue this goal, bureaucratic decision rules are made for these to follow.

3.2 Decision process models,

These models, often just called Garbage can models [2], are characterized by even less information search and more randomness than both rational and bureaucratic models (Pfeffer, 1981). A further typical feature of these models is the absence of organizational goals being maximized through choice, and no powerful actors who possess resources that they can allocate towards seeking a set of preferences. The Garbage can model is one example of such models, and this model posit that decisions are the outcome of a stream of problems, solutions, participants and choice opportunities (Cohen, March and Olssen, 1972). In organized anarchy models, the theory does not require a decision to be made or problems to be solved within a given time frame (Weiner, 1976). In other words there are no deadlines. The outcome of such models, when compared to the two aforementioned, is a very low level of consistency in the decisions being made, thereby making the outcome of such models hard to predict.

3.2 Political models

The political models seek to account for the differing interests and goals within organizations. Hence, action is often the result of bargaining between different interest groups and decisions therefore seldom perfectly reflects the preferences of the stakeholders involved. In this kind of models, the outcome of a decision process is determined by the relative power of the interest groups, the rules of decision making [3], and the preferences held by the parties. It further follows from these models that no prevailing goal proposition usually exist, and if it does, decisions not aimed at achievement of this goal is made nevertheless. The preceding paragraphs have given a brief portrayal of the most basic features of the different models, and the remainders of the paper are hoard for the analysis of automaticity within these different models.

4.0 AUTOMATICITY IN ORGANIZATIONAL DECISION MODELS?

As can be inferred from the previous paragraphs on automaticity, the concept has traditionally been applied in social psychological research on individual behavior. However, there are several reasons to argue that it would also be applicable to analyzing organizational behavior. First, organizational decisions are ultimately made by individuals, and the levels of automaticity inherent in the decision-makers are thus likely to influence the ways in which decisions are made. Second, applying both concepts and processes originated from the field of psychology have a long tradition within economic and organizational theory. For example, within relationship marketing and business-to-business marketing, the different phases of relationship development (e.g. Dwyer, Schurr and Oh, 1987) are to a large extent adapted from research on interpersonal relationships (e.g. Thibaut and Kelly, 1959; Blau, 1964; McCall, 1966). Moreover, the notion of commitment often used when describing long term cooperation between organizations (e.g. Wilson and Mummalaneni, 1986; Morgan and Hunt, 1994; Gundlach, Achrol and Mentzer, 1995) originates from research on commitment between individuals, e.g. spouses, (e.g. Rusbult, 1980; Johnson, 1982; Kelley, 1983) and research on employees' commitment to their job (e.g. Ritzer and Trice, 1969) and employer (e.g. Mathieu and Zajac, 1990).

Hence, as these examples suggest, there should not be any theoretical problems related to applying a concept originally developed for the analysis of individual behavior to a similar analysis of organizations. However, what is important in such an employment is that the intension of the construct remains the same, and that only the denotation is altered (Zaltman, Pinson and Angelmar, 1973). For example, in the case of adapting commitment to the organizational level, the sub-variety of calculative commitment still encompasses the basic features of switching costs and shortage of alternative partners. As such, the concept is the same, and only the object it describes is different. When it comes to applying goal-dependent automaticity in organizational settings, the same underlying features that defines the concept on an individual level have to be present. There are several arguments as to why this should hold. The presence of, and nature of, automaticity in the organizational decision models are the focal point in the succeeding parts of this paper.

4.1 Automaticity in rational models

Automaticity was in a previous paragraph said to be a departure from rationality and it may thus seem counterintuitive now to state that automaticity and rationality can coexist. However, there are some reasons to believe that this is actually a feasible hypothesis. The logic of such an assertion rests on granting some slack to the interpretation of the rationality concept, and view the decisions made in the organization from a more holistic view. If we, on one side, require every choice task to be decomposed into “elementary information processes” (EIP’s) (Johnson and Payne, 1985), and then request these EIP’s to be rationally executed, then automaticity are not likely to be found in rational models. This would then suggest that every minor decision would be executed according to the rationality assumptions, and that the employees would constantly behave like small Bettman information processors (Bettman, 1979). This, of course, is not a likely situation.

If we instead acknowledge that equivalent to humans, organizations are only rational within the boundaries of their processing capabilities (Simon, 1952), we might find automaticity used as a means to overcome these limited capabilities. For example, due to time pressures on the employees, a number of organizational decisions are made without the extensive information seeking and judgment tasks usually associated with rational decisions. However, what is usually the driving force behind these simplified decisions is an evaluation of the cost-benefit ratio of assessing one more alternative. According to the information economy there is always N number of alternatives available, the decision maker will (always?) evaluate n of these, and finally $n < N$ (Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer and Wood, 1997). Moreover, as the number of alternatives evaluated increases, the probability of the best alternative being among the non-assessed will decrease, and hence the potential value of the $n+1$ alternative will also decrease.

So, unless the value added by making the ultimate decision is at least equivalent to the cost of the resources spent on further assessment, one might argue that seeking the best alternative is non-rational. This can be claimed when the decision model used is based on cost/benefit theory, which rational models are (Payne, 1982). Drawing on this, we might further argue that rationality in a more holistic view is not to decompose every decision process into EIP’s, but to rationalize the resources available for decision making. Hence, while resources are allocated to decisions where the value of assessing alternative $n+1$ might be substantial, decisions where the value of alternative $n+1$ is more or less nonsignificant is simplified. One way to simplify decision tasks is to automate them, for example by instigating long term relationships with suppliers of “non-substantial” commodities, e.g. toilet paper and dispenser soap. If such automatic, preprocessed or routinized procedures is cultivated they would obviously be goal-directed, intentional, and minimum resource demanding. Hence, the defining features of automaticity could well be used to describe such routines and simplified decision tasks. Contracts and standard operating procedures (i.e. rules) would also provide the consistent pattern associated with automaticity, which is a further indication of the likely presence of the phenomena.

By suggesting the presence of rules I arrive at the borders to the next kind of decision model. Before leaving the rational model, let me conclude with suggesting that within this model the departure from rationality in terms of developing goal dependent automaticity might in fact be driven by the organization’s quest for optimal allocation of processing resources. Which, I guess, sounds quite rational? Automating simple purchasing procedures should, according to James (1890), in fact be an ambition since the processing capabilities could then be used for more complex tasks. So, that organizations automate and routinize tasks not to “waste” resources on insignificant issues could be a rational decision in itself. The allocation of resources among different decision tasks would be driven by a pursuit of utility maximization, which lies at the core of the rationality concept (Edwards, 1954).

4.2 Automaticity in bureaucratic models

As the bureaucratic models are characterized by decisions being made according to norms, precedence and rules, the presence of automaticity is more clearly observed than in any of the other models. For a number of repeated decisions, the decision-makers will arrive at choices that might be compared to Bettman and Zins’ (1977) notion of preprocessed choice. This implies that the outcome of any given choice situation of a repetitive kind will be predictable from the existence of a management-imposed rule referring to this situation. For example, larger organizations (a lately also smaller ones) have some kind of standard as to what color the office curtains or tables should be like, and what standards the computers should have to run on the company network. Hence, if a single office is redecorated, or a computer replaced, the outcomes of such actions can be predicted by the directions given by superior managers, e.g. purchasing managers.

Imposing standard operating procedures on the organization ensures organization-wide solutions to similar problems materialized in different departments, divisions, etc. This further implies that the decision is pre-processed or automatic, since no information is (at least not supposed to be) searched for alternatives, and the behavior is running to its completion when the instigating stimulus (e.g. need for new computer) is triggered. One kind of decisions that are typically transformed into automaticity in organizations is the purchasing of necessities like office paper clips, printer toners, paper, and the like. Often times the employees are instructed to buy from one particular supplier with whom the company has made a long term contract. In even more automated situations, the buying decision is completely computerized, and the supplier will be automatically notified when the customers stock is getting sufficiently low (e.g. the SKU systems in supermarkets). In these extreme instances, both the decisions of when, what and how much to buy is completely determined by the standard operating procedures programmed into the interacting firms' computer databases. While this is automaticity at its extreme, it is nevertheless a picture of how a number of single decisions are transformed into an automated sequence of repetitive choices.

However, one might argue that the development of such procedures are purely rational, in that firms seek maximum utility by establishing rules and instructions to be followed by the parts of the organization that does not possess full market information. While this is of course true, long-term relationships are nevertheless characterized by their explicit (e.g. contracts) and implicit (e.g. integrated computer systems) bonds between the parties that intricate any response to new superior offers in the market. Purely isolated, such long-term relationships are probably not value maximizing, but in terms of the overall performance of the organization the reality is most likely different. Another important aspect related to routines is that the employees will learn these after some level of repetition. This suggests that a great deal of the decisions will have a preprocessed outcome, which borders significantly to automaticity. Accordingly, one might conclude that goal-dependent automaticity is likely to find its organizational counterpart within bureaucratic models where rules and standard operating procedures cause the organization to act consistently over time for a given type of choice decision.

4.3 Automaticity in decision process models

Within the class of decision process models we are less likely to experience goal-dependent automaticity than in any other model. The reason is twofold; First, there is no “overarching organizational goals, and presumably intention is problematic even at the level of subunits and groups within the organization” (Pfeffer, 1981, p.27). Hence, as long as a goal does not exist, even among interest groups, behavior can not be goal-dependent. Recall from the paragraph on automaticity earlier in the paper that goal-dependent automaticity is both goal-directed and intentional. Hence, actions without clear goals or intentions do not possess the defining features of goaldependent automaticity.

Second, due to the stability of outcomes for goal-dependent automatic behavior, action should be consistently predictable by observing the presence of its instigating stimulus. According to Pfeffer (1981) however, there would be little consistency or consensus over behavior in decision process models, at least not in the models labeled organized anarchies. Thus, as long as one can not predict the outcome of a decision task by considering the stimulus-response history (previous outcomes), the decision is not based on goal-dependent automaticity.

Related to both goals and consistent behavior, Pfeffer (1981) describes how goals are seen as “products of sense making activities which are carried out after the action has occurred to explain the action or rationalize it”. He further suggests that “the action itself is presumed to be the result of habit, custom, or the influence of other social actors in the environment” (p.25). There are three important issues in these sentences that are directly related to automaticity. First, if goals are post-choice rationalizing behavior, then decisions are not intentional and thus not goal-dependent automatic. Second, if action were presumed to be a result of habit, then we would see a consistent behavioral pattern since the most distinct characteristic of habits is consistent action over time (Oulette and Wood, 1998). This is inconsistent with the claim presented later (p.27) about little consistency in decisions in these models. Third, if decisions are under influence of external factors in the environment, they may be viewed as what Bargh (1994) would call environmentally controlled goal directed action, and thus be driven by automaticity. However, the depictions given by Pfeffer (1981) on this issue is too vague to draw any valid conclusions. There is, however, reason to believe that actors will bring to the decision process preprocessed or automatically activated problem definitions and solutions. Viewing all problems from the same perspective and solving all problems in a similar fashion might be viewed as, if not automaticity, then at least as mindlessness (Langer, 1989). While these concepts are not redundant, they are closely related.

However, depending on the nature of these mindless ways of providing input to the decision process, it might also be viewed as automaticity. Hence, based on the rather strong and clear indications of non-present goals in these models, but also the possibility of automatic activation of inputs from participants, I will conclude neither on presence nor absence of automaticity in decision process models. However, I will suggest though, that the models are likely to include less automaticity than the bureaucratic models.

4.4 Automaticity in political models

The final kind of models under scrutiny in this paper is the political models. As for the decision process models, these models may be characterized by absence of a fundamental goal at the organizational level. Moreover, evidence for the presence of these models is that decisions are based on the power of the political systems in the organization rather than on goals, precedence or even chance. Thus, based on this knowledge and also the conclusions of the previous paragraph, one could be attempted to dismiss any suspicion of the political models having attributes qualifying for automaticity. For example, the absence of goals could ensure such a write off, and so would the assumed inconsistent pattern of choices that naturally follows an ever changing power balance among stakeholder groups.

If we for the sake of exploration lax the rigidity of the defining qualities of automatism, we might argue that automaticity might in fact be found in these models. For example, at the group level, the preferences of a particular interest group may be predictable due to an automatic response pattern previously exposed in similar situations. If this interest group has the necessary power base, i.e. related to the decision rules, then the actions of the entire organization might be predicted based on the behavior of this one sub-unit. For example, in political budget allocations, the power of one party may ensure that the allowance to one specific objective changes year by year (or – remains the same year by year). It is reasonable to assume that the opinions of an interest group is directed towards some goal, thus is intentional, and also is rather consistent over time. As such, the inputs to the bargaining that typify these models may in itself be fairly automated [4], and thus the outcome may be predicted based solely on the power of different interest groups.

However, the nail in the coffin as to automaticity in political models is the instant change in behavioral patterns that would follow any major shift of political power. Theoretically speaking, goal-dependent automaticity is not a quality that can be rapidly removed (Ronis, Yates and Kirscht, 1989). While altering the power distribution in the organization can change the decisional pattern, the interest group dethroned would still probably vote or argue in their usual manner. Thus, while the automatic or preprocessed standpoint taken by these groups are relatively goal directed, intentional and predictable, so is now longer the actions of the organization. Accordingly, the conclusion, if we do not turn a blind eye to automaticity in political models, would be to at least acknowledge that some parties in the decision making process act in ways strikingly similar to automatism. But to state that organizations whose decisions grow out of political models is illustrative for goal-dependent automaticity would undoubtedly be an exaggeration.

5.0 PROS AND CONS OF AUTOMATICITY IN ORGANIZATIONAL DECISION MODELS

To summarize the discussion of the preceding paragraphs, it is likely to find goal dependent automaticity within the rational models, if we grant some slack on the rationality concept. In the bureaucratic models automaticity is definitely a part of the ways in which choices are made. However, in both the decision process models and the political models there is less room for the notion of automaticity. Hence, discussing whether automaticity is a positive or negative ingredient in the organizational configuration will concentrate on the rational and the bureaucratic models only. The most evident pro-automaticity argument is that of simplification and optimal allocation of processing resources. Among psychologists, this has been described as positive for centuries (e.g. James, 1890). In organizations, where processing time and effort usually has some economic costs attached to them, this is at least as equally important as for individuals. Moreover, the simple fact that humans simplify decisions would also make it difficult for employees to understand why the organization should not do the same. Hence, automaticity would also be positive in terms of satisfaction among employees who can increase their efficiency by automating certain procedures.

There is, however, also negative aspects related to automaticity in organizations. First, this is related to the possible unawareness of changes in the environments, like changes in the markets where the firm does not possess full information (e.g. when purchasing).

This could imply that the decisions made in the organization eventually is so far from utility maximization that the loss from these is more than the processing cost reduction caused by automaticity. Hence, automaticity could be hazardous if the rules and standard operating procedures are not revised every now and then.

Finally, the basic fact that automatism is a departure from rationality introduce an ever ongoing question of how large a part of the decision tasks that should be automated. If automaticity is to be rational from a more overarching view, then the distinction between too many and too few rules and procedures is probably hard to identify. The question then, is whether too little automaticity is better or worse than too much? I guess answering that question based on reasoning alone would easily turn be speculative. However, it seems logical that automaticity exists also in organizational decision models, and that it is a beneficial and efficient way to organize a huge variety of decisions. However, like most processes in organizations, automatic behavior should be monitored and reviewed at specific time intervals to ensure that the rationality of automaticity does not suffer from lost potentials of higher performance.

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Endnotes

- 1) To briefly distinguish this process from a situation where all the defining features of automaticity are present; the person would then by cigarettes every time he passed the vendor machine, since the instigating stimulus would initiate the behavior without the persons awareness, and the autonomous character would ensure its completion. Hence, the example not only illustrates goal-dependent automaticity in practice, but also shows that to define behavioral processes as either automatic or controlled might be to rigid or, in Bargh's (1989) words, even incorrect.
- 2) Garbage can models are a group of decision process models, but there are also others.
- 3) e.g. majority rule, 2/3 vote, etc.
- 4) I do not, however, contend that these bargaining inputs are always automated but that one group's stance in a given situation might be fairly predictive due to experience and consistency in opinions.