Garbage and Goals

Towards a prescription for research that would lead to a Technology of Foolishness

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Declaration

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Abstract

The purpose of this thesis is to develop a framework for research that will lead to a "technology of foolishness", *à la* James March (1972). This is done by a) analysing the nature and b) evaluating the results of case studies that employ the garbage can theory within the field of organisational decision making. The garbage can is used since it was developed to describe decision making within organised anarchies. These are organisational contexts characterised by ambiguous goals, amongs other traits. Thus, one of the aims of the theory was to describe how decisions are made in the face of goal ambiguity. In this thesis nineteen case studies that were published between 1976 and 2010 are analysed. Only studies where the garbage can theory's components are brought to bear on the data in a significant way are included in the scope of the study. This means that data has to be structured according to the theory, or that the authors' conclusions address the theory specifically.

It was found that the case studies produce very few insights on goal ambiguity which can be put to use in developing a technology of foolishness. Based on the analysis of the nature of the garbage can theory and the studies in the sample, a new way of doing research on goal ambiguity is put forth. Based on the insights on goal ambiguity that were produced, the themes that need researching are suggested. A core discovery is that although the garbage can in used as a process theory very often, the interpretivist tools that fit within this approach are seldom used.

The normative strategy that is put forth includes incorporating the role of active decision making entities into the garbage can theory, or using the garbage can theory in conjunction with a model that does provide for the role of these decision making entities. It is important to note that these entities need not and should not be subjected to the principles of rational choice theory. It is also proposed that the garbage can theory be utilised as a process theory of decision making and that theoretical tools that are appropriate to this kind of theory be used. These tools would form part of theories designed for analysing and understanding organisational narratives. Themes that need to be researched include symbolic expressions (such as metaphors), tactile or visual experiences, the role of intuition and emotional expression in decision making processes, the role of identity (that of the focal decision makers and the people he comes into contact with) and, lastly, the idea that the world is enacted, rather than having to be predicted.

Opsomming

Hierdie tesis het ten doel om ’n raamwerk vir navorsing daar te stel wat sal lei tot die ontwikkeling van ’n ‘tegnologie vir dwase optrede’, *à la* James March (1972). Dit word gedoen deur a) die aard en b) die resultate van gevallestudies wat die vullisdromteorie op besluitneming in organisasies toepas, te analiseer. Die vullisdromteorie word gebruik omdat dit ontwikkel is om besluitneming in ‘georganiseerde anargieë’ te beskryf. Georganiseerde anargieë word, onder anadere, gekenmerk deur dubbelisinnige doelwitte. Dus was een van die mikpunte van die model om besluitneming te beskryf wanneer doelwitte dubbelsinnig is. In hierdie tesis word negentien gevallestudies, wat tussen 1976 en 2010 gepubliseer is, bestudeer. Slegs studies waar die komponente van die teorie beduidend in die data neerslag vind, word ingesluit by die omvang van die studie. Dit beteken dat die data volgens die komponente gestruktureer is, of dat die navorsers die evaluering van die teorie eksplisiet by hulle konklusies insluit.

Die bevinding is dat die gevallestudies baie min insigte rondom doelwitdubbelsinnigheid bied wat binne die raamwerk van ’n tegnologie vir dwase optrede pas. Op grond van die analise van die oorhoofse eienskappe van beide die vullisdromteorie en die studies in die steekproef, word daar ’n nuwe normatiewe raamwerk vir die benadering tot navorsing omtrent doelwitdubbelsinnigheid voorgestel. Op grond van die insigte omtrent doelwitdubbelsinnigheid wat wel deeluitmaak van die resultate, word temas vir navorsing voorgestel. ’n Kern-ontdekking is dat ofskoon die vullisdrom gereëld as ’n prosesteorie aangewend word, die interpretivistiese instrumente wat tot hierdie benadering hoort, selde gebruik word.

Die nuwe normatiewe strategie is dat die vullisdromteorie as sodanig aangepas word dat dit voorsiening maak vir aktiewe besluitnemende entiteite. ’n Ander werkbare opsie is om die vullisdromteorie te same met ’n teorie wat wel vir hierdie entiteite voorsiening maak, aan te wend. Hierdie entiteite hoef en behoort egter nie gemodelleer te word volgens ’n rasionele keuse teorie nie. Daar word ook voorgestel dat waar die vullisdromteorie aangewend word, dit as ’n prosesteorie vir besluitneming aangewend word en dat teoretiese instrumente wat binne die raamwerk van prosesteorieë pas, benut word. Hierdie instrumente sluit metodes en teorieë wat geskik is vir die analisering en verstaan van narratiewe in organisasies in. Temas wat nagevors moet word is simboliese uitdrukkings (soos metafore), ervarings wat tas- en

sigsintuie insluit, die rol van intuïsie en emosionele uitdrukking in die besluitnemingproses, die rol van identiteit (van die fokale besluitnemer sowel as ander entiteite met wie hy in kontak kom) en, laastens, die idee dat die wêreld geskep word deur aksies, eerder as dat dit voorspel hoef te word.

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Chapter 1: Introduction

1.1 Introduction

The idea of studying ambiguity within the field of organisational decision making is fairly novel. The concept was introduced in the literature early in the 1970's. This introduction evolved from the Carnegie model (Goodin, 1999: 71-72; Styhre, Wikmalm, Olilla and Roth, 2010: 137; Langley, Mintzberg, Pitcher, Posada and Saint-Macary, 1995: 262). However, it also indicated a departure from this dominant tradition (Pinfield, 1986: 365; Tsoukas, 2010: 381). The Carnegie model portrays decision makers as being "intendedly" rational (Bendor, Moe and Shotts, 2001: 174, Simon, 1955: 114). This tradition is best represented through publications by Simon (1947), March and Simon (1958) and Cyert and March (1963) (according to Pinfield, 1986: 365; Argote and Greve, 2007: 337, Bendor et al., 2001: 174). The authorship of these publications lead to the school of thought being known as the March-Simon tradition (Bendor et al., 2001: 174).

Prior to the Carnegie model becoming dominant, traditional rationality, in the form of rational choice theory (see Reed, 2003: 329-335) and classical micro-economic models (see Mankiw, 2004: 4-8) dominated how individual and organisational decisions were viewed. Traditional rationality, which also serves as a normative framework for making decisions, advocates the adherence to coherent application of the laws of logic, the correct calculus of probability and/or the adherence to the rule of maximising expected utility (Over, 2007: 3; Baron, 2007: 9-34)[1]. The Carnegie model started to challenge traditional rationality when Herbert Simon first argued for the idea of economically rational man to be replaced with an idea of man as limited in terms of knowledge and ability (Simon, 1955: 114). This shift in focus saw the economic firm substituted by the behavioural firm (Argote and Greve, 2007: 337).

[1] It is important to note that the notion of rationality that applies to the purpose of this thesis and that is relevant to the disciplines and fields of knowledge that are that are explored, is not the same as "value rationality" à la Weber ; "moral rationality" à la Etzioni; "communicative rationality" à la Habermas or "emotional rationality" à la Goleman. The discussion is limited to the kind of rationality that dominates the decision theory discourse; therefore the starting point is the idea of rational choice theory.

Ambiguity as a theme became popular in large part due to studies on sensemaking[2] in organisations by Karl Weick in 1976, a renewed interest in the institutional school within organisation theory, and a series of publications on various forms of ambiguity within a variety of organisational contexts (March and Weissinger-Baylon, 1986: 12). These forms include ambiguity of experience and the past (Cohen and March, 1986: 199-201; March and Olsen, 1975), of power and success (Cohen and March, 1974: 197-199, 201-203), of relevance (March and Olsen 1976a: 26), of self-interest (March and Olsen, 1976b: 38-53), of deadlines (Weiner, 1976: 225-251), of intelligence and meaning (March, 1987: 163-164), and of purpose (Cohen and March, 1974: 175-179).

Alongside the shift that saw ambiguity, as a theme, rise in popularity, another idea started to gain momentum within organisational decision making. This idea was the notion that decisions, within an organisational context, are not primarily the product of human intent. The garbage can theory, which was introduced by Cohen, March and Olsen in 1972, is the foremost advocate of this idea (Langley, et al., 1995: 262). The authors' garbage can theory portrayed decisions as being the outcome of the intersection between four independent streams: solutions, problems, choice situations and participants (1972: 2). Pinfield argues that the original garbage can theory is different from the models of bounded rationality that preceded it (1986: 366), in that bounded rationality still conceives of human intent as the driver behind decision outcomes (1986:365).

These two parallel shifts – the incorporation of ambiguity and non-intentional factors in researching and theorising on organisational decision making – are the pillars on which this thesis rests. The form of ambiguity of interest is that of *goal* ambiguity. What is at stake is how to research goal ambiguity if the intent is to produce a normative theory on decision making that embraces the absence of pre-existent, clearly defined, consistent goals.

1.2 Problem statement

There is evidence that suggests that that ambiguous goals are a common phenomenon. There is also speculation, and some instances of validation thereof, that fostering ambiguous goals could be sensible, intelligent behavior. The first problem is that little academic effort has

[2] Sensemaking, as a concept, refers to the way in which active agents construct sensible events. The act of sensemaking involves organising stimuli into a mental framework. These frameworks are what enable actors to understand and explain the phenomena which they perceive. Sensemaking takes place retrospectively (Weick, 1995: 4-5).

been devoted to refining the intelligence exhibited through ambiguous goals. Secondly, the existent research on goal ambiguity has delivered minimal insight that could be put to use in developing a normative theory that works from the assumption that goals are ambiguous and that they should be that way. This thesis will predominantly address the second problem. By doing so it hopes to indirectly contribute to the first problem, the need for the development of a normative theory. To achieve a clear understanding of the problem it is first necessary to clarify the meaning of the terms 'goal' and 'ambiguity'.

1.2.1 Meaning of key concepts

1.2.1.1 Goals

Various definitions of the concept 'goal' are proposed in the literature on decision making. Indeed, Scott recognises that: "the concept organizational goals is among the most slippery and treacherous of all those employed by organizational analysts" (2003: 292). March points towards the pervasiveness of the assumption of pre-existent purpose, by listing all the different terms used: "values", "needs", "wants", "goods", "tastes", "preferences", "utility", "objectives", "goals", "aspirations", "drives" (1972: 418). McCaskey points towards the same pervasiveness, but warns researchers against the elasticity of the concept: it has been used as a way of referring to broad purposes as well as specific measures (1979: 47).

It has been argued that there is a difference between an entity's values and its preferences or goals (March and Olsen, 1989: 118; Van Deth and Scarbrough, 1998: 39). Several researchers have shown that societal or organisational values guide decision making within organisations even though actions seem to be weakly connected to explicated intentions (see Rommetveit, 1976; Cohen and March, 1976; Stava, 1976; March and Romelaer, 1976; Olsen, 1976a; Olsen, 1976b). This suggests levels of intentionality or different kinds of intentionality.

The argument here is that the terms goals, aspirations, objectives, preferences, tastes and utility are closely related and are all relevant in addressing the current problem. A different form of intentionality – as it manifests in organisational and individual values – is excluded from the scope. The relationship between the various terms that are relevant to the study can be mapped clearly. Cohen et al. argue that organisations with problematic *preferences* need a theory as to how to act under circumstances of *goal* ambiguity (1972: 1-2). Thus, for the authors of the article, these two concepts, preferences and goals, may be equated to each

other. Evans and Over also suggest a direct relation between the two terms; more specifically they conceive of preferences as that which *determines* goals (1996). In the same vein, it is posited here that goals, aspirations and objectives may be viewed as the explicated form of an entity's preferences and/or tastes. Utility may in turn be understood as a measure of goal satisfaction (Over, 2007: 6).

1.2.1.2 Ambiguity

Goals of an ambiguous nature warrant a new normative theory (Cohen et al., 1972: 2; McCaskey, 1979). What ambiguity refers to needs to be demarcated, so that the possibilities for application are understood. 'Uncertainty', 'ambiguity' and 'complexity' are distinct terms, yet are often used interchangeably (eg. Styhre, Wikmalm, Ollila and Roth, 2010: 137; Moch and Pondy, 1977: 351; Olsen, 2001: 191; March and Olsen, 1988: 343) or are conflated (eg. Rommetveit, 1976; March, 1994: 192, Bendor et al., 2001: 171)[3]. March reports that ambiguity is sometimes treated as a special case of uncertainty (1994: 192). These phenomena complicate comparisons across texts and make it difficult for researchers to build on past efforts.

A concrete illustration of an instance of confusion may be useful. In a discussion of a case study on the management of a project in a research and development company, McCaskey explains that this environment was selected because it seemed probable that it would be characterised by goal ambiguity (1979: 41). After having gathered evidence to the contrary within the specific case, the author cites two sets of research. One set asserts that an R&D environment was more uncertain. The other produced conclusions that more closely resembled his own, namely that the R&D environment had clear, well-defined goals relative to other departments. The author concludes that uncertainty *or* ambiguity could not reside within the environment: "…since both the task and the surrounding environment are the invention of human intelligence, the degree of *uncertainty* is dictated by an interaction between the human actor and what is 'out there'…people higher in tolerance for *ambiguity* took simple tasks and made them more *complex* in order to stimulate…themselves" (1979: 41)[4]. Here all three terms are used, at first glance as synonyms, but later seem to relate in a more complicated way. Yet, the relationships are not addressed within the article.

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[4] The emphasis is my own.

A number of texts (March, 1994; March, 1978; Cohen et al., 1972; Cohen and March, 1974; McCaskey, 1979) utilise goal ambiguity as an umbrella term to refer to goals that are:

- vague (or ill-defined)
- problematic in that preferences are inconsistent (either over time or in terms of each other, when they are multiple)
- discovered after action has been taken

Some argue that particular environments lend themselves more to the above described goal ambiguity (Lee, Rainey and Chun, 2009b: 458). Another argument is that most organisations exhibit ambiguous goals, to some degree, part of the time (Cohen, March, Olsen, 1972: 1). Thus, the concept of goal ambiguity is dense.

The question remains as to how ambiguity, as explained above, is different from uncertainty, and whether the distinction is relevant. Zahariadis provides a lucid portrayal of the difference between the two: additional information may reduce uncertainty, but does not resolve ambiguity (2003: 3-5). March makes a similar distinction. He understands ambiguity is a fundemental lack of clarity or consistency, whereas uncertainty refers to imprecision in estimates regarding future states. Uncertainty assumes that a certain state does exist, despite it not being known, whereas ambiguity refers to states having multiple meanings and interpretation (1994: 178-179). In essence the notion of uncertainty neglects the fact that states of the world are, to an extent, constructed through the ways in which individuals attach meaning to external stimuli. The implication is that multiple states exist, as people often interpret events differently.

A commonality between the two concepts is a relation to the idea of bounded rationality. Some authors suggest that the experience of ambiguity, in part, is the result of the limitations of our rationality. People have different interpretations because they are not exposed to the same stimuli, due to lack of attentive capability (Sarasvathy and Dew, 2005: 385-386; March and Olsen, 1988: 343). However, it is also suggested that the experience of ambiguity may be reduced, in a sense, by our incapacity to pay attention to many things at the same time (March and Olsen, 1989). This would mean that inevitable asymmetrical exposure gives rise to the experience of ambiguity (effect A) *as well as* mitigates the experience thereof by facilitating the interpretation of an ambiguous world (effect B). It is argued here that effect A illustrates ambiguity that is similar to uncertainty. Effect B illustrates ambiguity as a

fundamental characteristic of stimuli. It is relevant for this thesis as the same distinction is applicable to the different forms of goal ambiguity. Goal ambiguity due to inconsistent preferences among employees can be seen as an ambiguity that could be reduced if employees had the same exposure, or if there were less uncertainty. The second and third forms of goal ambiguity are more clearly examples of the way in which the world is made up of stimuli that necessarily need to be interpreted. All three forms of goal ambiguity – inconsitency, vague formulation and post hoc creation – are relevant in terms of the current purpose.

Having made clear the forms and nature of goal ambiguity, traditional normative theories' treatment of this specific phenomenon will be discussed. It is the dissonance between *this* stance and empirical research on goal ambiguity, that gives rise to the problem.

1.2.2 Rational choice as a poor descriptive theory

Descriptive theories are aimed at providing an account of what people do when they actually make decisions (Over, 2007: 3). Normative theories, on the other hand, prescribe rules. They are concrete explanations of how to realise an ideal state (Baron, 2007). Although the nature of these rules are disputed (see Cohen, 1983; Stein, 1996; Stanovich, 1999; Stanovich and West, 2000), theories of formal logic, probability theory, statistics, utility theory and decision theory applications[5] are traditionally understood to denote normative theories. Traditionally, the standards that are set by these theories are understood to communicate the level of 'rationality' of a certain judgement or instance of behaviour (Baron, 2007: 19; March, 1987: 588; Bazerman and Moore, 2009: 4-5). The implication is that a rational choice theory should be applied if the aim is to judge well.

As suggested earlier, rational choice theory, is the proposition that human beings should make decisions by going through a process consisting of calculating the outcomes that result from human action, and weighing those outcomes against what one wants to achieve (March, 1972: 418; Miller and Wilson, 2006: 469; Over, 2007: 3).

From a management theory perspective, Drucker (1955), for example, saw the decision making process as consisting of five different phases, starting with the formulation of a problem, then analysing the problem, developing alternate solutions, deciding among these options – exercising a rational choice – and, finally, putting the chosen solution into action. In

[5] Here taken to refer to decision analysis, multi-attribute value analysis, game theory, and tools such as decision trees.

this instance, the presupposition that goals are known is so deeply entrenched that it is not even considered a step in the process. Anderson phrases the same core argument differently by stating that the traditional way of viewing choice is consistent with goal identification, the search for alternatives, predicting the consequences of each of the alternative actions, the evaluation of each of the alternatives in terms of their consequences for goal achievement, and, finally, the selection of the alternative that most optimally serves the goal (1983: 201). This form of rationality has also come to be referred to as pure or formal rationality, so as to distinguish it from bounded rationality (March, 1994: 3).

Thus, within rational choice, ambiguous goals are viewed as pathological: they prevent the decision maker from engaging in a process of rational choice. The entities and different kinds of processes that rational choice theory may be applied to will be discussed in depth in the second chapter. Only through evaluating these applications will the need for an additional normative theory will be thoroughly substantiated. At present it is important to note that rational choice assumes pre-existent goals that are clear and consistent.

Over the last half century, since Simon (1955) suggested shifting our focus from the economic man to the administrative man, it has become all the more commonplace to accept rational choice theory as limited in terms of its capacity to describe decision behaviour (Dyckman, 1981: 299; Kingdon, 2003: 77; Pinfield, 1986: 365; Langley et al. 1995: 260; French, Maule and Papamichail, 2009: 27). March and Simon (1958), Lindblom (1959), Georgiou (1973), Benson (1977), Wildavsky (1979), Green and Shapiro (1994) and Chia (1994) have all systematically criticised rational choice theory. However, Andersons states that although legitimate critiques of rational choice are widespread, critics have been less successful in proposing empirically-based alternatives (1983: 201). Since this statement was made, Kahneman, Slovic and Tversky (1982) has made progress towards establishing a framework for biases and heuristics as a systemic means through which we actually make decisions. Gerd Gigerenzer (1999; 2007) has turned research on heuristics into a normative theory for making decisions. However, neither of these branches of research is well aligned with the deviation from rational choice theory which is at stake here. This deviation, or critique, relates to the volume of research that shows that goals are often either unclear, inconsistent, only known after action has been taken, or a combination of these options.

March summarises the behavioural trend with regard to preferences (1987: 596-597):

- Decision makers actively manage their preferences, in that future preferences are anticipated and action is sometimes undertaken to moderate them. This means that preferences are expected to change.
- Preferences are actively constructed, sometimes with strategic intent. This is due to the anticipation that external actors and oneself might infer characteristics of the decision making entity by observing their goals. This implies that preferences and actions are in fact chosen at the same time, as decision makers are aware that preferences or goals might be perceived to have meaning apart from their instrumental function[6].
- Decision makers knowingly act in ways that are inconsistent with their preferences, or are reluctant to voice them, depending on the situation[7].
- Lastly, preferences are conflated and contradictory at the same time.

Cohen and March (1994), Weick (1976), March and Olsen (1976a), Crozier and Friedberg (1980), McCaskey (1979), and Lindblom (1959) and Chun and Rainey (2005) have all studied the ways in which decision makers confront ambiguous circumstances. The first four and the last of these publications specifically studied ambiguous preferences. March reports that the first four in the list attest to the sensibility of acting *within* a context of goal ambiguity, and that these authors are aligned in arguing for a new formulation of the normative problem that confronts decision engineers (March, 1978: 590).

March summarises possibilities why fostering ambiguous goals might be sensible (March, 1987: 598-599):

- Decision makers are aware of limitations in terms of integrating personal and institutional (or organisational) goals and manage their prefernces accordingly.
- Decision makers might, to an extent, be aware of that preferences are constructed. This realisation implies that goals are important regardless of their action consequences, as they also have symbolic consequences.
- Decision makers might know and calculate for the fact that some people are better at standard rational argument than others and that these skills are not well correlated with morality or sympathy[8].

[6] Empirical proof for this is presented by McCaskey's study (1979) March and Olsen (1989: 39-52), Staw and Ross (1978) and Anderson (1983).
[7] See Brunsson (1982) for empirically based arguments.

Numerous empirical studies show support for these ideas. Brunsson (2006; 1990; 1982) argues extensively for why hypocrisy, in this case referring to action being unaligned with "speaking", is a necessary attribute for an organisation to function well. Anderson (1983) showed that by discovering goals in the process of making the decision, the need to specify all goals at the outset was avoided, leading to less conflict. Lindblom (1959) illustrated that clarifying goals could be counterproductive within a political setting, as building coalitions involves persuading various participants to commit to a certain proposal without their goals necessarily being aligned. Kreps (1979) specified conditions under which intelligent decision makers would prefer to have changing preferences. Winsten (1980; 1985) proved that not placing the same value on one thing consistently to be generally sensible. March alluded to the fact that decision makers recognise action as a way in which new preferences may be discovered and/or developed (1988a: 399). Finally, Weick (1995) showed that it is sensible for members of an organisation to act and then rationalise their actions *post factum*.

The detail of how ambiguous goals are exhibited by different entities and how they make a difference in various organisational procedures will be discussed in chapter two. At present it is sufficient to take note that ambiguous goals are common and that there is systematic speculation and proof that fostering these ambiguous goals might be sensible.

1.2.3 From accurate description to normative formulation: research is needed

Why is the fact that rational choice is poor at *describing* behavior relevant to *normative* theorising? The answer is that normative theories can be improved if more heed is paid to descriptive accounts of decision making (March, 1978: 588). Within the field of choice itself, it has been a trend for normative and descriptive theories to influence each other dialectically, rather than growing in isolation. Gigerenzer (1999; 2007), for example, turns descriptive insights into normative theory by relating the former to evolution theory. Normative theories have responded to Simon showing that behaving more "rationally" would not necessarily lead to better decision making (March, 1987: 589). Due to Simon's behavioural take on economic judgements, satisficing is now considered sensible under fairly general circumstances (March, 1994: 9).

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[8] See Clegg, Corpasson and Phillips' discussion on the role of rational choice and techniques in the excecution of the 'final solution' (2007: 160).

Due to the past dialectic relations between descriptive and normative theories on decision making (March, 1978: 589), the suggestion to adapt normative theories according to descriptions of behaviour should not seem unfitting. Both George (1980) and Newman (1980) advocate an approach to prescription that is connected to the way in which decision makers actually approach the task. When utilising this approach the first priority is to develop in-depth understanding of decision behaviour and the decision questions that people face (March, 1988a: 397).

There are some, like Baron (2007: 21), who argue that normative theorising should be the task of philosophy, and should not be contaminated by behavioral considerations. However, the current argument is that in addition to goal ambiguity being ubiquitous at the individual and organisational level, reasons for why this would be sensible have been explored. These explorations attest to the idea that operating under conditions of ambiguity may be intelligent. Under such circumstances, ignoring the ambiguity or trying to remove it by making use of rational tools, such as multi-attribute value analysis, might lead to misstating the normative problem that confronts the decision maker or organisation (Sarasvathy and Dew, 2005: 385-386; March, 1978: 596-599)[9]. It is antiquated and insufficient to ignore ambiguity.

The normative toolkit needs to be extended. Theories that prescribe rules, tools and models for circumstances within which pre-existent, clear and consistent goals are axiomatic, need to be supplemented with theories that offer prescription in situations characterised by goal ambiguity.

Thusfar, there are few attempts at formulating normative theory that would fit into ambiguous contexts. Relatively little research has been done on decision making in conditions of goal ambiguity specifically (Thompson, 1967: 136; Thompson and Tuden, 1964; Lee, Rainey and Chun, 2009a: 284). The most recent set of studies on goal ambiguity aim to develop dimensions of goal ambiguity. These include target specification goal ambiguity, program evaluation goal ambiguity and time specification goal ambiguity. However, these studies are not supportive of goal ambiguity as they are conducted from a rational choice perspective. Also, goal ambiguity is understood to refer to goals allowing room for interpretation and thus

[9] It is emphasised that rational tools are not to be substituted altogether. Indeed, managers, economists, decision theorists and organisations theorists use many of these tools, which have been developed to the extent of being very sophisticated (March, 1972: 419). These tools, such as OR techniques, decision analytic tools, and micro-economic models have been useful (March., 1978: 588). The argument is that these tools are not suited to or valuable within situations characterised by goal ambiguity, as they assume the existence of a set of consistent goals (March, 1972: 419).

excludes the other relevant forms (see Chun and Rainey, 2005; Lee, Rainey and Chun, 2009; Lee, Rainey and Chun, 2009b; Jung, 2011).

Lindblom's theory on the ad hoc comparisons made by managers within public organisations, and Henri Mintzberg's studies on strategy, that emphasise the incremental nature of decision making and encourage the use of intuitive and metaphorical processes, are examples of the normative theories that are needed (McCaskey, 1979: 31-32). However, Kingdon argues that incrementalism is poorly reflected in twenty-three case studies he conducted (2003: 79-83). Consequently, the notion of a technology of foolishness (March, 1972) is nominated as the starting point for normative theorising on goal ambiguity.

March, both in an article entitled 'Model Bias in Social Action' (1972) as well as in chapter five in *Ambiguity in Choice in Organisations* (1976a), contrasts a technology of foolishness (TOF) with a technology of reason[10]. The former are theories, tools, and principles that apply, and should be executed, where goals still need to be developed. These tools induce action that precedes a clear purpose. Plainly stated, they should motivate people to act before they think.

1.2.4 Deeper features of the problem

The problem is that normative responses to the behavioural discussions of ambiguous preferences have been conservative (March, 1987: 599; Sarasvathy and Dew, 2005: 386). This is not surprising: even though research on goal ambiguity does exist it is not of substantial volume and parts of it are conducted from the perspective of rational choice theory.

The reason for this delay possibly relates to the strong resemblance between traditional theories of choice and cultural ideas about intelligence. The two ideas share three assumptions (March, 1972: 415-418): entities have pre-existing purpose, behavior that is consistent with this purpose is necessary and virtuous and, finally, rationality is superior to other processes, like intuition and faith, through which judgements are reached. The idea of intelligence, in turn, is central to modern ideology (Clegg, Corpasson and Phillips, 2007: 8). Related to this explanation is the reason Loewenstein (1999) offers as to why certain types of motivation relating to the symbols and the construction of meaning have been left out of economic utility theory: they are not readily quantifiable. This quality leads to unclear relationships between variables (1999: 338).

[10] This distinction has since been adopted by Saranvathy and Dew (2005) and Jacobs and Statler (2006).

The deep roots of the notion that rational thinking should precede action may have had a negative effect on researchers' capability to gather insight on goal ambiguity. Researchers themselves may have to fight against ideological predisposition and decision makers, especially those in corporate environments, may be hesitant to disclose information that shows they do not act rationally (Sarasvathy and Dew, 2005: 386)[11]. Also, studying goal ambiguity poses a significant challenge to those that want to advance the knowledge on decision making via quantitative modelling.

1.3 Objective and aims

1.3.1 Overall objective

The overall objective is to establish a prescriptive framework for doing research on goal ambiguity that would be fruitful in terms of developing a TOF. This will be achieved by evaluating empirical applications of the garbage can theory (Cohen, March and Olsen, 1972) to organisational decision making. This thesis will report on the success of the various case studies. A case study is deemed succesful if it produces insight on goal ambiguity that could be utilised in developing a TOF. The nature of the studies, alongside the garbage can theory itself and the way in which it is applied, will be analysed. From this threefold analysis, depending on the studies' relative success at producing insight on goal ambiguity, a *way* of doing research will be inferred. From the content of the results on goal ambiguity, the *themes* that need researching will be inferred.

1.3.2 Specific aims

To be able to meet the stated objective, the following sub-questions need to be answered:

1. What is the state of the art regarding a technology of foolishness?
2. What is the connection between goal ambiguity and a technology of foolishness, and what kind of insights on goal ambiguity could be put to use within the frame of a technology of foolishness?
3. What can we take to constitute the garbage can research programme?
4. Did such a programme produce insights on goal ambiguity through the application of the theory to empirical data?

[11] Feldman and March (1981) illustrate this point by proving that decision makers often collect information but do not use it in the process of making the decision. The information serves as a symbol for the fact that a person is an intelligent decision maker.

5. Did studies that apply the theory empirically, but have been conducted in a way that is independent of the garbage can research programme, produce insights on goal ambiguity?
6. With reference to questions five and six – what is the dominant character of these studies, or applications?
7. With reference to question six – based on the case studies, their results and the nature of the garbage can theory, can we deduce research methods and themes that are either more or less likely to produce the sought after insights?

1.3.3 Outline of the thesis

Chapter two is a detailed discussion on a TOF, and makes a more in- depth, structured argument for why such a technology is needed. Regarding to the aims listed above, questions one and two will be answered.

Chapter three centres around the garbage can research programme. It aims to determine which publications to include in the programme. Furthermore, it aims to analyse the case studies and evaluate the insights produced. Answers to questions three and four, as well as a partial answer to question six, will be provided.

Chapter four sees the aggregation of insights produced by applications that were done independently of the garbage can research programme. Question five, and the outstanding part of question six will receive attention.

Chapter five will present the conclusions and the contributions of the research.

1.4 Research design and methodology

1.4.1 Research design

To develop a prescription for research on goal ambiguity *case studies* that apply the *verbally formulated garbage can theory*, will be scrutinised and analysed according to their theoretical frameworks, the nature of the data, and the nature of the analysis. The Poole and Van de Ven (2010) distinction between process theories and variance theories of decision making will be brought to bear on the data. Thus, all case studies on organisational decision making which apply the garbage can theory form the target population of the study.

The following discussion addresses the choices that shaped the research design.

1.4.1.1 The first choice – using data that the garbage can theory is applied to

The argument for incorporating the garbage can theory

The garbage can theory (GCT) was identified as being in line with the *raison d'être* of the TOF. Firstly, the model was developed to describe decision making within organisations that could be described as organised anarchies. The notion of organised anarchies has an affinity with goal ambiguity as these are organisations, or parts thereof, that exhibit the following characteristics at least part of the time: 1) the participation by decision makers is fluid, 2) the goals are ambiguous and 3) the technology with which goals are to be achieved is unclear Cohen, March and Olsen, 1972: 1). Based on this premise alone, it could be argued that the GCT should, theoretically, be able to describe decision making in such terms that insight on goal ambiguity stands to be gained through its application. This inference is supported by Moch and Pondy via their statement that the GCT could be taken to predict that when goals are ambiguous, decisions will be made while preferences are constructed after the fact (1977: 355).

Secondly, by incorporating this specific theory into the study, a significant research programme within the literature on organisations and, more specifically, organisational decision making, is being drawn from. The garbage can has been described as "the mainstay of the literature on organisational decision making" between the 1970's and the 1990's (Levitt and Nass, 1989: 190). The original GCT is immensely influential within multiple disciplines such as political science and institutional theory (Bendor et al., 2001: 169). The studies by March and Olsen that are compiled in *Ambiguity and Choice in Organisations* (1976a), and that have built on the original model, are seen as the first sustained post-modernist study of organisations (Perrow, 1986: 137-138). In a major study on approaches toward studying decision making at the top of organisations, Hickson (1987) identified the model as one of three main theories on high level decision making in organisations.

The reader might question the effectiveness or legitimacy of testing for only one of the attributes that the theory sets out to describe. However, it is very unlikely that a single study could cover all of the relationships in a situation as it is described by a specific theory (Black, 1999: 7). Events are usually too complex. Many studies therefore test for limited subsets of a body of theoretical propositions (Black, 1999:19). The decision to only evaluate for insights on goal ambiguity is thus not only plausible, but also conducive to results of a higher quality.

It is clear that the GCT forms a large part of the basis of this thesis. It is therefore necessary that the GCT, in its original form, be discussed in more depth. It is also necessary to discuss the theory because its history and original postulation present certain challenges in terms of researching the applications of the theory.

An introduction to 'A Garbage Can Model of Organisational Choice' (1972)

Cohen et al. aim to develop a theory on behavioural decision making that applies to organised anarchies (1972: 2). Some organisations, like public and educational organisations, are more likely to cultivate decision making processes that reflect this notion, however the authors claim that most organisations are organised anarchies some of the time (1972: 1).

Organised anarchies are characterised by three properties: problematic preferences, unclear technology and fluid participation (1972: 1). When the authors elaborate on the first characteristic it becomes clear that "problematic" includes preferences that are not properly defined, that are inconsistent[12] and that are discovered after action has already taken place. Unclear technology is explained as referring to a poor understanding of the means-ends relations within the organisation's processes.

In order for behavioural theories to accommodate this phenomenon, the authors propose investigating the manner in which organisations make decisions without consistent, shared goals. (1972: 2). They recognise that organised anarchies imply shifts in normative theory, however their attempt is focused at describing decisions as they take place in anarchic situations (1972: 2).

The authors claim that decisions are fundamentally ambiguous (1972: 2). This is motivated by stating that organisations provide opportunities through which members of the organisation arrive at an *interpretation of what they are doing* (1972: 2). From this, the authors seem to logically deduce that an organisation can be viewed as a collection of choices looking for problems, issues looking for decision situations and solutions looking for issues to address. Essentially, the decision situation is as a garbage can into which decision makers dump problems and solutions. The specific combination in a can at any point in time is dependent on the availibility of other cans at the same point in time. However, decision makers first have to recognise other cans (1972: 2-3).

[12] It is not clear whether the authors are referring to inconsistency over time or amongst different members or units of an organisation.

The authors claim that the primary proposition of the garbage can model (1972: 2-3) is that a decision can be equated to *an outcome or an interpretation* of independent streams within an organisation (1972: 2-3). A stream of problems is made up of concerns of individuals, whether they are internal or external to the organisation. Problems are understood to require attention. A solution is explained to refer to a product. The example provided is that a computer is not only someone's product but also a solution that is actively looking for a problem to address. The third stream is that of participants in the process. The variations in participation are understood to stem from other demands made on the time that participants have at their disposal. Lastly, choice opportunities are the situations in which it is expected that the organisation produces behaviour that could be recognised as a decision. Appointments that need to be made, budgets that need to be set and contracts that need to be developed are all examples (1972: 3).

The authors construct a computer simulation model based on the basic ideas of the streams and their temporal intersections, although the basic idea undergoes some change to accommodate the simulation. The stream of choices and the stream of problems intersect with a *rate* at which solutions flow, and a *stream of energy* from the participants (1972: 3). In the case of choices, problems and participants, a fixed amount is assumed. Each problem and each choice is characterised by an entry time, whereas each participant is characterised by a time series of energy that can be spent on organisational decision making. As for the rate at which solutions flow, a solution coefficient is specified for every time period which operates on the potential decision energies to determine problem solving output (1972: 3).

These variables are then related to each other via certain organisational structures, namely the decision structure and the access structure. The former specifies which participants have access to which choices, whereas the latter reflects problems' access to choices. As a result, each choice is also characterised by who can take part, and each problem, in turn, is characterised by a set of choices to which it has access (1971: 3-4). The last characteristic to note is that each of the fixed number of problems, in addition to being defined in terms of an entry time and an access structure, is also understood to require a certain amount of energy to be solved (1972: 3-4). Thus the concept of energy is conspicuous in the computer simulation, as no mention of it is made in section on the ideas on which the simulation builds.

For the simulation to work, three additional assumptions are built in. The additivity of energy requirements within every choice situation is assumed. The authers also conceive of ways in

which energy (or participants) is allocated to the different choice situations and the way in which problems are attached to choice situations (1972: 4). The authors ran the simulation, under different kinds of decision and access structures, as well as different variations in energy distribution (1972: 4-8).

Results, implications & conclusions

The authors decided to test for different decision styles, problem activity, problem latency, the decision maker activity and, finally, the decision difficulty (1972: 8). In summary, how they conceived of these performance indicators looks like this (1972: 8-9):

- A decision is made by resolution, when a choice situation resolves a problem, by oversight, when a choice is made quickly and no problem is solved, or by flight, when a choice does not resolve a problem and original problems have moved on to other choice situations..
- Problem activity is measured by the total number of time periods that a problem is active and attached to some choices, summed over all problems. This reflects the degree of conflict in the organisation.
- Problem latency is measured by the total number of periods during which a problem is active, but not attached to a choice, summed over all the problems. This indicates the extent to which problems are recognised and addressed through choice.
- Decision maker activity is presented by the total amount of times a decision maker shifts from one choice to another. This is significant as it reflects decision maker energy expenditure, movement and persistence. Decision difficulty is simply measured by the total number of periods that a choice is active

Based on 324 simulated situations, Cohen et al. find that (1972: 9-11):

- Decisions are mostly made via oversight and flight. Resolution rarely takes place..
- Important problems are more likely to be solved than unimportant ones.
- Important decisions are less likely to resolve problems.
- Choice failures that do occur are situated among the most important and the least important choices.
- The process is sensitive to variation in energy load.
- Specific decision makers and problems track each other through choices

The process is sharply interactive (in that the nature of both the access structure and the decision structure impact the outcomes). The major feature of the garbage can process is the partial uncoupling of problems and choices (Cohen et al., 1972: 16). Viewing processes as garbage can-like is potentially beneficial as it could lead to a deeper understanding of the organisational decision making processes. Organisational design and efforts to engineer for good decision making could take the existence of garbage can processes into account, so that these processes may be managed, albeit only to a certain extent (Cohen et al.,1972: 17).

Now that the garbage can theory's suggestion are clear, and the reasons for incorporating this specific theory into this attempt are clear, what is meant by using a certain version of the theory needs to be explained.

1.4.1.2 The second choice – the verbal formulation of the theory

As may be deduced from the discussion on the garbage can theory, there is a distinction between the formulation of the ideas that precede the construction of the simulation model, and the simulation model itself. Bendor et al. express this difference as one version being the verbal theory or informal theory and the other being the formal model deduced from the (verbal) theory (2001: 170). The authors of the original article refer to "The Basic Ideas" (Cohen et al., 1972: 2) and "The Garbage Can" (Cohen et al., 1972: 3), where the former presents the content on what Bendor et al. understand to be the verbal theory and the latter discusses the computer simulation model. Cohen et al. use the term 'theory' when they discuss their basic ideas (1972: 2). The term model is used numerous times in their discussion on the computer simulation (1972: 3 - 4). These two sets of authors seem to present the distinction in a very similar way.

Bendor et al. go further in explicating that the verbal formulation should be treated as the fundamental theory and that the computer simulation should be treated as the model derived from the verbal theory (2001:170)[13]. They also argue that although the formal computer simulation is the theory's testable scientific core, it is not in keeping with the basic ideas or the verbal formulation of the theory (2001: 169). For them it is clear that the verbal formulation of the theory does not exhibit relationships between components that are rigorous enough to be tested for formally (2001: 170).

[13] The sharp distinction as well as the verbal theory being fundamental is supported by Anderson and Fischer (1986).

A problem presents itself in that other authors have not illustrated the same understanding when it comes to the distinction between theory and model. For example Levitt and Nass (1989: 190), Weiner (2007:873), Mucciaroni (1992: 489), Lipson (2007: 79) use the term 'model' to refer to the verbal formulation of the theory. Others such as Dorta-Velazquez, De Leon-Ledesma and Perez-Rodriguez (2010: 24) and Pinfield (1986: 366) refer to the verbal theory as the anarchic perspective or anarchy theory. A third group refers to the verbal formulation as a metaphor (eg. Styhre, Wikmalm, Olilla and Roth, 2010: 137).

'Garbage can theory' should here be taken to refer to the verbal formulation of the theory, as Bendor et al. (2001) distinguishes it.

Additionally, as will become clear, others have not shared Bendor et al.'s sentiment that the verbal formulation hasn't enough rigour to be imposed onto data and tested for. Indeed, case studies that have applied the garbage can theory in its verbal form, form the empirical basis of this thesis. Case studies that apply the garbage can theory, as opposed to the garbage can computer simulation model[14], are precisely what present the opportunity to harvest secondary data for insights on goal ambiguity. This is the case because goal ambiguity does not feature in the simulated model.

The reasons for limiting the scope to studies that involve empirical data on cases of decision making in organisations will now be addressed.

1.4.1.3 The third choice – case studies

Empirical studies[15], and more specifically case studies, are evaluated for three reasons. These reasons relate to the normative-descriptive distinction between theories on decision making, and to the particular phenomenon which needs to be understood.

The difference between normative theories and descriptive theories, and the relationship between the two strands, is significant here. The main aim of this thesis is to profile the kind of descriptive research that is likely to lead to insights that in turn will give rise to the development of a normative theory of choice. In the discussion on the problem, past dialectic

[14] For studies on and adaptions of the computer simulation see Fioretti and Lomi (2008, 2010); Padget (1980); Carley (1986a, 1986b); Anderson and Fischer (1986); Masuch and LaPotin (1989); Warglien and Masuch (1996); Takahashi (1997); Wei and Sagaragi (2004); Kaneda and Hattori (2005); Lai (2006); and Inamizu (2006).

[15] For conceptual studies within which the garbage can theory is merged with other theories see Das and Teng (1999); Ellström (1983); Cray, Inglis and Freeman (2007); Dyckman (1981); and Greene (2001).

relations between the two strands were discussed. It should thus be clear why succesful description can contribute to normative theorising.

But why should case studies, specifically, contribute to normative theorising? Deriving theory from case study research[16] is viewed as particularly appropriate in a situation where little is known about a phenomenon, as theory building from case studies does not rely on voluminous existent literature or prior empirical evidence (Eisenhardt, 1989: 532). Other strengths of this approach include the high likelihood of the emerging theory being testable as well as valid, as a result of theory-building being so closely tied to empirical evidence (Eisenhardt, 1989: 547-548). Based on these arguments it is inferred conceptually that case studies would be a good way of gaining a certain kind of insight into goal ambiguity. Case studies should potentially be able to produce insights that are useful for formulating a novel theory. Therefore, the scope of the study is limited to case studies, as opposed to other forms of empirical research.

A second reason for scrutinising case studies is the assertion that ambiguity, and the less common forms of order that govern processes where it is present, are best studied by utilising data that has been produced through (participant) observation. The subtle characteristics of such a choice environment are usually not adequately captured via survey research (Moch and Pondy, 1977: 353).

In summary: a) it is sensible that descriptive accounts of decision making should, to an extent, influence normative theories on decision making, b) case studies are good bases when attempting to formulate a novel theory that targets a subject on which little is known and c) observation is better at capturing phenomena characterised by ambiguity. Taken together, these three assertions make case studies the logical focus in terms of data to evaluate when developing prescriptions for research.

How the sample is compiled and how the studies will be analysed, will now be elucidated. The preceding discussion on the GCT should illustrate that isolating the studies that rely solely on the verbal formulation involves some analysis already – most authors writing on the theory do not recognise the difference between the two versions.

[16] For an account of what the process of building a theory according to this method would constitute, see Eisenhardt (1989).

1.4.2 Research methodology

The study is in keeping with the behavioral approach to generating knowledge on decision making: various cases studies on behavioral decision making in organisations are analysed. A largely quantitative approach is adopted in terms of collecting the studies. The instances of research that fit into the scope of the study are divided into two sets: those studies produced as part of the garbage can research programme and those produced independent of the programme. For the first set, the aim was to incorporate all of the studies that fit into the scope. Thus, no sampling technique was used, rather the entire population is evaluated.

Regarding the second set of studies, two approaches to collecting the studies for the sample are followed. Firstly, the recent and self-proclaimedly unique critique of the theory and its lineage (Bendor et al., 2001) was consulted. Incorporating the studies referred to or made use of tin this text, would ensure that the most prominent applications of the GCT are included. However, this approach by itself would not suffice, as the authors claim that there have been few attempts at empirical application (Bendor et al., 2001: 186). Furthermore, they report that the few existing applications are loosely coupled to the theory (Bendor et al, 2001: 186), yet they do not provide the reader with a list or even examples of the attempts referred to. The only two applications referred to within the study that *do not* form part of the work considered to be part of the garbage can research programme are those of Kingdon (2003) and of Sproull, Weiner and Wolf (1978). As a *representation* is sought after, the first of the two is included in the sample.

The second approach was to make use of a reputable database, or citation index. The Thomson Reuters *Social Science Citation Index* (SSCI) database was selected. The SSCI includes articles from 3000 journals with the highest ISI[17] ratings, and that are representative of 50 fields within the social sciences (Thomson Reuters, 2013). The rationale behind the choice comes down to Thomson Reuters, after acquiring ISI in 1992, being the authoritative institution in terms of the impact ranking of academic journals. Klein and Chiang verbalise ISI, and therefore Thomson Reuters' prominence: "ISI is the only serious producer of citation data, so the term "citations" is synonymous with citations as recorded by ISI in its various products (such as SSCI)" (2004: 134).

[17] 'ISI" stands for Institute of Scientific Information. This was the name of the company that pioneered the idea of rating and measuring an academic text's impact by using the number of times an article is cited. The acronym ISI has become synonymous with impact rating despite ISI having been sold to Thomson in 1992 (Klein and Chiang, 2004: 134).

The SSCI was searched for articles that would fit within the identified scope. The search was conducted for the period between January 1973 and and August 2012. The phrase 'garbage can' had to feature in the title of the article. 'Garbage can' is used so as to allow for studies in which both 'garbage can model' and 'garbage can theory' are used. It was shown earlier that both terms and even others such as 'garbage can paradigm' or 'garbage can metaphor' could refer to the same set of ideas. The phrase had to feature in the title as this serves as strong indication that the GCT played a prominent role in analysing and interpreting the data. The scope requires that the GCT gives structure to the data, or that the validity of the theory be commented on in the conclusions.

The search produces thirty articles, ten of which fit within the scope. The remaining articles are left out for different reasons: some do not relate to decision making in organisations, some utilise the computer simmulated model, some engage with the GCT on a conceptual level[18]. The twelve studies that were found, along with the work by Kingdon (2003) constitute the sample analysed in chapter four.

Of course, sourcing the sample from the SSCI is not a perfect strategy. The SSCI has been critisised for being biased towards articles that are published in English (Archambault, Vignola-gane, Cote, Lariviere and Gingras, 2006: 329) and for eschewing some of which is important within a specific field by strict (and even arbitrary) compartementalisation of what belongs within a given field (Davis, 1998: 61). The latter of the two points of cririque is less significant for the current attempt since all of the fields were covered in the search. The first point of critique would translate to the study ignoring articles that could possibly be relevant, but were not written in English.

This risk of the sample being biased towards English articles is relatively small, compared to the risk implied in alternative strategies. Using an online search engine, for example, was also considered. Since search engines are more dynamic and consistent of more variables, it is highly likely that the same search parameters would start delivering different results. Also search engines can produce a vast array of journals, without weighting them against a quality indicator, such as ISI-rating.

[18] The studies by Bitektine (2009) and Larsen (2001), for example, utilise the theory as an evolutionary process theory in an attempt to explain trends, or "fads", in social and management research, respectively. The fourth article that does not fit the scope of the thesis relates the garbage can theory to changes that take place within tourist destination trends in Switzerland (Beritelli and Reinhold, 2009).

Using specific journals is an option often executed in studies that come down to meta-research. The nature of the GCT renders this strategy unsuitable. Not even the journals in which prominent articles on the garbage can were published have published a substantive amount on the theory. *The Administrative Science Quarterly*, for example, published only 6 studies in the period between the start of 1973 and the end of 2012 in which the phrase 'garbage can' features in the abstract of the article. *The American Political Science Review* delivers only two studies if all of the same search parameters are used. The nature of the GCT leads to applications in a wide variety of organisations, processes and academic fields. The applications of the theory is spread across a range of journals.

The dual strategy followed lead to a sample consisting of highly ranked papers, that represent a range of fields and that includes the seminal application by Kingdon (2003).

Not only the compilation of the data, but also the approach towards analysing the data, determines the outcome of the study. A discussion on different theoretical perspectives as well as on different types of study, will precede the presentation of the data (in chapter three). Apart from these classifications, another important distinction is made. Whether the garbage can theory is applied as a process theory of decision making or a variance theory of decision making is a fact that may disclose reasons for its performance in terms of goal ambiguity. This distinction, as it is less familiar and has not yet been put in the same context as the garbage can theory will now be discussed. The distinction serves as a conceptual tool with which the data is analysed.

1.4.2.1 Different theories on decision making within organisations[19]

The most essential difference between process and variance theories is the respective notions of causation that underlie them (Poole and Van de Ven, 2010: 546-547). The entire discussion on the distinction eminates from work done by Poole and Van de Ven (2010).

Variance theories explain the change from one situation to the next in terms of the relation(s) between elements, or variables, that represent the attributes of the subject of analysis. In contrast, process theories explain how the sequence of events brings about a certain outcome. In the case of variance theories, the extent to which results may be generalised depends on

[19] The purpose of this sub-subsection is in no way to provide the reader with an exhaustive typology of theories within the field of organisational decision making. Such a typology would include a discussion of the differences between macro and micro theories, and structure and process theories, for example. Such an overview is provided by Nutt (2010). The purpose here is simply to elaborate on a distinction that is currently relevant .

the ability of the theory to be applied, across the board, in a uniform way. In the case of process theories, the explanations offered by the theory become more general as the theory becomes more versatile.

Regarding causation, the essentialist concept of causation typically applies to variance theories. This means that proving causation requires showing that the independent variables are both necessary and sufficient conditions for an effect to occur in the dependent variable(s). In other words: *x* fully causes *y*. The probabilistic notion of causation, on the other hand, rejects an essentialist view, as it is perceived to be unrealistic. Probabilistic causation requires an independent variable to probably cause a certain effect in the dependent variable. In other words: *x* probably, amongst other factors, causes *y* (Poole 2010: 544-549).

The temporal order of events is a key driver within process theories; efficient causality does play a role but is less important. The decision is thus understood to be comprised of a series of micro-level events, or actions, that are organised into macro-level events, or phases. Traditionally, the particular decision under study is explained in terms of the theoretical narrative that consists of phases that denote the necessary and specific progression through which a high quality decision will be made. Effectiveness is measured by adherence to the sequence. Process theories provide explanations that are necessary, although not sufficient and these explanations can only be tested for after a process has been completed. Ultimately, the goal of process theory might be summarised as the description and explanation of underlying narratives, by making use of systematic observations and analysis. Establishing narrative models is reported to require different reasoning and evidence than variable based research, although both quantitative and qualitative approaches may be used in process research (Poole and Van de Ven, 2010: 576-577).

Based on the discussion in the preceding paragraph and the one on the garbage can theory in section 1.4.1.1, there is a strong resemblance between the postulations of the garbage can theory and those of process theories. Poole and Van de Ven do not refer to the garbage can theory as an example of a process theory. However, despite the garbage can being a descriptive theory with no normative implications, it is in keeping with the idea of process theories as temporal order is the most important form of order within the garbage can. Furthermore, the way in which process theories are reported to be developed and utilised[20] matches the history of the original garbage can theory and some of the first applications

thereof. Process theories are often derived from observations, but are also utilised as hypotheses regarding change in organisations (Poole et al. 2000: 115-117)

The proposition that the garbage can theory could be seen as a process theory of choice is supported indirectly by Pinfield when he claims that the garbage can theory advocates that the best way of understanding organisational decision making is not to study the outcomes, and that processes are at least as important as outcomes (1986: 367-368). The proposition is supported more directly by Moch and Pondy. They state that the foremost compilation of case studies that relate to the garbage can theory, *Ambiguity and Choice in Organisations* (1976a), will be of interest to those who advocate the *decision process school of thought*. Moch and Pondy also assert that as a result of the theory's broad conceptualisation of choice, scholars across a broad spectrum of fields would be interested in its application (1977: 351). Being widely applicable is one of the strengths of a process theory, according to Poole and Van de Ven (2010: 576).

1.4.2.2 Motivation for and tensions around classification

The purpose of classifying the respective studies according to the research approach and whether the garbage can is being utilised as a process theory or a variance theory is simple: it needs to be determined whether studies that have produced insights on goal ambiguity have design characteristics in common. Through determining whether there exists a pattern amongst studies that produce the sought-after insights, suggestions may be made regarding productive future research on goal ambiguity. The opposite notion also applies, in that a pattern amongst studies that did not deliver insights on goal ambiguity may by implication indicate directions not to pursue in future research. The aim is to use the results of past studies to identify ways in which goal ambiguity might be studied in future.

These classifications are not simple to execute. This is due to researchers often combining qualitative and quantitative approaches. Combinations of different methods of analysis and different types of data often result in a study that is difficult to situate within a single theoretical frame or perspective (Wilson, 1983: 5). Very close attention has to be paid to the data and to the language used by the author, in each case. The author's terminology may not be taken at face value, since theoretical perspectives, and the garbage can theory are interpreted in different ways. What each author means by a certain term will be compared with discussions on the garbage can theory (in this chapter and in chapter three), the

discussion on differences between theoretical perspectives and approaches (in chapter three) and the distinction between variance and process theories (in this chapter).

1.5 Conclusion

This study was designed to be able to contribute to a technology of foolishness by developing a prescription for future research on goal ambiguity. Thus: the literature on goal ambiguity within organisational decision making is expanded through this attempt. The expansion is of such a kind that it should benefit future normative theorising on decision making in organisations.

By exploiting the results of studies that have employed the garbage can theory, conclusions reached by evaluating these studies will also contribute to the literature on the garbage can theory. By arguing for the reasons as to why the garbage can is either successful or unsuccessful in terms of producing insights on goal ambiguity, the study will contribute to the way in which research on ambiguous goals within organisations are understood and researched. Hereby it will also enhance understanding of actual decision making behaviour.

A large part of the thesis is dedicated to aggregating and analysisng secondary data. The reader might deduce that the contribution of such an effort is limited. Two points need to be made in this regard. Firstly, Black argues that considerable original thinking is required when testing aspects of already existing theories, finding their limits and contributing towards modification (1999: 22). The question posed when analysing the data on organisational decision making has not been brought to bear on this specific data before. Secondly, viewing the garbage can theory from the perspective of the variance theory/process theory distinction has not been done up to this point. By looking at the garbage can from the perspective of goal ambiguity and process theories, new knowledge on the garbage can theory can be generated. Secondly, relating research that applies the garbage can theory to need for a TOF will produce a novel framework for researching goal ambiguity in future.

Having presented the aims and the design, and before the data is presented and analysed, it is necessary to elaborate on the notion of a technology of foolishness. This elaboration will provide a clear understanding of why fruitful research on goal ambiguity is necessary.

Chapter 2: A Technology of Foolishness: Distinctive Character, Origin and Use

2.1 Introduction

For the need for an extension on normative theories to be clear, it is necessary to first provide an in-depth account of the status quo when it comes to decision engineering, namely rational choice theory. After discussing the applications and implications of rational choice, the argument for an extended normative theory will made. This will be done by pointing out possible applications and a staring point for this additional theory. The starting point is the concept of a technology of foolishness (March, 1972). Lastly, empirical research that has built on this idea will be discussed.

The argument being made is not for an alternative normative theory that aims to *replace* the framework of rational choice. It is more useful to assume that different theories of organisational decision making are not opposed and that the value of a specific theory's application depends on a) the nature of the situation within the organisation and b) the kind of phenomenon that is being studied (Olsen, 1976a: 82-83). There is also empirical proof that people, who are capable of causal reasoning and employing traditionally rational techniques, are also capable of operating within a different mode that is not powered by a logic of consequence (Sarasvathy, 2001:1).

The content of this chapter is relevant in two ways. The work discussed at the end of this chapter sketches the existing research context within which insights on goal ambiguity – as produced by case studies that apply the garbage can theory – could be of use. At the same time, without the first part of the chapter the motivation behind the pursuit of such a technology remains vague, and not entirely justified.

2.2 The application and implications of rational choice

2.2.1 The reach of rational choice: individuals, organisations, society

The rational framework has become entrenched in the way in which human behaviour is perceived. Consequently, it is also entrenched in the formulation of theories on human behaviour such as micro-economic models, theories on political decisions, public policy formulation and statistics, amongst others (March, 1994: 3-5). The entity acting rationally could either be an individual, an organisation, or even a society. It is for this exact reason that research which both challenges the assumptions of rational choice theory *and* is able to put forth an alternative will be widely applicable.

A well-known manifestation of rational choice theory at the individual level is modern economic utility theory. According to Loewenstein, within this theoretical framework, it is assumed that human beings rationally calculate their maximum utility before deciding on a certain course of action. Despite an earlier Benthamite form having been more psychologically robust, the way in which the concept of utility has been treated for the largest part of the 20th century has culminated in utility being viewed as equivalent to 'revealed preference'. The main insight of this thread of research is that people simply choose what they prefer (1999: 315). Thus, knowing his or her preference is a prerequisite for an individual to be able to choose.

Research done over the past few decades has attempted to add new dimensions to the utility concept, transforming it into something that once more resembles Bentham's original idea (Loewenstein, 1999: 315-316)[21]. Despite these recent efforts to account for a more diverse range of determinants of utility, human motives that have been codified into utility functions and incorporated into economic analysis remain inadequate: they mostly involve consumption (Loewenstein, 1999: 335). The implication is that preferences that do not clearly pertain to consumption are left out of what is studied when economic decisions are evaluated. Within this view, individuals know their preferences, *and* only preferences of a certain nature are taken into account.

[21] Bentham (1789) did not view consumption to be the only determinant of the experience of utility. In his understanding, utility has nine sources, only two of which pertain to consumption: pleasures of sense and pleasures of wealth. The other sources include pleasures of skill, self-recommendation, a good name, power, piety, benevolence and malevolence.

There are also theories that address the rationality of organisations. Organisations are understood by some – such as Gouldner (1959), Alisson (1971), and Georgiou (1973) – in an instrumental way: they are designed to pursue a set of goals and thus act with intent. From this perspective, organisations are defined by their preferences, which are expressed in terms of clear and consistent shared goals (Giesecke, 1991: 60; Kingdon, 2003: 78; Reed, 2003: 329-331). Ellström pointed out that others, March and Simon (1958), Thompson (1967) and Pfeffer (1981), have elaborated on the theme of these goals being linked to the means of achieving them in an unproblematic way (1983: 232-233). Means for achieving organisational goals in rationalised procedures include cost-benefit analysis, division of labour, job descriptions and evaluation and reward systems (Weick, 1976: 11).

Most modern theories portray political systems as fulfilling an aggregating function by channelling diverse individual and group interests into collective choice (March and Olsen, 1989: 119). The people who require representation within the political system are individuals that have preferences, which are distinct and jointly inconsistent. The political problem is therefore to establish a procedure through which scarce resources may be divided between members of the population (Sen, 1970; Pattanaik, 1971). Within this aggregative view of a political system, political organisations, as instruments of this aggregation, would be evaluated in terms of their allocative efficiency relative to the preferences of citizens (1989: 120). In other words: in order to fulfil their purpose, political organisations a) act rationally when they aggregate preferences and distribute resources, as well as b) assume that the citizens act rationally, in that they have preferences and do pursue them.

The idea of rational choice, in all its pervasiveness across entities, has not remained static. What it means to act rationally has undergone some change. These changes, as well as their relevance to goal ambiguity in organisational decision making and a TOF, will now be discussed.

2.2.2 Various conceptions of rationality

Within the field of organisational decision making, different forms of rationality that have been conceived include bounded rationality (March and Simon, 1958; Lindblom, 1959), contextual rationality (Long, 1958; Schelling, 1971; Weiner, 1976; Cohen et al., 1972; Sproull, Weiner and Wolf, 1978), process rationality (March, 1994), substantive rationality (March, 1994), ecological rationality (Gigerenzer, 1999; 2007) and instrumental rationality (Over, 2007). Although these ideas differ from that of the original rational choice theory to

varying degrees, they could still be argued to belong to a group of theories that view a decision as the act which connects action to goals that were known and understood prior to the act of deciding (March, 1978: 592). Over provides a powerful description that attests to the perceived fundamental nature of goal-directedness, regardless of whether or not the stance is one of pure or formal rationality: "Beliefs and desires are just those mental states that work together to produce action. And action…has to have goals… In fact, if we could not identify some successful goal activity in a 'creature', we could not call it a living thing at all..." (2007: 8).

A discussion on all the various notions of rationality that have been conceived of and researched is not necessary. However, in light of goal ambiguity's relation to rationality being bounded (March and Olsen, 1988: 340; March and Olsen, 1989: 21-52; Weissinger-Baylon, 1986: 38-40; Sarasvathy and Dew, 2005: 385-386), a brief elaboration of bounded rationality is warranted.

Herbert Simon's introduction (1947) of bounded rationality did alter the way decision making was understood, albeit to a limited extent. The process through which a decision is reached remained the same; however, it was recognised that the decision maker, *in situ*, experiences both cognitive (such as computational and attentional) and informational constraints (Tsoukas, 2010: 381). Consequently, decision problems are simplified in reality (Pinfield, 1986: 365; March, 1987: 591).

The concept of bounded rationality gave rise to a strand of descriptive and experimental research within decision making that focusses on how human beings actually make decisions under circumstances of uncertainty (see Kahneman, Slovic and Tversky, 1982). It was suggested that individuals satisfice, rather than maximise, in that they do not choose the best option, but instead settle for an option that is good enough (March, 1994: 18-23). Other heuristics, or short cuts, are understood to help people reach decisions in terms of their goals, in spite of cognitive and informational constraints (Bazerman and Moore, 2009: 4-6; Over, 2007: 6).

The theoretical assumption regarding perfect knowledge in terms of possible courses of action and related future states is challenged by the literature on forms of bounded rationality, however the axiomatic nature of known, pre-existent preference remains intact. Otherwise put, the work on bounded rationality still depends on decision making entities wanting to reach a certain end state.

2.2.3 Summary of the treatment of preferences within rational choice and bounded rationality

The way in which preferences, or goals, are portrayed within pure, or formal, and bounded rationality has been summarised by March (1978) in an abstract way. The following aspects are addressed in his summary (1987: 596):

- Preferences are viewed as 'absolute' in the sense that actions are moral or correct in terms of the preference of the specific decision making entity[22].
- Preferences can only be relevant when actions are taken in terms of them.
- Preferences are stable over time in that by the time the foreseen outcome has been realised, the preference that drove the decision would be unchanged.
- They are consistent – mutually inconsistent preferences cannot be held by one decision making entity.
- Preferences are seen as being precise, in that ambiguity regarding the extent to which an outcome would match a certain preference is ignored
- Preferences are exogenous as they are not influenced by the decision making processes which they govern.

From the discussion in this section it is clear that the idea of rational choice, and its implication that behaviour is instrumental, is entrenched in a variety of academic perspectives, including economics, management theory, organisation theory and political science. Purposeful action is assumed for individuals, organisations and political systems alike. And although bounded rationalitty made a big impact on how choice is understood, it did not change the way the role of goals within decision making is understood.

2.3 The need for treating ambiguous goals differently

2.3.1 Introduction

Speculations and validation regarding ambiguous goals being a form of intelligent behaviour have already been addressed in the introduction. Enough ground has been covered to address the possibilities of an additional normative theory in more depth. The way in which different entities and different organisational processes might benefit from a theory that embraces goal

[22] Herbert Simon expressed the same idea by stating that reason is wholly instrumental; it may be viewed as a gun for hire in the service of any kind of goal (1983: 7-8).

ambiguity will now be discussed. These various possible applications are meant to illustrate the need for and utility of the theory more vividly.

The theory that should be developed will ultimately require a different understanding of intelligence and rationality. It will be shown that conceptions of rationality within which the theory would fit, already exist.

2.3.2 Ambiguous goals and individual intelligence

March's summary of why it could be intelligent to foster ambiguous goals (see section 1.2.2), resonates with Loewenstein's account of the weaknesses of utility theory, which we have seen is a specific manifestation of rational choice theory. Based on a study of why people partake in mountaineering, Loewenstein (1999) argues for a model of motivation behind human behaviour that allows for non-consumption aspects (see section 2.2.1) to be taken into account. Mountaineers engage in this activity not because of the thrill or beautiful scenery, but because it is a reliable medium through which signalling to others and to oneself – regarding identity – can occur (Loewenstein, 1999: 321-325). Similar to the signalling motive, mountaineering also provides individuals with the rare opportunity to gain perspective and a good understanding of "what they want out of life" (Loewenstein, 1999: 331). This perspective is purportedly connected to near death experiences or experiencing primal fear. This last reason is dubbed "meaning-making" (Loewenstein, 1999: 332). March's point that individuals actively construct preferences as they are aware that goals serve as symbols which are interpreted by themselves and others, is strengthened by Lowenstein's account. Thus, if it is assumed that some behaviour is driven by orders that do not rely on pre-existent goals, these behaviours would not stand to grow or progress by relying on tools based on rational choice. A theory that identifies the actual drivers, and which is geared for manipulating these drivers in order for a better outcome to be reached, is needed.

2.3.3 Ambiguous goals and organisational intelligence

2.3.3.1 Intelligence redefined within political organisations

The utilitarian perspective on decision making within political organisations and systems has also been criticised. March and Olsen (1984) argue that, despite the idea of utilitarianism being widespread within modern approaches toward studying political phenomena, an institutionalist model better describes behaviour within this context. Institutionalist theories portray a political structure, a concept defined as the "collection of institutions, rules of

behaviour, norms, roles and physical arrangements, buildings and archives that are…invariant in the face of turnover…and resilient to idiosyncratic preferences…of individuals" (March and Olsen, 1984: 741). The understanding is that this structure drives behaviour. In this view a decision maker seeks to determine what is appropriate, given the situation and the way in which the individual sees him or herself, as opposed to determining what is optimal, given a certain preference (March and Olsen, 1984:741).

According to the rational model, political organisations fulfil an aggregative purpose. This aggregation comes down to firstly allowing for collective choice and, secondly, facilitating the distribution of resources based on this choice. However, political systems could also be viewed as made up of integrative processes and, consequently, as comprised of organisations that are aimed at integration (March and Olsen, 1989: 117-119).

Whereas aggregative theories conceive of citizen preferences as mutually inconsistent and exogenous to the system, integrative theories see the preferences of members as something that is discovered within the system, through deliberation and reasoning aimed at establishing general welfare (Mill [1862] 1950; Pateman, 1970; Pitkin, 1981). Theories regarding jurisprudence, for example, see institutions as not only aggregating but shaping individual preferences, in that they provide opportunities for these preferences to be developed (Selznick, 1957).

An important feature that distinguishes integrative processes from aggregative, or rational, ones is the idea of reasoned debate and deliberation as the means through which with a sense of the common good is achieved (March and Olsen, 1989: 124). Conflicting preferences are treated as a basis for deliberation, rather than a basis for bargaining, and a logic of exchange does not apply. A process from which a mutual understanding, trust or sympathy could emerge, is presumed (Follet, 1918; Habermas, 1975; March, 1988b). In order to achieve this trust or shared preference, activities such as "thought, discussion, debate, education, coercion, the exploitation of accumulated social experience encoded in expertise and rules" are proposed (March and Olsen, 1989: 126). It is thus assumed that in the face of *ex ante* disagreement, public discussion and private thought will lead to better *ex post* solutions than solutions reached by exchange in an attempt to serve prior preferences. An integrative political process would thus benefit from a normative theory that prescribes guidelines for the act of developing goals.

When evaluating the political institutions in terms of their integrative capacity two issues are relevant. First there is the question of whether the process develops the expertise involved in elaborating on the meaning of goals and deliberating on tensions so that shared understanding may be achieved. This competence has both technical elements and elements that pertain to 'wisdom', or an understanding of the community's needs (March and Olsen, 1998: 127-128). More specifically, occasions where deliberation does or does not help, in terms of clarification and finding suitable alternatives, need to be considered (Taylor, 1984; Stinchcombe, 1990). The second question pertains to integrity: does the process ensure that citizens act in accordance with the common good, as opposed to being corrupted by their personal preferences (March and Olsen, 1989: 128). Integrity could stem from organisational arrangements that work towards accountability, as well as training and personal commitment (Friedrich, 1940; Finer 1941).

From this discussion it is clear that the assumptions that underlie integrative theories on political systems and political organisations, as well as the ideas of how integrative processes are evaluated, validate the use of a normative theory that does not assume the pre-existence of goals. By validating the use of such a theory, it validates the need for research on goal ambiguity.

2.3.3.2 Intelligence redefined within profit-driven organisations

In a 1997 study aimed at determining whether entrepreneurs think in a distinct way, Sarasvathy found that successful entrepreneurs have the ability to act without depending on a pre-existent goal. The author brands the reasoning that precedes action, but does not depend on goals, as "effectual reasoning" (2001: 1). Effectual reasoning stands in contrast to causal reasoning or, rational thinking. The author states that the latter begins with the presupposition of a pre-determined goal, and seeks to identify the best way to achieve this end. Effectual reasoning, on the other hand, begins with a set of means "and allows goals to emerge…over time" (2001: 1). This emergence is understood to relate to the varied imagination and aspirations of entrepreneurs. Effectual thinkers are explained, metaphorically, to be explorers setting out to discover unchartered spaces and creating the future rather than trying to accurately predict what will happen (2001: 1). The author is clear on the fact that successful entrepreneurs are capable of both effectual and rational, or causal, thinking. Effectual reasoning is given precedence in the early phases of a venture, and most entrepreneurs struggle to switch from the initial effectual mode to the "first wave" of causal reasoning (2001: 1).

It could thus be argued that 'start-ups', or entrepreneurial ventures, would benefit from research on goal ambiguity that would produce a new normative theory.

2.3.3.3 Intelligence redefined within educational organisations

In 1974, Cohen and March put forward an argument for an alternative approach to viewing decision engineering in educational organisations. They explained that the leadership in universities is confronted by four kinds of fundemental ambiguity, the first of which is ambiguity of purpose. They elaborate on this notion by stating that both the terms in which action may be justified and the goals of the organisation are unclear. Goals are unclear due to the need for them to phrased in a general way. This, in turn, is so that they may gain wide acceptance within the organisation (1974: 195-196).

When purpose is characterised by ambiguity, utlising rational choice theories become problematic (Cohen and March, 1974: 195). The importance of utilising rational choice tools under different circumstances is recognised, however techniques that involve discovering "real" goals, by observing behaviour, have also proven to be largely inefficient. The reasons that are offered for the failure of these approaches include producing inadequate answers as to whether the goal is uniquely consistent with the behaviour, and whether a goal inferred from past behaviour is still useful in predicting behaviour in the future (Cohen and March, 1974: 196).

The basic argument is that too often a model of intent is imposed on organisations that act in another way (Cohen and March, 1974: 197). It is therefore necessary to develop a perspective that may provide guidance to leaders within "ambiguous organisations" (Cohen and March, 1974: 203). These findings are supported in a more recent publication on the different forms of educational organisation, in which the author argues that in the situations that are best described by an 'anarchistic model'[23] (Ellström, 1983: 234), theories that incorporate play and foolishness are necessary (Ellström, 1983: 237). This model would be useful in circumstances where goals are unclear or cause disagreement (1983: 237).

From this it follows that educational organisations are in need of a normative theory that does not presuppose the existence of clear goals, and that they would therefore benefit from research on goal ambiguity that is able to produce this theory.

[23] The three notions that constitute this anarchistic model are those of organised anarchies (for which Cohen et al., 1972 as well as Cohen and March, 1974 are cited), garbage cans (à la Cohen et al., 1972) and loosely coupled systems as Weick conceived of them in 1976.

2.3.3.4 Intelligence redefined in order to enable organisational change, organisational learning and information sharing

Specific processes in organisations can be discussed to show, in a concrete way, that a new normative theory could make a difference. Organisational change, as one example, is best enabled when rational processes, such as long-term planning and cost-benefit analysis, are supplemented by processes that do not comprise a forward-looking logic. Any innovative actions are bound to be perceived as involving high risk when analysed with expected value calculations. This means that introducing new ideas at a rate which is sufficient to sustain the organisation, becomes a problem (March, 1981: 572). The introduction of new ideas is more likely to be fruitful when other ways of evaluating the change can, in a sense, protect new ideas from rational cynicism. Fostering goal ambiguity may lead to additional evaluative forms, because the perception of the reliability of rational processes decreases when it is recognised that goals are ambiguous. This recognition will allow for action to be taken without the aid of rational calculation (March, 1981: 572-574).

Another process that may be improved by a normative theory that embraces goal ambiguity is learning. The idea of rational choice implies a certain kind of learning within organisations. This idea describes preferences, the behaviour of individuals, organisational choices and environmental responses as forming a closed cycle of connections: each element causing some form of change in the next (March and Olsen, 1988: 337). However, research has shown that these linkages are often not how learning takes place (March and Olsen, 1988: 340). One example of how behaviour deviates from the rational learning cycle can be seen in the ways in which different individuals develop different interpretations of a common experience (March and Olsen, 1988: 343). Another factor that impacts the cycle is decision makers' ability to hold an abundance of preferences at the same time: which of these preferences are viewed as being most important at a certain point in time determines the lesson (March and Olsen, 1988: 345). The authors themselves explicate that a theory that recognises the ambiguity faced by decision making entities, will be of use to those wanting to engineer for learning (March and Olsen, 1988: 357).

The third example deals with the function of communication in organisations. Most treatments assume that for choices to be executed rationally, the relevant, most accurate information needs to be shared effectively. The sender must fully comprehend the message and then transmit the message with great precision (March, 1988a: 400). However, where preferences are ambiguous, selecting the information contained in a message is more

difficult. Decision makers do not know what they will have to know (March and Sevon, 1988: 435). In such a situation, information gathering may be significant both as an investment, the future pay-offs of which are uncertain, and as an aid in the process of defining preferences (March, 1988a: 400).

From the three arguments above it follows that theories on the engineering of change, learning and communication could benefit from research on goal ambiguity. This research would have to be conducted in such a way that goal ambiguity is understood to the extent that normative theorising becomes possible.

2.3.4 Appropriate conceptions of rationality

If one can accept goal ambiguity, as exhibited by individuals and a range of different kinds of organisations, as an indication of intelligence, it means that rationality *could* be conceived of in a less narrow way. Of course the acceptance is not encouraged blindly, but rests on behavioural evidence and viable speculation on why individuals and organisations need to foster ambiguous goals under certain circumstances.

Indeed, notions of rationality that do not presuppose the existence of (consistent) goals have been developed as the result of behavioural research (March, 1978: 592-593). Adaptive rationality (Cyert and March, 1963; Day and Groves, 1975) emphasises experiential learning and thus focusses on backward looking reasoning. Posterior rationality (Hirschman, 1967; Weick, 1969; March, 1972) views the discovery of intentions as an interpretation of action, rather than something which is conceived of or exists prior to action being taken. When trying to engineer for decisions based on these forms of rationality, the majority of existing tools are rendered useless. Traditional tools rely on calculation and pre-existent preferences, whereas these notions of rationality do not (March, 1987: 593). It is clear that a normative theory on goal ambiguity, especially those aspects that pertain to the post hoc inference of goals, would enhance posterior rationality.

2.3.5 Summary

It is clear that a wide range of organisations would be able to put a normative theory that does not assume the pre-existence of clear goals to good use. It also becomes more reasonable to accept, since it is clear that such a theory could potentially impact processes that are key in most organisations: innovative processes, learning processes and communicative processes. However, such a theory can only be developed once a rich volume of valid insights into goal

ambiguity have been achieved. Once research that grows these insights has been done, the knowledge produced would fit in with existing forms of rationality, such as posterior rationality.

It is now necessary to discuss existing attempts at building an extended normative theory of organisational decision making. Through this discussion it will become clear that this thesis is not isolated or removed from academic development. The discussion will also produce themes that have been developed and that need to be researched in more depth.

2.4 Starting point of a new theory

March's idea of a technology of foolishness (TOF) is a good framework from which to develop a normative theory accepting of goal ambiguity. The argument around this point was presented in the introduction chapter. The TOF will now be discussed in more depth, so as to achieve a better idea of the research that is needed. Research that has followed from a TOF will also be discussed. Finally, themes that need to be researched will be identified from the existing attempt, so as to enable a convergence of research energy.

2.4.1 A technology of foolishness explained

We have already seen (section 1.2.3) that a TOF, as conceived of by March (1972), would embrace goal ambiguity and would, amongst other things, induce action that is independent of a rational thought process. The need for a TOF has been discussed in the preceding sections of this chapter. The focus now falls on what exactly March means when he refers to a TOF.

Two themes could be said to form the backbone of the idea. The first theme is that of sensible foolishness. Multiple foolish options are available. Consequently, a decision making entity needs ways of determining which of the foolish options could lead to the creation of worthwhile, or as March calls them, 'interesting' goals. March goes on to suggest three ways of coming across sensible foolish options (1972: 422-424):

- Imitation; where or who to imitate is important to establish.
- Coercion; circumstances suited to ethically acceptable coercion need to be specified.
- Rationalisation, which takes place retrospectively; where and when it is appropriate to test for the feasibility of goals needs to be determined.

March argues that after having sufficiently challenged the primacy of pre-existent goals, imitation, coercion and rationalisation would seem less problematic or undesirable (1972: 424).

The second important theme is play. This concept is contrasted with reason. Play presents the opportunity to adopt an attitude or mode of thinking that is conducive to experimentation and the relaxation of the assumptions of a rational thought process. March defines playfulness as: "the deliberate, temporary relaxation of rules in order to explore the possibilities of alternative rules" (1972: 425). Play and reason may be behavioural competitors that require different mental modes; however, they are functional complements. Not all organisations or individuals will be equally competent at both. Thus, the problem is to establish the optimal combination of both styles (1972: 424-425).

To induce a playful attitude, or to motivate organisations to experiment, March suggests the following (1972: 425-428):

- Goals need to be treated as hypotheses, rather than something which is unmalleable.
- Intuition needs to be treated as 'real', as opposed to being treated as something that skews judgement, something that should be ignored and eliminated from the process.
- Hypocrisy – a situation where actions and verbal formulations are asymmetrical – should not be viewed as ethically problematic, but should be treated as a transition.
- The content of memory needs to be scrutinsed critically as different interpretations of how an organisation came to be in a certain position should be explored. This would enhance learning.

A TOF would thus involve guidance regarding which of a great many foolish options are relatively worthwhile, as well as consisting of theories, models and tools that centre on how to induce "play" in organisations.

It is advocated here that there are two ways of interpreting the relationship between these themes. Firstly, they may be seen as dimensions of a TOF. If this view is adopted, March could be understood as suggesting highly abstract courses of action, (imitation, coercion, rationalisation), alongside engineering for playful attitudes. In this case, the combination of the two would induce acting without having to think rationally. Another way in which sensible foolishness and play could relate is that a playful attitude is that which has to be adopted when utilising one of the three mentioned courses of action. Play could be seen as

the attitude than enables the operationalisation of the higher aim of acting before you think, achieved *through* imitation, coercion or engaging in rationalisation. Within this view, the frames that help people to adopt this playful attitude are treating goals as hypotheses, etc.

Regardless of which of the two interpretations is closer to March's intention, the author's conception of this new technology, as well as his speculations on how theories and models that make up the technology may develop, remain highly abstract. In order to establish a sense of the practicalities involved in researching goal ambiguity, empirical research that has since built on his formulation will be discussed.

2.4.2 Empirical attempts

Very few studies that are aimed primarily at contributing towards a TOF exist. When the phrase "technology of foolishness" is searched for on the Google Scholar search engine, along with the specification that the term must feature in the title of the article, three articles are found, two of which overlap in content and have been written by the same authors. This search was conducted for the last time on 31 October 2012. Presumably, more research has been done on the concept of "serious play" or "serious playfulness" as a feasible strategy within organisational context. As this thesis focusses on how to research goal ambiguity in such a way that a TOF might be developed, texts that are simply on the topic of play are considered to fall outside the scope. The two studies that were found will now be discussed in depth..

2.4.2.1 'Toward a Technology of Foolishness: Developing Scenarios through Serious Play'

Objectives and theoretical concerns

In this article Jacobs and Statler seek to develop a new conceptual framework for scenario planning by incorporating serious play. They argue that this incorporation will transform scenario development in such a way that it becomes part of a TOF (2006:79). Traditionally, scenario planning is used to address both the ambiguity and the uncertainty which arise due to contingencies within the focal organisation's environment. It is defined as "focussed descriptions of fundamentally different futures presented in coherent script-like or narrative fashion" (Schoemaker in Jacobs and Statler, 2006: 78). Although scenario planning involves conceiving of diverse versions of the world, this is usually done via coherent narratives that reduce ambiguity rather than embracing it (Jacobs and Statler, 2006: 79).

The theoretical work being built on in the process of conducting the research also includes the concept of play. It is stated that the motivation for researching play relates to March's speculation around the way in which play relates to foolishness (Jacobs and Statler, 2006: 80).

The authors simply present the reader with the concept of a TOF as conceived by March (Jacobs and Statler, 2006: 80). The idea of play, on the other hand, is discussed by viewing it from a psychoanalytic perspective, as well from the perspective of educational psychology. These theoretical frameworks essentially suggest that play is important in terms of developing cognitive skills that relate to the creation of meaning, the application of logic, as well as social adaption (Jacobs and Statler, 2006: 81). By integrating these perspectives with the theory on scenario development the authors arrive at two insights. Firstly, scenario planning might be considered a form of play, even though this possibility has not yet been explored academically. Secondly, if being good at adopting a playful mode impacts adaptive variations, scenario planning that is playful might aid the development of knowledge and skill in the organisation (Jacobs and Statler, 2006: 82 - 83).

In the process of developing an operationalisation of play within the process of scenario planning, the authors report on findings related to play that were produced by studying organisations. Roos, Victor and Statler (2004) are credited with conceiving the notion of serious play: "a mode of activity that draws on the imagination, integrates cognitive, social and emotional dimensions of experience and intentionally brings the emergent benefits of play to bear on organisational challenges (Roos, Victor and Statler in Jacobs and Stattler, 2006: 82). Previous empirical studies have shown that (2006: 83):

- Playful action on a strategic level is conducive to innovation and the creation of meaning.
- Utilising dimensional objects and thinking analogically have had positive effects on strategic processes.

The case study

The authors report on a case study performed in a wireless telecommunications company. Due to market changes and a merger with another company, the corporate strategy team of the company experienced ambiguity in terms of its post-merger identity, as well as regarding its role within the company. In February 2002, the corporate strategy team arranged a two day long intervention that would serve the purpose of exploring the company's identity and

challenges in relation to the environment and strategic options. The researchers facilitated a playful process that included utilising "more than 3000 toy construction materials" (Jacobs and Stattler, 2006: 84). Participants constructed models of their organisation, both individually and jointly, by using these objects, resulting in mental models being externalised to a certain extent (Jacobs and Statler, 2006: 83- 88).

Conclusions

Creative interaction and symbolic expression with the physical pieces of the model aided understanding of problems. It also facilitated the critical reflection on and change in understanding of crucial aspects, such as the company's brand values. Apart from this outcome, participants experienced future scenarios in a multi-dimensional way, thereby tapping into kinds of knowledge and sensory experiences that are not usually capitalised on during strategic thinking or conversations. This, according to the authors, enhanced the experience of ambiguity in the situation (Jacobs and Statler, 2006: 86-87).

The main conclusion drawn may be summarised as follows: playful activities, utilised within a process largely guided by reason, become a space within which adaptive variation can emerge. "A modus of intentionality that does not privilege necessary conclusions, but…remains…open to emergent possibilities contributed to the effectiveness of this scenario planning intervention" (Jacobs and Statler, 2006: 88).

The authors suggest that the following phenomena be researched so as to enhance the understanding of playful processes: the impact of a variety of different media (simulation, three dimensional objects, flip charts) on scenario planning; the varying intentional modes – from purely rational to foolish – at different stages of the process of developing scenarios; whether novel scenarios can, in general, be constructed through serious play; and the importance of organisational identity for scenario planning, as what we consider inside and outside of ourselves becomes ambiguous during play (Jacobs and Statler, 2006: 88-89).

2.4.2.2 Reflection on 'Toward a Technology of Foolishness: Developing Scenarios through Serious Play'

Despite this thesis not being focussed on the best means and processes for scenario building, there are clear implications of this study for the interest in ambiguity in decision making.

March's concept relates to the content of the article in that his justification for the need of a TOF seems to provide the researchers with a rationale as to why a different approach within scenario planning might be fruitful.

The authors do not explicitly utilise March's suggestion of keeping foolish behaviour sensible by paying heed to imitation, coercion or rationalisation. From the data it is inferred that the participants in the study did at one stage engage in rationalisation as they were reconsidering the role of their brand value. The brand value which once was held to embody sacred objectives they were meant to strive towards, was perceived very differently after participants had argued about how it motivates them, but also prevents them from making progress (2006: 86). Had the authors' primary objective been to contribute to a TOF, rather than to expand on the literature on play or scenario planning, they might have expressed this point themselves.

Lastly, even though the authors of this article rely on March situating the concept of play within his idea of a TOF, they pay no attention to his suggestions regarding how to induce play. In a sense, they outsourced the theory and mechanisms around play to psychoanalytical and educational psychology perspectives. This strategy seems to have worked, as it provided a more detailed and academically grounded framework within which they could interpret the data.

In summary, Jacobs and Statler have contributed to a TOF by showing how an adjusted approach towards scenario planning may form part of such a technology. Adjustments include:

- The adoption of a certain modus of intentionality in which necessary conclusions are not assumed, thereby allowing for the emergence of possibilities;
- The use of physical objects during the process of planning;
- The incorporation of metaphors as aids to understanding problems.
- The perception and expression of (organisational) identity is impacted and exercised during play.

2.4.2.3 'Entrepreneurial logics for a technology of foolishness'

Objectives and theoretical concerns

Sarasvathy and Dew aim to contribute to a TOF by determining the kind of logic is echibited by successful entrepreneurs. They seek to contribute as they side with March on the fact that ambiguous goals could be considered sensible: "…viewing ambiguity as a necessary cost

imposed by the information processing attributes of individuals fails to capture the extent to which similar styles in preferences would be sensible, even if the human organism were a more powerful computational system" (2005: 386). The aim is to describe the logics that are embedded in a means-driven process through which goals are generated (2005: 392).

The empirical work

Two separate studies on the behavior of entrepreneurs are synthesised to form the empirical data from which the thinking patterns are inferred. Sarasvathy and Dew found that entrepreneurs are capable of switching from traditional economic ways of thinking to ways that do not adhere to a rational choce framework whatsoever. Indeed they often act in the absence of clear goals (2005: 386-387). Apart from simply presenting this as a descriptive argument, the authors also explain that it is being able to act without having clear preferences that enables these entrepreneurs to innovate (Sarasvathy and Dew, 2005 387).

The first study (Sarasvathy, 1998) is a protocal analysis of what expert etrepreneurs would do to establish a new firm within an existent market (Sarasvathy and Dew, 2005: 388). This study is referred to in section 2.3.3.2. Think out loud verbal protocals were used to develop a model that describes entrepreneurial expertise. 27 founders of successful companies, ranging in size and residing within different industries were given the same problem set to solve. The set consisted of 10 typical decisions (Sarasvathy and Dew, 2005: 388). What resulted was a model referred to as effectuation (Sarasvathy and Dew, 2005: 388). The differences between effectual thinking and rational thinking were discussed in section 2.3.3.2 and will therefore not be discussed in detail here again. What should be added is that effectuaters typically think in terms of affordable losses as opposed to focussing on expected return when it comes to financial decisions. Effectual thinking entails being open to surprises instead of avoiding them. It emphasises partnerships and pre-commitments over competitive analyses (Sarasvathy and Dew, 2005: 388).

The second study sought to determine the nature of the strategic action that lead to the development of a new firm in a new market. Four threads of technological development – that started in 1945 - are analysed historically to produce an understanding of how the RFID wireless barcode tags were invented (Sarasvathy and Dew, 2005: 388). Interestingly enough, apart from the model of effectual produced by Sarasvathy in 2001, the GCT was also used. What emerged from an initial garbage can situation was temporal networks between different actors (Sarasvathy and Dew, 2005: 388). The historical data as well as the interviews yielded

the insight that: "…ambiguity allowed a variety of stateholders to come together in a variety of ways" (Sarasvathy and Dew, 2005: 388).

Conclusions

Based on the data from the two studies, the authors conclude that entrepreneurs exhibited all of the elements of March's original notion: goals were treated as hypotheses, intuition was taken seriously, hypocrisy was tolerated, what memory provided was not treated as the only truth, experience was treated as a theory (Sarasvathy and Dew, 2005: 392).

The entrepreneurs exhibited the tendency to rely on a logic of identity as opposed to a logic of preferences. Action was explained in terms of identity, rather than in relation to preferences (Sarasvathy and Dew, 2005: 393). This kind of reasoning is reported to work well even if action is vaguely related to outcomes, and can be performed without ordering preferences (Sarasvathy and Dew, 2005: 393). Expert entrepreneurs are good at bulding and sustaining strong identities (Sarasvathy and Dew, 2005: 397).

Entrepreneurs also followed a logic of action. Sarasvathy and Dew constrasts this with a logic of belief (2005: 397). This means that the subjects relied on "direct action upon the world" (Sarasvathy and Dew, 2005: 398). The tendency is to act and learn, impact and learn from what happens, as opposed to investing in determining probabilities and producing accurate predictions (Sarasvathy and Dew, 2005: 398).

Lastly, a logic of commitment is employed, instead of a logic of transaction. Transaction implies contract between parties that have pre-existent goals (Sarasvathy and Dew, 2005: 401). Succesful entrepreneurs do not assume that people they engage with hold pre-existent goals. They assume docility on the part of other actors and focus on stakeholders as opposed to resources (Sarasvathy and Dew, 2005: 401).

2.4.2.4 Reflection on 'Entrepreneurial logics for a technology of foolishness'

The work by Sarasvathy and Dew builds directly on March's idea of TOF, and also does so explicitly. Of the four ways is which March suggests organisations can experiment, Sarasvathy and Dew choose to focus on the statement that goals need to be treated as hypothesis.

The contribure to a TOF by showing that succesful entrepreneurs use a strong sense of identity as opposed to a strong sense of what they want, or what their goals are, to make decisions. The authors also show that the perception that an infividual can make an impact on

world exists. This perception leads the world to be viewed less as an externally determined entity, the conditions within which need to be predicted. Lastly, entrepreneurs do not assume that the people they collaborate with have lear fixed goals. Therefore, flexible commitments are favored over contracts.

These assertions are practical manifestations of how goals can be treated as hypotheses and that this behavior is beneficial in a certain context. Sarasvathy and Dew succeed in providing some of the first bulding blocks for a TOF.

2.4.3 Synthesised understanding of a TOF

After having discussed March's initial formulation and having incorporated the limited research that has been done thus far, the important themes that have emerged and need to be researched in more depth can now be inferred. These themes will be used to judge whether an insight on goal ambiguity fits within the framework of a TOF. The themes distilled from the discussion in this section are: symbolic expressions (such as metaphors), tactile or visual experiences, and/or the role of intuition and emotional expression in decision making processes, the role of identity (that of the focal decision maker and the people he or she cooperates with), the idea of enacting the world.

2.5 Summary

It has been argued that there is a need for a normative theory on goal ambiguity, where this ambiguity is not sought to be removed, but is to be embraced. What is meant by goal ambiguity has been clarified in order to establish an understanding of the phenomenon which needs to be researched. The main thrust of the argument is that although ideas of rational choice, and therefore the idea of pre-existent goals, pervade social theory, behavioural accounts have shown that decision making entities make decisions and take action despite goals very often being ambiguous. This finding has sparked speculation as to whether this might be intelligent behaviour. Empirical studies have tested for these speculations, with the consequence that at least some of them have been confirmed. Despite the way in which ambiguity has contributed to new conceptions of rationality, such as posterior rationality, and despite there being proof that a need for a TOF exists in many different organisational settings, relatively little effort has been invested in researching a TOF and its take on goal ambiguity. Until this research has been conducted fruitfully, a fully fledged TOF cannot be developed. The limted attempts that exist do provide insight on how to engineer for the

adoption of playful attitudes and the suspension of traditional consequence-based ways of thinking.

The following themes were found to be a good starting point in terms of research on goal ambiguity that is in keeping with a TOF: the role of emotional expression, or intuition; the incorporation and exploitation of visual and tactile experience; and symbolic expression as a vehicle for conveying multiple meanings; the cultivation of a strong identity as opposed to the cultivation of strong goals; the decision maker's ability to effect the world, or to enact it.

It is now necessary to systematically account for and analyse the sample of case studies that apply the GCT. Through this account, it will be established whether insights that a) pertain to goal ambiguity were produced and b) whether they may be related to the dominant themes within a technology of foolishness. The answers to these questions will be illuminated in an attempt to establish whether the nature of a study and its approach to research, makes it more or less likely to produce insight on goal ambiguity.

Chapter 3: In Search of Insight on Goal Ambiguity I

3.1 Introduction

In this chapter the focus shifts to the pursuit of insight on goal ambiguity that is suited to a technology of foolishness (TOF). The necessity of the development of a TOF, and by implication the research needed to understand goal ambiguity, was addressed in chapter two. The reasons for evaluating case studies in which the garbage can theory (GCT) is applied were presented in chapter one. In turn, this chapter will provide a systematic account of case studies within which the GCT is applied to organisational decision making. This chapter focusses specifically on the studies that form part of work that constitute the garbage can research programme (GCRP). Therefore, a second, enabling aim of the chapter is to argue and conclude on publications that should be viewed as part of this programme.

After analysing the studies, their distinct contributions will be aggregated. This aggregation will clearly illustrate whether the application of the theory was fruitful in terms of goal ambiguity.

3.2 What constitutes the garbage can research programme?

Bendor et al.'s definition (2001: 185) of what constitutes the GCRP includes: 1) the original 1972 article, 'A Garbage Can Model of Organisational Choice'; 2) *Ambiguity and Choice in Organisations* (1976a); 3) *Ambiguity and Command* (1986); 4) 'The New Institutionalism: Organisational Factors in Political Life' (1984); and 5) *Rediscovering Institutions* (1989). *Leadership and Ambiguity* (1974) is not included in the grouping. This section serves as a verification of this definition.

Bendor et al. argue for these specific publications to be viewed as part of this package due to the causal relationships between some of these publications. The 1972 article, 'A Garbage Can Model of Organisational Choice', is argued to have led to the 1976 book on ambiguity and choice (2001:169). The same idea applies to the relation between the 1984 article on new institutionalism and the 1989 book, *Rediscovering Institutions* (2001: 169). *Rediscovering*

Institutions is also reported to be connected to *Ambiguity and Choice in Organisations*. Firstly, some of the content within *Ambiguity and Choice in Organisations* features directly in *Rediscovering Institutions*, and, secondly, *Ambiguity and Choice in Organisations* is said to be the most cited publication within *Rediscovering Institutions* (2001: 185). In addition to these quantitative measures, Bendor et al. point towards the thematic thread, namely the "juxtaposition of ambiguity and socially constructed order" (2001: 184), running through these publications. Despite also referring to the titles of the publications as being a binding factor (2001: 184) they do not treat Cohen and March's 1974 book, *Leadership and Ambiguity*, as part of their grouping.

To verify the validity of Bendor and his colleagues' definition, the extent to which all the mentioned publications build on the GCT as well as the nature of this dependence was studied. Diverse measures, or indicators, are taken into account to produce a granular analysis. These indicators include thematic trends, citations and the use of garbage can language. As the nature of the publications and their relation to the GCT differ, different indicators are important when analysing each of the respective publications. It is more complicated to situate the GCT within the two publications on institutionalism.

By isolating the garbage can's influence in each of the publications and looking at the theoretical body of each publication in its entirety, it may be determined whether viewing these publications as garbage can research is, in fact, apt. The publications are dealt with in chronological order.

3.2.1 Leadership and Ambiguity

It is clear, albeit in a superficial way, that the GCT features in this volume, as terms like 'garbage can' and 'anarchy'[24] are used in the titles and subtitles of some of the chapters. To make sure that nothing on the theory has been left out of the study, further assessment of the content of the chapters was done to see whether these ideas feature in other chapters. The publication has nine chapters, three of which contain these indications of relating to the GCT: chapter five, 'The Process of Choice'; chapter six, 'The Logic of Choice in American Colleges and Universities'; and chapter nine, 'Leadership in Organised Anarchy'. An in-depth study of these chapters allows conclusions to be drawn as to whether the volume can be labelled garbage can research.

[24] The relation between the concepts 'garbage can' and 'organised anarchy' was addressed in the introductory chapter.

Chapter nine has been found not to rely on the GCT for the majority of its arguments and content. Within this chapter, the authors discuss four kinds of ambiguity that confront leaders – those of purpose, power, experience and success (Cohen and March,1974: 195); extend advice on tactical administrative action within an 'anarchic' situation; and then go on to present and discuss the idea of a TOF. As for the tactical advice, two points relate to the GCT: "overload the system" and "provide garbage cans" (Cohen and March,1974: 210-211). The third prominent section on a TOF is made up of content that features in an article titled 'Model Bias in Social Action' (March, 1972). Exactly the same content on this topic is also presented in chapter 5 of *Ambiguity and Choice in Organisations*. Apart from the theme of post hoc rationalisation, the ideas have nothing in common with the GCT.

The content of the two remaining chapters deals with the GCT. Chapter five presents exactly the same ideas and empirical research as discussed in 'A Garbage Can Model of Organisational Choice' (Cohen et al., 1972: 17; Cohen and March, 1974: 88-91). The authors recognise this to some extent (Cohen and March, 1974: 87). The content of chapter six centres on the verbal version of the GCT, and contains the same research presented in chapter nine of *Ambiguity and Choice in Organisations*. It is taken for granted that the particular environment being studied, namely American tertiary education organisations, embodies organised anarchies, and therefore exhibit garbage can decision processes. The authors then, in a sense, extend the GCT by examining the theory's implications for power, or formal authority, as well as less significant decisions, in these settings.

Based on three measures used by Bendor et al., the direct overlap of content, the title of the publication and the theme of socially constructed order[25], this publication should have qualified to be part of *their* definition of a GCRP. It has also been recognised elsewhere that the work in *Leadership and Ambiguity* "builds on" that which is reported on in the 1972 article and that *Ambiguity and Choice in Organisations*, in turn, is built on *Leadership and Ambiguity* (Moch and Pondy, 1977: 353). However, despite these measures and a perceived causal relation contributing positively to the publication's inclusion, it is argued here that other theoretical claims contribute significantly to the content of the publication – as has been shown by discussing the content of chapter nine and by showing that the bulk of the content does not relate to the GCT. It would therefore be a misnomer to view the publication as a whole as garbage can research.

[25] See chapter nine for examples.

3.2.2 Ambiguity and Choice in Organisations

The volume is made up of seventeen chapters, twelve of which each contain a report on a case study. To be able to conclude whether the volume, as a whole, can be described as garbage can research, all of the chapters that report on case studies have been studied closely. The five theoretical chapters are not considered in depth. The main reason for this decision is that one of the five, chapter two, presents the same research reported on within 'A Garbage Can Model of Organisational Choice'. It is thus clear that, to some extent, the garbage can has been brought to bear on the theoretical section.

Dyckman found that the volume essentially constitutes an exploration of how non-intentional factors lead to actions and outcomes of decision making processes (1981: 292). Moch and Pondy agree as they view the content as illustrative of non-rational aspects of organisational choice. They also state that the publication, at least in part, serves the purpose of testing for the GCT (1977: 351). The same authors view the main themes to be the separation of process from outcome, the concept of slack, the determinants of participation, and time dependence (Moch and Pondy, 1977: 355). As has been mentioned, Bendor et al. see the juxtaposition of socially constructed order and ambiguity as an important theme (2001: 184).

Ten of the twelve empirical studies reported on in the volume can be said to relate to the original version of the GCT in a direct way. A direct relationship refers to one of the following three options: 1) the data is structured according to the components of the theory; 2) the presupposition that organised anarchy reflects the actual environment and/or garbage can processes are present underlies, or inspires, the study; 3) both options one and two. Six of the ten directly related studies – half of the total number of studies – make use of the GCT by imposing the components onto data. The data is mostly qualitative. In these studies, the data is 'read' through a garbage can lens, transforming it into a body consisting of solutions, problems, participants and choice opportunities. These six studies are reported on in chapters six (Olsen, 1976a: 82-139), seven (Rommetveit, 1976: 140-155), eight (Kreiner, 1976: 156-173), eleven (Weiner, 1976: 225-250), fourteen (Olsen, 1976c: 314-337) and sixteen (Christensen, 1976: 351-385). The way in which the GCT relates to the two studies presented in chapters six and seven, respectively, is somewhat complicated. It is not clear whether the data gave rise to the theory, or whether the theory's descriptive capacity is attested to by the data. The results of the study reported on in chapter six were first published by Olsen in 1971. It is cited as one of the works that contributed to the GCT being conceived (Cohen, March, Olsen, 1972: 2). Yet, at the end of the discussion, Olsen states that this study points towards a

certain category of choice situations that the GCT is competent at explaining (Olsen, 1976a: 134). From this it would seem that this study, in an earlier form, contributed to the theory being conceived and was then later presented as attesting to the same theory's descriptive capacity. The same applies to research done by Rommetveit (Cohen et al. 1972: 2), which was later accounted for in chapter seven of *Ambiguity and Choice in Organisations*.

Four other studies, those discussed in chapters nine (Cohen and March, 1976: 174-205), twelve (March and Romelaer, 1976: 251-276), thirteen (Olsen, 1976b: 277-313) and seventeen (Enderud, 1976: 386-396), also relate to the GCT in a clear way, but are less dependent on the theory. These studies use the idea of garbage can decision processes and/or the idea of organised anarchy as a presupposition, often one amongst others, in researching organisations. One could argue that the results of these studies can be viewed as an expansion on the GCT; however the authors do not explicate how the results could be built into the original theoretical framework. These findings resonate with those of Moch and Pondy who have argued that the theory is not explicitly linked to the case study data in many of the chapters (1977: 355).

In both of the categories discussed above, the theory is married to the context by arguing that the empirical situation matches the description of organised anarchy. Some studies emphasise one of the three characteristics more than the others. As a result, the concept is not brought to bear on the various data sets in exactly the same way.

On the grounds of ten out of the twelve studies pertaining to the GCT (six of them in a pertinent way) and the original 1972 article's text having been reproduced within the volume, it is argued that this volume should qualify as garbage can research. This, however, is not argued because of a "causal relationship" between the two publications: 1) less than half of the chapters could be seen as building on the original article's theory in a clear way, an assertion supported by Moch and Pondy (1977); and 2) it appears as if the causal influence, too an extent, flows *from* certain content within the 1976 publication *to* the 1972 article.

3.2.3 'The New Institutionalism: Organisational Factors in Political Life'

The various sections within the article, including the problematic elements of modern political theories, the institutionalist suggestions in terms of shifting emphases, and, finally, suggestions on theoretical development, have been analysed carefully. A close reading of this publication is necessary as the GCT's influence is less immediately visible within the publications on institutionalism.

Of the three ideas that should be incorporated in the way political phenomena and organisations are studied, two are dependent on the GCT for their empirical legitimacy. The idea of political historical complexity builds on 'A Garbage Can Model of Organisational Choice' (Cohen et al., 1972) when the authors state that many elements are found interacting in unexpected ways – 'solutions' look for 'problems' (March and Olsen, 1984: 740). However, other sources are also cited to substantiate this claim. *Ambiguity and Choice in Organisations* is cited as empirical proof for the fact that these interactions take place within an environment that is not value neutral (March and Olsen, 1984: 740). Furthermore, 'A Garbage Can Model of Organisational Choice' is relied on when it is suggested that within this complexity, simultaneity groups different elements together, thereby creating order. The authors also present the reader with the idea of a structure that is heavily influential in terms of actions and movements within an organisation (1984: 740). They do not cite the original article, although it is clear that what they are referring to mirrors the concepts of 'decision structure' and 'access structure' *à la* Cohen et al. (1972).

With the third idea, politics as an interpretation of life, the authors challenge the primacy of decision outcomes as the sole objective of decision making (1984: 741). The empirical thrust for this argument comes from work featured in *Ambiguity and Choice in Organisations*. This research purportedly shows that "pleasure lies in the process" (1984: 741-742). The garbage can does not, however, feature in their short account of the way forward when it comes to this idea.

It is argued that of the six forms of institutionalist order that are suggested, the following forms were influenced by research done on the GCT: temporal order, normative order and symbolic order. This influence is recognised explicitly in one of the three cases.

It is justified to view the idea of time or simultaneity as a source of order, as a direct derivative of the original garbage can article. The following quotations are presented as evidence: "Such a view of organisational choice focusses attention on the way the meaning of a choice changes over time. It calls attention to the strategic effects of timing, through the introduction of choices and problems, the time pattern of available energy and the impact of organisational structure" (Cohen, March & Olsen, 1972: 2). Also: "The critical element of garbage can processes is that there are elements of temporal sorting. Linkages are formed, in part, because of simultaneity" (March, 1994: 204). In light of these statements from publications produced by the same authors, it is somewhat odd that the garbage can is not

cited when the authors provide an account of temporal order (1984: 743). Others such as Dyckman (1981: 296) and Moch and Pondy (1977: 358) have also understood the garbage can's key trait to be the importance of timing.

A similar peculiarity is found when evaluating the account of normative order. From the description (1984: 744) it becomes clear that the authors should have refered to certain chapters in *Ambiguity and Choice in Organisations.* Normative order involves the impact of norms on decision making, the way these norms materialise into rules and roles in organisations as well as the way societal norms change over time (Rommetveit, 1976; Cohen and March, 1976; Stava, 1976; March and Romelaer, 1976; Olsen, 1976(a); Olsen, 1976 (b)).

With regard to symbolic order, the authors cite *Choice and Ambiguity in Organisations* as proof that this form of order has an empirical base, although no mention is made of specific chapters or studies (1984: 744). This makes it difficult to infer the theory's influence.

The ideas of historical order, endogenous order and demographic order do not have significant ties with the GCT.

In summary 'The New Institutionalism' article, when postulating a new way of studying political phenomena, depends significantly on the original GCT as well as on the research presented in *Ambiguity and Choice in Organisations*. Of the three attentional shifts – portrayed as forming the basis of new institutionalist theory – two rely on the original garbage can article's main claims and subsequent research: the idea that political history is complex and the idea that politics must be seen as an interpretation of life. Of the six suggested forms of order, three rely on the GCT: temporal order, symbolic order and normative order. Bendor et al. support this summary (2001: 185). In addition to this analysis, the authors cite the garbage can – both the original article and *Ambiguity and Choice in Organisations* (no specific chapters) – as an example of research that fits in with the shift towards recognising complexity and the importance of interpretation.

Based on the stated relationships, it is clear that this volume *could* be considered to form part of a GCRP. However, whether it should be made to fit such a category is not clear. To an extent, by including this publication in what they deem garbage can research, Bendor et al. *create* the space to criticise the original article for having produced a "sprawling theoretical framework" (2001: 184). Olsen argues that Bendor et al.'s way of relating the new institutionalism to the GCT makes it difficult for dialogue to take place and that there exist

significant differences between the two theories' subject matter and the way in which they view organisations. The garbage can is argued to be more akin to bounded rationality[26], whereas the new institutionalism proposes a different form of logic: rule based (2001: 193).

It would be more productive to argue that the garbage can plays a significant role within a revitalisation of institutionalist perspectives on organisations (Selznick, 1996: 275), but that these perspectives have a history of their own, and have been shaped significantly by other publications, such as the *Leadership in Administration* (1957) (Selznick, 1996: 270). To argue that this study does not form part of the GCRP, notwithstanding the fact that the GCT plays a role in it, contributes to conceptual clarity. This is the option exercised here.

3.2.4 Ambiguity and Command

Similar to *Ambiguity and Choice in Organisations*, the GCT is easier to locate within *Ambiguity and Command*. The titles of ten of the fourteen chapters (excluding the introduction) include either the concepts 'garbage can', 'organised anarchy', or both. The way in which the garbage can is utilised was studied carefully.

Chapter two (March and Olsen, 1986: 11-28) serves as an introduction to the GCT, its underlying philosophy, and provides a wide-ranging oversight with regard to the theory's development, utility and spheres of application. Chapters three (Weissinger-Baylon, 1986: 36-51), five (Crecine, 1986: 72-117), six (Bromiley, 1986: 120-138) and eleven (Hughes, 1986: 249-257) exhibit the structuring of qualitative data according to the components of the GCT. One of the studies (chapter three) also uses implications of the original computer simulation in its categorisation of the data. In all of these studies, with the exception of that reported on in chapter six, the theory is argued to be a good fit to data as the empirical context matches the definition of an organised anarchy.

The research presented in chapters seven (Anderson and Fischer, 1986: 140-163), ten (Gray, 1986: 195-226) and twelve (Hayward, 1986: 258-267) builds on the ideas that constitute the original GCT. The data is structured and simulations are built in ways that could be seen as derivatives of the original theory.

Thus, it is argued that of the ten chapters identified, eight have been found to relate directly[27] and significantly to the original garbage can. In addition to this, the editors of the publication

[26] A connection also that has also been found by Moch and Pondy (1977), Cyert and March (1992), March (1996), March and Simon (1958), Goodin (1999) and Jones (1999).

explicate that the GCT and garbage can perspectives are intended to be the golden thread running through the publication (1986: 1-2). *Ambiguity and Command* can undoubtedly be seen as belonging to the GCRP.

3.2.5 Rediscovering Institutions

Bendor et al. see *Rediscovering Institutions* as having built on 'The New Institutionalism' article (2001: 185). According to the authors, the publication aimed to address the questions as to how, within the context of democratic ideology, political institutions function. They sought to establish how institutions influence political life, how they change, and how they might be changed intentionally (March and Olsen, 1989: 18). In terms of understanding political phenomena, the book is considered a "contemporary classic" (Goodin & Klingleman, 1996: 16). Similar to the analysis of 'The New Institutionalism', close reading is necessary to evaluate this publication for the GCT's influence.

The volume consists of nine chapters. The first chapter draws heavily on the 'New Institutionalism' article: exactly the same attention shifts and new forms of order are suggested. Two of the three shifts and three of the suggested forms of order have already been argued to rely on the claims of the GCT as well as its applications.

Chapters two to four provide the reader with the conceptual research and conclusions that constitute the basic premises and theoretical claims of the institutionalist perspective. Rule driven behaviour is one of these premises. The GCT, as well as theoretical assumptions that are used in constructing the simulation, are key to understanding rule-driven behaviour. The authors argue that rules – in the form of routines and codes of conduct – are what govern actions within institutions. The way the GCT envisions organisational structure, along the dimension of employees' access to choice situations, awards the theory a certain descriptive and predictive capacity in terms of decision behaviour (March and Olsen, 1989: 23-24). Apart from routines governing the outcomes of decisions, social or cultural norms explain outcomes that cannot be explained by intent. These norms are also part of what the authors view to be the 'rules' that govern behaviour (March and Olsen, 1989: 24). The authors cite *Ambiguity and Choice in Organisations* to prove that norms do in fact determine decision behaviour (March and Olsen, 1989: 29). By not incorporating human intent and by modelling at a macro level, the GCT plays a role in supporting the authors' idea that individual intention is not the primary driver of decision outcomes.

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[27] See section 3.2.2 for an explanation of what is meant by 'directly' in the way it is used here.

The GCT's axiom of fluid participation provides one account of why social rules, which need to be learned via interpretation and the inference of meaning, are ambiguous (March and Olsen, 1989: 40-41).

The garbage can features, albeit in a more modest way, when it comes to the authors' theoretical discussion on initiating change in organisations. Of the three suggested ways in which to initiate change, one rests squarely on the original garbage can article. The authors suggest that the GCT has the power to indicate certain areas within which change might be initiated (March and Olsen, 1989: 62). Also, garbage can related research aids the understanding of why intended change does not materialise (March and Olsen, 1989: 62). In this sense, the garbage can is viewed as useful because it allows the effects of broader norms and values to be deduced, as it makes no provision for individual or organisational intention.

In terms of the empirical material on ad hoc and large scale reorganisations presented and discussed in chapters five, six and seven, the garbage can's impact lies in the authors' depiction of ad hoc administrative reorganisation. Three of the five ways in which ad hoc reorganisation needs to be viewed rely on the GCT and its applications (March and Olsen, 1989: 74). Viewing reorganisations as rhetoric, as garbage can processes, and as related to social values, pertain to the GCT in more or less direct ways. The discussion of these various ways of understanding yields that only one, viewing reorganisations as garbage cans, relies solely on the GCT. *Ambiguity and Choice in Organisations* is one of seven sources cited in discussing reorganisation as rhetoric. It is cited in reference to empirical proof that the same group of people can employ multiple forms of rhetoric in an organisational context (March and Olsen,1989: 74-78). In the section on understanding reorganisation as relating to social values, the authors make the claim that action – including reorganisation – is tied to the discovery of meaning. *Ambiguity and Choice*, alongside one other source, is cited as providing empirical evidence for this claim (March and Olsen, 1989: 89).

Chapter seven contains March and Olsen's theory on the type of institution – integrative or aggregative[28] – that will become dominant in the future. In the process of building their argument, they rely on the GCT's idea of independent, time-bound streams. They hypothesise about the cyclical nature of shifts along the continuum of integration and aggregation (March and Olsen, 1989: 134-135). In addition to the GCT playing a significant role in their hypothesis that integrative institutions will become important, they also cite garbage can

[28] See chapter two of this thesis for an elaboration on this distinction.

related research in *Ambiguity and Choice in Organisations* as examples of research focussing on institutions' integrative capacity (March and Olsen, 1989: 124). Although the original article is cited only once in this chapter, the way in which it used to build the hypothesis leads the theory to be of paramount importance within the discussion on the characteristics of appropriate institutions.

Three of the nine chapters are in no way indebted to the GCT: chapter six, chapter eight and chapter nine.

From this summary, it is clear that the GCT's presence in and influence on *Rediscovering Institutions* is significant. It is also clear that the garbage can is more or less significant depending on the themes and issues are addressed. Where rule driven behaviour is discussed the presence looms larger; where preferences and interests are discussed (the last two chapters) the theory fades into the background. It is argued here that the content of three of the nine chapters, namely chapter one, chapter two and chapter five, would be significantly altered, if the garbage can research (both the original article and the work in in *Ambiguity and Choice in Organisations)* did not exist. It is argued, however, that this publication is not to be considered part of a GCRP, for similar reasons to those explicated with regards to the exclusion of 'The New Institutionalism'. Bendor and his colleagues' understanding of *Rediscovering Institution*'s belonging to a GCRP (2001: 185) is too dependent on a perceived relationship between *Ambiguity and Choice in Organisations* and *Rediscovering Institutions*. This is problematic as it has been shown that the GCT is not dominant in all of the research instances reported on in *Ambiguity and Choice*[29] and because such a perception neglects the relationship of *Rediscovering Institutions* to other publications (Olsen, 2001: 193; Selznick, 1996: 270).

3.2.6 Conclusion as to what constitutes the garbage can research programme

The following publications will henceforth be taken to constitute the GCRP 1) the original 1972 article, 'A Garbage Can Model of Organisational Choice', 2) *Ambiguity and Choice in Organisations* (1976), and 3) *Ambiguity and Command (*1986). The definition is thus based on the definition by Bendor et al., but incorporates the writer's own analysis as well as critical commentary by other authors.

[29] See section 3.2.2 of this chapter.

3.3 Classification of the studies

Before the studies are scrutinised, the classifications according to which they will be will be characterised will be introduced and discussed. These classifications form the profile of a study. In the end, it will be seen whether a certain profile is more or less likely to produce insight on goal ambiguity.

3.3.1 Qualitative versus quantitative research in social science

Quantitative studies usually focus on controlling the variables[30] in the study and consequently determining the ways in which these variables relate to each other (Henning, 2004: 3). Observations are systematic in a way that has been determined before the study commenced. The goal of quantitative research is to test for certain hypotheses and to produce replicable studies. The most common way of collecting quantitative data is through survey research, in which the answers to the questions posed are quantified (Black, 1999: 4).

In qualitative studies, variables are usually not controlled as the purpose is to capture the natural development[31] of action and representation (Henning, 2004: 3-4), as well as to become aware of variables that were not known before the study commenced (Westbrook, 1994: 195; Henning, 2004: 8). The main means of collecting data for qualitative research are observation, interviewing, and studying artefact objects such as official and legal documents. Interviews usually consist, at least in part, of open ended questions (Henning, 2004: 5). It is best to utilise all three channels as this triangulation leaves the researcher with a variety of data that works towards ensuring the integrity of the study (Henning, 2004: 6; Lincoln and Guba, 1985: 301). The probability of credible findings is also increased by prolonged engagement (Lincoln and Guba, 1985: 306-307.)

Henning argues that it is not the means of collecting the data but the analysis thereof that mostly clearly distinguishes quantitative and qualitative research. In qualitative study, the researcher's capacity to integrate serves as the analytical instrument. The researcher creates meaning by turning the raw, empirical data, or the 'thin description' of what is being studied, into a 'thick description'. These interpretations rely on information within the same study, as well as a certain theoretical framework. For Henning, qualitative research is superficial if a researcher merely arranges the data into categories or according to themes in a positivistic

[30] Here intended to refer to the actions and representations of those persons and phenomena that are studied (Henning, 2004: 3).
[31] The emphasis placed on the natural development of the working hypothesis has led to a certain approach towards qualitative research being labelled a 'naturalistic approach' (Westbrook, 1994).

way (2004: 6-7). Quantitative studies analyse data by using a range of mathematical models, such as various statistical analytic tools (Black, 1999: 304).

A simple and useful way to understand the distinction between qualitative and quantitative research is articulated by Mellon (1990: 24): the purpose of qualitative research is more to understand than to be able to predict. After having recognised this, the cyclical approach within which the collection of data and the analysis thereof is an integrated activity, and which is typical of qualitative research, becomes logical.

3.3.2 Different theoretical perspectives

Researchers within social science would agree that the purpose of theory is to explain facts, that theories should be testable and that a theory is a process without a single resting point (Wilson, 1983: 2; Black, 1999: 7, 8; Westbrook, 1995: 245). Concerning theories' competence at explaining facts, a theory should be more than an empirical generalisation, or a proven statistical correlation. It should enable the members of the scientific community to "imagine new facts". Also, a conceptual schema does not qualify as a theory, as concepts by themselves cannot provide explanation. Laws or principles are required to relate various concepts in such a way that explanation is made possible (Wilson, 1983: 2-3). The widely held notion that theories should be testable masks the differences regarding what constitutes proper testing. These differences pertain to the relation between the knowing subject, conducting the research, and the known object being researched (Wilson, 1983: 4).

The different ways of understanding this relationship become clear when evaluating different theoretical perspectives. Positivist and interpretivist, or idealist, frameworks or 'world pictures' (Wilson, 1983: 7) are relevant for the current attempt. These world pictures have been interpreted in a variety of ways. Consequently, each world picture yields multiple traditions. The world pictures[32] produce different kinds of theories, as they advocate different rules and processes for conducting research (Wilson, 1983: 7).

Positivism, in its purest form, equates to a rejection of a metaphysical realm. Knowledge may be gained through measurement and observation, and thus a method of investigation similar to that of the natural sciences is employed. The implication is that feelings or thoughts cannot be studied from this perspective (Henning, 2004: 17; Wilson, 1983:8). Furthermore, a sharp

[32] 'World pictures', as Black refers to them, could also be referred to as ideological frames or ideologies. However, these could be considered loaded terms. Therefore, the synonym for world picture that will be used in this thesis is 'theoretical frame'.

distinction is made between the researcher and those who are investigated; these are seen as radically independent (Wilson, 1983:8). Methodologically, positivists conduct experiments or gather data through observation, from which general laws may be observed. The primacy of results that are objectively verifiable, generalisable and that can make accurate predictions, translates to methods that centre on experimental control, pre-determined structure and replicability (Henning, 2004: 17-18). Causation, within this picture, is connected to both necessity and sufficiency. The toolset of the positivist traditionally includes surveys and statistical analysis (Henning, 2004:18; Westbrook, 1995: 250).

Historically, the interpretivist, or idealist, perspective followed the positivist perspective. By the mid 1900's, a shift was seen away from positivist approaches towards an approach through which the *meaning* of the actions of subjects can be interpreted (Henning, 2004: 19). Thus the "directing, willing…acting individual" is the subject matter of the idealist (Wilson, 1983: 8). Another quarter of a century after the first shift, a second shift occured: researchers set out to study the way in which social meaning is created through discourse (Henning, 2004: 20). This implies that the social world is less like the natural world upon which experiments may performed, and more like a text, which needs to be read and interpreted (Wilson, 1983: 8-9).

The realisation that observation limits the researcher to a certain kind of knowledge, stands central to the interpretivist, or idealist, perspective. Explanations provide motives and reasons, rather than producing general laws (Henning, 2004: 19). From this it may be deduced that scientific methods provide a mere approximation of the truth..

Research within this theoretical frame is typically characterised by a variety of data sources and methodologies as variety is perceived to lead to greater validity. These different approaches are not usually taken to hint at a relativistic stance; rather it is held that different viewpoints lead to a multifaceted construction of the knowledge about the world. Methodological practices rooted in this approach include unstructured observation within the 'natural setting', open interviews and ideographic descriptions (Henning, 2004: 19-20).

From a thematic comparison of the above discussions on different approaches, theoretical frameworks, as well as the discussion on theories of decision making in the first chapter, one might be inclined to deduce that a certain classification will imply certain others. In other words, one might think that certain classifications will be grouped together, as shown in Figure A on the following page.

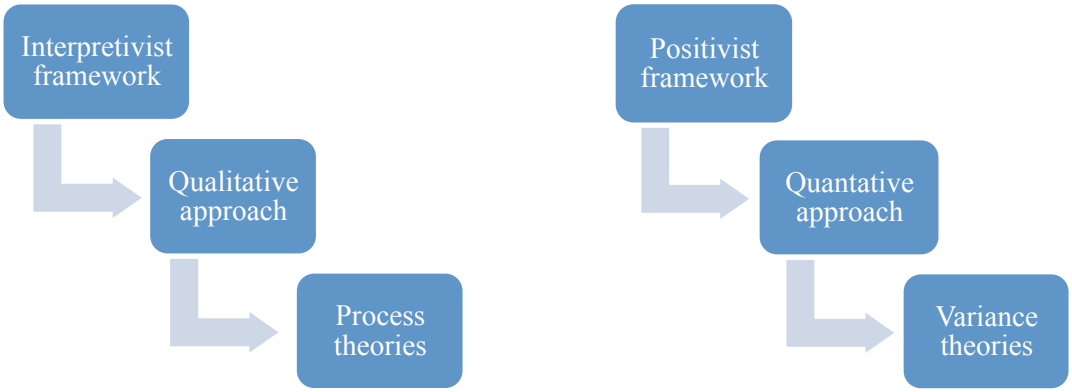

Figure A: Expected grouping of classifications

Wilson, however, extends a warning in response to this kind of inference when he states that the meaning of theoretical frameworks has been interpreted in different ways (1983: 7).

All of the studies that form part of the sample will be classified according to:

- The approach, which will be sub-categorised in terms of the nature of the data and the analysis thereof.
- The theoretical framework within which the study fits best.
- Process-variance theory distinction.
- The credibility of the data used.

These classifications, and value judgements, will be integrated with the reports on the various studies. The relevance of the classifications was addressed in chapter one, but will be revisited in both chapters four and five.

The categories discussed above and utilised in the process of conducting the research presented in this thesis are by no means presented as exhaustive.

3.4 Account of the case studies and their conclusions

Having defined the research programme and discussed the classifications, case studies of organisational decision making that apply the GCT must be accounted for. Note that the purpose of these accounts is not to engage critically with every assumption, theoretical building block, or element of the research design, but rather to collect the insights from a

series of instances. This works toward a holistic picture of the empirical contribution of the GCRP.

3.4.1 Case studies from *Ambiguity and Choice in Organisations*

3.4.1.1 'Decision making under changing norms' (by Kare Rommetveit) – Study 1

Aim, theoretical concerns and research design

This study examines a situation in which standard operating procedures are challenged. The author claims that all polities routinise some activities and that these activities are programmed in such a way that behaviour equates to the fulfilment of certain roles (1976: 140). Standard operating procedures are thus characterised by the assumption of a simplified model of the world as well as a high level of predictability. However, when these standard operating procedures are challenged, the author claims to have found multiple, competing definitions of problems and solutions (1976: 140).

The GCT is applied to data on a specific choice regarding the location of a new medical school in Norway. In March 1968, the Norwegian parliament decided to build two new medical schools in both Trondheim and Tromso (1976: 141). However, this decision was considered unexpected in terms of standard operating procedures. The events that preceded the decision represent a 'break' from what had been considered the likely outcome in two ways: 1) at first, when the idea was still to build a single new medical school in Norway, all indications testified to Trondheim being the city of choice. Instead Tromso was the city decided on; 2) eventually, not one but two schools were built: the project in Tromso starting in 1973 with a similar project in Trondheim expected to start shortly after (1976: 142).

The author states that the GCT has thusfar focussed on the effects of different access and decision structures (1976: 140). Rommetveit's study is aimed at looking into the conditions for desegmentation of these structures. The author specifically attempts to investigate the relation between desegmentation and changes in normative structures, or basic value-priorities (1976: 140).

Data was collected over a period of 18 months, starting in the fall of 1969. The means of collection included an examination of major Norwegian cities' newspapers over a period of 10 years, 42 lengthy interviews with 36 prominent persons (prominence was measured by the appearance of names in the written material), examining letters and notes of participants,

examining archives of the participating institutions, as well as participant observation at various meetings in 1969 and 1970. The data gathered is presented in a table that outlines 6 different time periods within the decision making process. It is also structured according the streams of participants, problems, solutions and choice opportunities identified within the distinct time periods. Some of the subcategories, which pertain for example to the different kinds of participants and the specific time periods, emerged from studying the data (1976: 143). Thus the components of the garbage can theory are used to categorise or frame the data, however the author did not limit his understanding to this framework.

Conclusions and classification

The decision (process) regarding the location of a new medical school in Norway was shown to (Rommetveit, 1976: 149 – 155):

1. Indicate that under conditions where standard operating procedures are disrupted, the garbage can performs relatively well in terms of describing the situation.
2. Illustrate that decisions are ambiguous stimuli, by proving the complexity of interactions between participants in the process. Consequently, processes where one participant or group of participants is dominant, the garbage can would not be as suitable, or useful.
3. Indicate that standard operating procedures failed to predict the outcome of the decision, due to a change in the normative structure of the environment in which the decision had to be made.
4. Suggest that the changes in the normative structure had varying levels of impact in different arenas within the same environment.

The nature of the data is mostly qualitative; the approach towards the analysis is also qualitative. The data may be described as thick due to multiple streams of literature being brought to bear on the data in an attempt to analyse it. The integrity of the data, and thereby the merit of the study, is enhanced by the fact that the author used a variety of ways of collecting data. The GCT is seen, or applied, as a process theory. The study may be understood to be in balance between a positivist and an interpretivist theoretical frame. Mostly the behaviour of participants is observed, either indirectly or directly. These observations, along with behavioural models, are used to reach the conclusions. However, the author does recognise that these participants exhibit different interpretations of events and that they claim to attach value to the symbolic meaning behind the change detected.

3.4.1.2 'Ideology and management in garbage can situations' (by Kristian Kreiner) – Study 2

Aim, theoretical concerns and research design

The aim of the study is to examine management success and failure, here treated as the effective implementation of plans, within the context of an "ideological organised anarchy" (1976: 157). The setting of the study is a free school in Denmark. The school was founded in reaction to the public school system in Norway at the time and was intended to be different from public schools in two ways: 1) parents had more influence in terms of managerial decision making, as a collective, democratic model was postulated as the ideal; 2) in terms of the curriculum, the development of intellectual capability received less emphasis, whereas social development through play was awarded more prominence (1976: 157-158).

The specific plan that had to be executed pertains to a decision that was made by the 'open assembly', the formal governing body of the school, which is comprised of all 170 parents of the school as well as each of the 10 teachers. Up until that point, the pedagogical structure entailed that children be divided into six different grades. During most of the time spent at school, children were bound to a specific group (1976: 157 – 158). The assembly, however, voted (69 to 6) for the structure to be dissolved and to have most of the activities take place on a workshop basis. The decision presented a broad frame of what needed to be achieved, with no set of specified actions through which this could be achieved (1976:162).

The author's theoretical interest lies in the various loose relations between the ideology of an organisation and action that is produced within and by the same organisation. The aim is to study the relation between the degree of legitimacy of the leader's behaviour and the response to this behaviour (1976: 156). Previous studies have shown this relation to be multidimensional: participants within the organisation respond to deviant leaders with some form of sanction, however, leaders with clout have been found to be criticised, yet accepted after having acted in an illegitimate way (1976: 156). Secondly, the author is interested in the effects of loose coupling between process and outcome with respects to organisational ideology (1976: 157).

The components of the GCT are used to interpret the data gathered. The author argues that the GCT is well fitted to the empirical environment as the organisation in question exhibited the characteristics of an organised anarchy: 1) no consistent set of preferences could be applied to concrete choices that had to be made; 2) knowledge around technology, or the

means through which problems were to be solved, was vague; 3) participants were not assigned to certain decisions based on rules, and it was hard to predict the nature of participation in each instance (1976: 159).

Data was collected by observing the decision making processes at the free school during the year of 1971. The research group is reported to have been present at all but one of the relevant meetings. Extensive interviews were conducted. Conclusions also draw upon a detailed questionnaire completed by parents and teachers[33] (1976: 157). The data produced during the course of the observation period was used to identify five different events that could be considered attempts at managing the decision process. The author discusses each of these events by making use of garbage can language[34] (176: 159-170).

Conclusions and classifications

The decision to change the pedagogical structure of a free school in Denmark was shown to (1976: 171):

1. Exhibit no signs of a positive relationship between the likelihood of implementation of certain aspects of the decision and their legitimacy in terms of the ideological purity of the attempts.
2. Suggest that the debates over legitimacy were useful in terms of 'training' members in the value system of the organisation.
3. Indicate that a) although phases of the process could be described by and understood through intentional models of choice, b) the whole process is understood best through theoretically applying the garbage can.

The data on which the study is based, as well as the analysis thereof, is of a qualitative nature. Multiple theoretical perspectives are used to produce thick data. The integrity of the data, and thereby the merit of the study, is enhanced by the variety of data collection methods used. The GCT is applied as a process theory. With regard to the theoretical approach, what applies to study one also applies here – interpretative orders are recognised as being present, however the way in which the data is perceived remains largely positivistic. This is indicated by the fact that observed behaviour is made to "converse with", or be seen in the context of, existent behavioural theories.

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[33] The same data is used for another study that forms part of *Ambiguity and Choice in Organisations* and which is also reported on in this chapter. See section 3.4.1.5

[34] See page 160, for example, for references to "decision structure" and "access structure".

3.4.1.3 'Participation, deadlines and choice' (by Stephen S. Weiner) – Study 3

Aim, theoretical concerns and research design

In this case study, a decision made during the time period between 1960 and 1970 concerning the desegregation of elementary schools in the School State District of San Francisco is analysed by applying the GCT. The San Francisco United Schools District was put under pressure by various civil rights movements in the 1960's (1976: 229). These movements intended to spur efforts to desegregate the public elementary schools in the city. Segregation was visible in terms of race and was understood to be a result of certain racial groups clustering in certain geographical parts of the city (1976: 228).

Despite the district's appointment of committees to research and unpack this problem as well as possible solutions, a civil rights movement filed a suit in the United States District Court in 1970. The suit was aimed at establishing legal support for the immediate desegregation of all 102 elementary schools in the city. Up until that point, the process had lacked substantive outcomes and, therefore, certain participants had become impatient (1976: 233). The result was the imposition of a deadline by Judge Stanley Weigel, who found that the district had not done enough in terms of countering segregation. Both the district and one of the civil rights movements had to prepare a set of plans for the desegregation of schools and these were to be presented on 10 June 1971 (1976: 233). Weiner emphasises the fact that 'desegregation' had not been defined by the ruling (1976: 233).

The GCT is argued to fit the empirical context as the situation matched the definition of an organised anarchy (1976: 225). Other theories were rendered inadequate by the specific circumstances, which included the absence of consistent lucid goals. The author explains that this absence is the result of goals being phrased in vague or abstract terms to avoid being heavily criticised, as this kind of negativity would make the goals inoperable (1976: 225).

The specific purpose of the study was to evaluate the effect of the imposition of a deadline on the garbage can processes. The authors pursued an understanding of the effects of the deadline, so as to be able to provide guidance on how deadlines may be used to affect participation and decision outcomes (1976: 226). Also, the original GCT does not include requirements in terms of problems being solved by a certain point in time. The author points out that this is a significant shortcoming as deadlines could serve as a cue to direct attention towards certain problems and choice situations and, consequently, away from others (1976: 226).

Although the design of the research is not explicated, it can be deduced that interviews were conducted and legal documents as well as newspapers were studied. It is unclear whether participant observation was used to gather data. The data is presented as a list of chronologically ordered, purportedly significant events (1976: 237-239). Also, the variance in the number of participants before and after the deadline was imposed is presented in tabular form (1976: 234). The data is then discussed and categorised according to the components of the GCT (1976: 239-245). Based on this, it may be concluded that although certain aspects were measured quantitatively, the majority of the data takes a qualitative form.

Conclusions and classifications

The decision to desegregate elementary schools in the School State District of San Francisco was shown to (1976: 233 – 248):

1. Indicate that the GCT's assumption that problems and solutions flow independently of participants is false, because problems and solutions, on the one hand, were found to track participants, on the other hand.
2. Suggest that the imposition of a deadline affects the participation within a specific garbage can in three ways: highly active participants become even more active;less active participants become even less active or leave the choice situation entirely; those who are left to participate are coerced into doing so.
3. Suggest that the deadline forces participants to calculate their energy deficit, thereby leading to the ejection of certain 'garbage' – participants and problems associated with them – from the can.
4. Suggest that the garbage can ejects 'garbage' in a way that is aimed at conserving energy, in that problems that have attracted participants who are willing and able to spend energy are retained.
5. Suggest that enhanced energy expenditure by the small number of active participants causes these participants to develop a monopoly on the competence required by the specific choice opportunity.
6. Indicate that deadlines reduce goal ambiguity by drawing attention to certain decisions and away from others, but that ambiguity remains a factor at play since problems associated with the relevant decision might still be unclear.

The author quantified observations by measuring participants' energy expenditure in terms of, for example, time spent (1976: 234). The author thus occasionally quantifies data that

originally took up a qualitative form. Observations are still largely expressed in qualitative terms. The garbage can is applied as a process theory. This is indicated by the emphasis on the order in which events took place. However, this instance of research also showcases the theory's potential to be interpreted and used as a variance theory, due to the quantitative measurement of shifts in energy required and energy lost (due to the imposition of deadlines). The data is not as thick as in other studies as the garbage can is the only theoretical frame that is used to categorise and interpret data. The merit of the research – in terms of this thesis' aims – is also impacted negatively by the lack of explication of the research design. Once again, the importance of interpretative order is recognised; however, the nature of interpretation or the processes that shape it are not discussed. The analysis of the data is approached in a strongly positivistic way.

3.4.1.4 'Reorganisation as a Garbage Can' (by Johan P. Olsen) – Study 4

Aim, theoretical concerns and research design

The author examines the interplay between the substantive and symbolic outcomes of a reorganisation process. This particular attempt centres on understanding the drivers behind a reorganisation that took place at the University of Oslo. Until 1963/1964, whoever fulfilled the administrative position of departmental chairman in a Norwegian university operated in an autocratic way, with all formal authority and decision making responsibility associated with this role (1976c: 315). This model of departmental governance changed in the mid 1960's. The new model differed from the previous model in that decisions were to be made collectively, awarding participation rights to non-tenured staff, administrative staff as well as students. A board, council and chairman were to be elected by all those involved in the department. The Department of Physics at the University of Oslo was the very first department to adopt this system (1976c: 315-316).

The author states that since organisation implies the intention to affect the world in a determined way, reorganisation is viewed to imply intention too. These processes usually initiate solutions to problems that keep organisations from operating optimally (1976c: 314). It is suggested that instead of viewing the reorganisation process as implying intent, it could alternatively be viewed as a 'garbage can' (1976c: 314). Terms associated with the GCT feature in the presentation of the qualitative data. The author postulates that reorganisation is a choice opportunity that collects a multitude of loosely connected problems, solutions and participants (1976c: 314). The author also relates the concept of reorganisation with less rigid

access and decision structures. Reorganisation involves discussion on both practical and symbolic issues, new and old values, and consequently becomes a process of arriving at an interpretation of the organisation's identity (1976c: 315).

The data was collected by examining archival materials, conducting interviews, as well as conducting a general questionnaire. The data is structured according to the components of the GCT, in that problems, participants and solutions are identified and grouped together. The data is represented in terms of phases that were found to have split the overall process in two: 1) discussion centred on enhancing the workings and efficiency within the organisation; 2) demand for participation among younger staff members becoming an issue (1976c: 315).

Conclusions and classifications

The decisions to initially reorganise one department and later to reorganise other departments at the University of Oslo were shown to (1967c: 334 – 336):

1. Indicate that reorganisation was initiated because of frustration with administrative inefficiencies, both in- and outside the relevant department.
2. Suggest that the idea that other garbage cans affect the participation within the focal can is valid[35].
3. Indicate that a) the reorganisation did solve some of the problems it intended to solve, however b) new problems were born in the process of reorganisation.
4. Indicate that a) the reorganisation had a moderate effect on day-to-day workings within the department, that b) the reorganisation was celebrated publicly as a victory for democracy and that c) this celebration fit with similar movements outside the university at the time.

The case study data is qualitative. The way in which it is analysed is also qualitative; however, a similar problem to most of the case studies is present regarding the distinction between a positivistic or interpretivist theoretical frame. Interpretation and symbolic values are recognised as playing a role in the decision making, but these phenomena are studied in the same way as any other kind of behaviour. The importance of the chronological order of events shows that the garbage can is applied as a process theory. The data is thick as both the garbage can and theoretical perspectives on reorganisation are used to interpret the data. The

[35] As more departments were considering reorganisation, less people became involved in the discussion around the Physics Department.

variety of ways in which data was collected positively impact the integrity of the data, and consequently the merit of the study.

3.4.1.5 'Decision making and socialisation' (by Soren Christensen) – Study 5

Aim, theoretical concerns and research design

The author uses the GCT as a general framework for observations of decisions making processes in a Danish free school from August 1971 to January 1972 (1976: 352). The highest decision making body within the school is the 'house meeting'. All parents, students and teachers have access to this meeting; it meets at least once a month. The decision structure, comprised of the aforementioned highest body as well as the 'teachers meeting' and the 'school committee', is deemed very important as it reflects a part of the ideology of the school (1976: 352-353).

During the time period of study, the house meeting made three decisions: 1) The decision to establish a Society of Friends of the School with the purpose of facilitating the construction of a new classroom. This decision was voted in unanimously; 2) The decision to change from a traditional grade-divided school to an open, free choice school with no grades. 69 people voted for this transformation whereas 6 voted against it; 3) The decision to rehire a teacher who had been fired by the group of teachers. 26 people voted for this change and 20 voted against it (1976: 355).

Although these actions were decided on through a vote after considerable discussion, none of the three were implemented: the classroom was not built, the overall structure of the school did not change and the specific teacher did not return. In a way the decision process was thus ineffective (1976: 355).

The author aims to consider some of the complications in assuming that the prime concern of a decision making process is a decision. More specifically, the author attempts to show that it would be misleading to think of decisions as the primary product of decision processes and, secondly, that change occurs without decisions having been made (1976: 351). In addition to pointing towards the gaps in standard choice theory by making use of this particular case, the author also intended to study an alternative purpose of decision making processes, namely that of creating and discovering meaning (1976: 352). The author argues that one of the characteristics of garbage can decision making, namely unclear technology, leads to organisations utilising decision processes as arenas for coming to believe in a certain model

of the world, and thereby achieving a better understanding of how goals should be reached (1976: 352).

Data was collected through participant observation at the meetings held in the school over a six month period. The primary intention was to present and analyse the decisions made by the highest decision making body. Events are reported in the order in which they occurred. Only after this presentation are the components of the GCT brought to bear on the data in order to structure it differently. A series of interviews as well as questionnaires to all members of the school (parents, teachers and students), conducted in the spring of 1972, served as background material to the data (1976: 356).

Conclusions and classifications

The decision processes in a Danish free school were shown to (1976: 383 – 384):

1. Suggest that choice opportunities are created to exercise problems.
2. Illustrate how decisions get made in a formal way without ever being implemented.
3. Suggest that processes and outcomes were separated in that processes served an additional purpose to being able to generate outcomes, namely that they establish collective belief, and that this is especially necessary in an organisation that does not share an ideology with the wider society.
4. Suggest that if processes serve a strong symbolic purpose, decisions are less likely to be implemented.
5. Illustrate that change does occur, despite loose coupling in terms of decisions and implementation, and that it was found to occur in technical contexts, rather than in prominent cans.

This study draws on qualitative data, which is analysed in a qualitative way. The GCT is applied as a process theory. Arguably, the data is thick, due to multiple theoretical perspectives being brought to bear on it. Multiple means of data collection contribute to the perceived merit of the study. Once again, due to interpretation and the creation of meaning being identified as important drivers, but the means of analysis resting firmly on observing behaviour, it is difficult to situate this research within either an interpretivist perspective or a positivistic theoretical frame.

3.4.2 Case studies from *Ambiguity and Command*

3.4.2.1 'Defence resource allocation: Garbage can analysis of C3I procurement' (by John P. Crecine) – Study 6

Aim, theoretical concerns and research design

The author aims to produce a deeper understanding of the deficiencies of C3I[36] performance. Prior to the time of writing, these deficiencies were understood to be a result of defence resources procurement processes (1986: 75). The aim of the study is served by exploring the implications of garbage can theories of choice. The author states that his approach is one of information processing (IP) – the garbage can is understood to belong to this category (1986: 75).

An assessment of the C3I capabilities of the US and NATO air-ground forces revealed the deficiencies referred to in the above paragraph. The author argues that the reason this is disconcerting and should therefore be researched is that increased mobility and lethality of modern military forces lead to high demands being made on C3I systems, especially during war time (1986: 73). Numerically inferior forces can only be successful if the situation is diagnosed in an appropriate and timely manner and if the appropriate forces are assembled and deployed at the correct time and place (1986: 73).

The theoretical framework of the GCT is discussed within a part of the chapter that is dedicated to IP in loosely coupled systems. It is argued that the independent streams which form the components of the GCT, make it an appropriate theory within a discussion on loose coupling (1986: 85). A detailed account of the original theory is provided: the verbal theory is elaborated on and the characteristics of the first version of the computer simulation are discussed (1986: 83-88), although this distinction is not made by the author..

It is clear from the case discussion that official documents, such as The National Security Act of 1974 (1986: 88), as well as previous research, form the basis of the data. How the author chose amongst possible relevant texts is not explicated. It is argued that the process of defence procurement may be viewed as an organised anarchy (1986: 105-106). A few examples of choice opportunities are discussed, wherein the author points out that these opportunities are driven by both solutions and problems (1986: 106-109). The GCT is merged with the data in a conceptual way, via the discussion of the empirical context in terms of the

[36] Acronym for Command, Control, Communication and Intelligence systems.

characteristics of an organised anarchy. The components of the GCT are referred to throughout the chapter, but the data is not structured according to these components.

Conclusions and classifications

In a study on the deficiencies of defence resource procurement the author found that (1986: 112 – 116):

1. a) The development of weaponry is weakly tied to military needs and that this is the result of certain structural traits within the organisation, of which researchers become aware when they apply the GCT.
2. The current loose coupling could be rectified or addressed by a central military command structure or the involvement of commanders in service decisions regarding C3I systems.
3. A viable tactic through which to gain control over outcomes would be to manipulate the energies spent by other participants.

The garbage can is not applied as a process theory but rather as a variance theory. The theory is seen as delivering insights regarding organisational structure, rather than emphasising temporal order. The data is qualitative, and although the analysis is also qualitative, the emphasis on observable behaviour complicates the classification of the study as fitting within an interpretivist or positivist theoretical frame. The author has no significant references to interpretative orders, meaning and symbolic value. The study thus leans towards the positivist side of the spectrum. The data could be considered thick, as it is considered in the light of multiple theories. The lack of explication with regards to research design negatively impacts the value judgement regarding the integrity of the data.

3.4.2.2 'Garbage cans at sea' (by Wayne P. Hughes, JR) – Study 7

Aim, theoretical concerns and research design

The study centres on the nature of operational decision making in the U.S. navy fleet. The author attempts to indicate that the GCT might be more relevant than one would initially expect and that if the theory were modified, it would be useful within the context of commanders' decisions at sea (1986: 249).

It is clear that the author studied the GCT as well as two other theories it is compared to, namely war games and the idea that naval decision making might be equated to decision making in the context of an American football match (1986: 254-256).

As for the empirical data the models are weighed against, it is unclear how it was gathered. It is assumed that the author is reporting on personal observations, since this chapter forms part of the section within the book that represents the perspective of military officers. One can thus not reach a conclusion as to how representative the study is.

Conclusions and classifications

In a study on operational decision making within the U.S. fleet, the author found that (1986: 249 – 251):

1. During peace time, the GCT is useful as a result of the environment reflecting the characteristics of an organised anarchy, in that preferences are vague.
2. During war time the environment slowly transforms so as to reflect these characteristics to a lesser degree.
3. The theory is beneficial in that it is analytical, and consequently flexible and transparent, calculates for the fact that multiple problems all seek the attention of one decision maker and draws attention to the ways in which solutions, like problems, are active.
4. The nature of wartime decision making lends itself towards study as results should be sharper in focus due to the high cost involved if failure is to occur. Such a situation, it is argued, requires a special model, because ‘ought to’ situations are in fact ‘must’ situations.

Both the data and the analysis are qualitative. The GCT is viewed as a variance theory. The data could be considered thick, as a variety of theoretical perspectives are compared. No other form of analysis, except applying behavioural theoretical frames to the author’s experience, is executed. It is argued that although this instance of research does not slot in perfectly, it fits relatively well into positivistic theoretical framework. Triangulation in terms of data collection methods are absent.

3.4.2.3 'Garbage can decision processes in naval warfare' (by Roger Weissinger-Baylon) – Study 8

Aim, theoretical concerns and research design

The author argues that naval warfare comes to resemble organised anarchy, allowing that a heavy load and deadlines characterise the situation (1986: 37). The aim is to illustrate the insights gained by applying a modified version of the GCT to the data of a computerised war game. Firstly, to ensure a better descriptive fit, the GCT needs to be adapted to account for standard operating procedures (SOPs). It is through these procedures that ambiguity is addressed or countered (1986: 37). Secondly, the extension of the theory should include normative considerations (1986: 38).

The author discusses the manner in which naval warfare embodies an organised anarchy. The three-fold ambiguity – technology, preferences and participation – is stated to be present both before war starts and during wartime. The latter occurs due to 'fog of war'. This would imply that the ambiguity is understood to emanate from a limitation on information and communication between different levels of the organisation (1986: 38). This translates to ambiguity being a result of bounded rationality.

All the data that is utilised in the study comes from a week-long war game played at the Naval War College. Several hundred naval officers participated in the game, which was set up according to a pre-established scenario. The interpretation of the war game data was done by making use of other information resources, such as interviews with thirty admirals and general officers, observation of key decision makers as well as studies of historical accounts (1986: 43). The plan was to record certain triggers (such as a report on a location of enemy sonar detection systems), the decisions they caused, the time it took to make the decision, and finally, to list whether the decision resulted in resolution of a problem or flight (1986: 45).

Conclusions and classifications

In a study on naval warfare as an embodiment of organised anarchy, the author concludes that (1986: 51):

1. Conditions of naval warfare do resemble the characteristics of organised anarchies, which cause the principles of coordination and control to be interfered with.

2. SOPs are found to be the way in which the interference is minimised, in that they lead to energy requirements being spread more evenly across time and within the organisation.
3. During wartime both prematched and unmatched problems form part of the flow of solutions.

A qualitative approach towards gathering data is taken, however some of the data is of a quantitative nature. The analysis is qualitative, but cannot be classified as interpretivist. The roles of interpretation and the construction of meaning do not seem to be relevant – knowledge on the situation is created through matching observations of behaviour to existing theoretical frames. Furthermore, it is also difficult to discern whether the GCT is applied as a process theory or as a variance theory. The importance of timing in recording the data could suggest that temporal order is important within the authors' view of the process. However, emphasis on the linear matching between outcomes and choice situations suggests variance theory. The data is thick, due to multiple theoretical considerations. Triangulation, with regard to collection methods, is present.

3.5 Discussion of the findings

The eight empirical studies produced 32 distinguishable conclusions, only three of which pertain to goal ambiguity. Of course, this quantification of the findings, in itself, does not convey a significant message. The paucity of insights into goal ambiguity needs to be interpreted in light of the type of studies. Additionally, the GCT needs to be discussed critically in order for the results to gain meaning.

The visual representation[37] of the results might serve as an aid in the process of viewing the findings within the context of the characteristics of the research. This representation may be

[37] Each of the case studies is represented by a row in the table (Figure B). The numbers correspond to the numbers allocated to the case studies in the accounts provided in sections 3.3 and 3.4. Each of the characteristics identified in chapter one and controlled for in the respective discussions (section 3.3) features as a column. If a cell is the colour green, this indicates that the specific characteristic represented by the column is present in the study represented by the row. The opposite holds for cells that have been coloured grey. The letters "P and "I", below the heading "Theoretical framework" refer to positivist and interpretivist, or idealist, frameworks, respectively. The letters "V" and "P" under "Theory of DM" indicate whether a study exhibited indications of having used the garbage can as either a variance theory of decision making or a process theory of decision making, respectively. Under the heading "Research approach", "quant" stands for quantitative, whereas "qual" stands for qualitative. The last three columns indicate whether triangulation in terms of the data was found, whether the data is considered to be a thick description and, lastly, whether any insights that pertain to goal ambiguity were found.

seen on the following page. The critical discussion on the GCT and how its characteristics might relate to the scarce nature of insights on goal ambiguity, will be presented in the following chapter. Currently, the focus is on a) extracting meaning from the visual representation below and discussing the conclusions that do give insight into goal ambiguity in organisational decision making.

By looking at the columns that represent triangulation and the indications of whether data was thick or thin, it seems that there is reason to infer that the studies, in general, have characteristics that attest to their merit. It is also plain to see that qualitative approaches towards studying organisational phenomena dominated. What is striking is that the two studies, studies 3 and 7, which managed to produce insights on the topic of goal ambiguity have nothing special, except the GCT, in common. The one recognised the importance of interpretation and symbolic order, the other was found to embody a positivist theoretical perspective only. One showed indications of understanding the garbage can to be both variance and process theory, whilst the other utilised it as a variance theory only. One combined qualitative and quantitative data, the other only made use of qualitative data. Furthermore, it is disconcerting, in the light of the research aims of this thesis, that both these studies were found to have relied on thin descriptions and that one of the two lacked triangulation. This, of course, negatively impacts the integrity of the data.

Another noteworthy fact is that all but one of the studies that applied the theory as a process theory of decision making, showed signs of recognising the importance or relevance of interpretative order. This suggests that according to this sample a study is roughly 60% more likely to recognise symbolic orders if the GCT is used as a process theory of decision making.

Study no.	Theoretical framework		Theory of DM		Research approach				Triangulation	Thick data	GA?
					Data		Analyses				
	P	I	V	P	quant	qual	quant	qual			
1	■	■		■		■	■		■	■	■	
2	■	■		■			■		■	■	■	
3	■	■		■	■		■	■		■	■		■
4	■	■		■			■		■	■	■	
5	■	■		■			■		■	■	■	
6	■			■			■		■	■		
7	■			■			■		■	■		■
8	■			■		■	■		■	■	■	

Figure B

The first conclusion that is relevant to the specific purpose of this thesis arises from the study on the desegregation of primary schools in San Francisco (study three). The author found that deadlines reduce the experience of goal ambiguity as a deadline focusses participants' attention on a particular aspect. Study seven, on operational naval decision making, concluded that preferences are vague – which qualifies as one of the three ways in which goal ambiguity manifests – during peace time, but that this ambiguity is eliminated during war time. These conclusions may be useful in formulating theories that form part of a TOF; however they do not pertain clearly to themes identified in section 2.4. One can conceive of these insights as contributors to theories on when goal ambiguity is likely to arise and when it is likely to be less prevalent.

3.6 Summary

A carefully considered definition of what constitutes a GCRP has been established. The following publications are seen as part of such a programme: 1) the original 1972 article, 'Garbage Can Models of Organisational Choice', 2) *Ambiguity and Choice in Organisations* (1976), and 3) *Ambiguity and Command* (1986). Case studies that form part of these publications and that have applied the GCT to data in significant ways were selected, accounted for, analysed in terms of their research design and, finally, their conclusions were presented. This aggregation served the purpose of establishing that very few insights on goal ambiguity have been produced by applying the GCT. The few that have been found, do not relate to the dominant themes within research on a TOF.

Before any conclusions may be drawn with regard to the GCT's capacity, or incapacity, to deliver insights on goal ambiguity, more studies need to be analysed. The next chapter explores case studies whose data is viewed by applying the GCT, but which have been studied independently of the GCRP.

Chapter 4: In Search of Insight on Goal Ambiguity II

4.1 Introduction

There should by now be an understanding of the use of, or the need for a TOF. The link between research on goal ambiguity and a TOF was explicated, along with the reason for evaluating case studies that apply the GCT for insights on goal ambiguity.

The content of the previous chapter suggests that case studies within which the GCT is applied do not succeed in delivering insight into goal ambiguity. However, the sample of studies was limited to those conducted within the bounds of the GCRP. The aim of this chapter is similar to that of the previous chapter. Insights produced by applying the GCT to organisational contexts are compiled by doing an analysis of each of the studies within the sample. This chapter's purpose is to draw from case studies that were *not* produced through the GCRP itself.

The studies will be analysed in the same way as in the previous chapter as in the previous chapter. The method through which the sample was compiled was discussed in the introductory chapter.

4.2 Account of the case studies and their conclusions

4.2.1 *Agendas, Alternatives and Public Policies* (by John Kingdon) – Study 9

Aim, theoretical concerns and research design

Through this study, which comprises a total of twenty-three case studies, Kingdon seeks to answer the following questions: 1) why do some subjects rise on the political agenda while others are neglected; and 2) why do some policy alternatives receive more attention than others? The research was designed to capture the development of public policy over time. The focus falls on cases of agenda setting within both health and transportation services, which in turn form part of the larger federal government of the United States (2003: 4).

The GCT is considered to have the potential to provide answers to the questions, as the federal government clearly exhibits the characteristics of an organised anarchy (2003: 85). Due to this, other theoretical approaches to describing agenda setting behaviour have been found inadequate (Kingdon, 2003: 19). These alternative approaches include rational choice processes, incremental processes and the idea of tracing the origin of a particular issue (Kingdon, 2003: 71-83).

The GCT is the point of departure, but it has been altered in significant ways so as to accommodate the specific empirical context. The specific streams differ, but the logic remains that of the original theory (Kingdon, 2003: 84-86). Three process streams are envisioned: problems; policies or policy proposals; and politics. The first two streams are portrayed as heavily influenced by individual participants, whereas the last stream largely comprises participants at a more collective level. The streams need to be understood as flowing, or functioning, separately; however, the coupling of the streams is what leads to agenda or policy change. Kingdon creates an additional concept, policy windows, to refer to times during which a change in policy is particularly likely (2003: 87-88). This concept could be seen as a specific form of choice opportunity, in the wording of the original model.

Information was gathered via interviews that took place in four sessions between 1976 and 1979. A total of 247 lengthy interviews that consisted of open ended questions were conducted. From the results of these interviews, along with the analysis of government documents, popularised and specialised accounts and academic writings, the author developed 23 case studies that were used to test the modified version of the GCT (Kingdon, 2003: 4-5). The data is structured and discussed according to the theory's various streams.

Conclusions and classifications

Kingdon found that (2003: 196 – 206):

1. Issues travel to the agenda via the problem stream, the politics stream and via certain visible participants.
2. The means through which conditions are brought under the attention of those that set the agenda, as well as the way in which conditions come to be understood as problems, determine which problems will ultimately reach the agenda.These means include indicators, focussing events and feedback on current initiatives.Conditions that violate societal values, conditions that suffer in comparison to other countries as

well as conditions that are placed within certain categories are viewed to be problematic.

3. Problems also fade from the agenda, due to other problems occupying the attention of those that set the agenda, or change in the condition(s) that highlighted the problem.
4. Events within the politics stream are powerful agenda setters. Some elements within this stream, such as national mood, are more powerful than other elements.Consensus within this stream is reached via bargaining rather than through persuasion.
5. Subjects are more likely to reach the agenda if they are advocated by publically visible participants.
6. Alternatives are developed within the policy stream, mostly by less visible participants.
7. Streams function independently, and are most likely to be joined as result of a pressing problem or an event within the politics stream.This intersection brings about policy change.
8. The process is not essentially random.Patterns emerge due to general constraints on the system, rules within each of the streams as well as the rules that dictate the intersection of streams.

The data is qualitative, and the analysis also takes place in a qualitative fashion. The GCT is applied as a process theory. The data is thick as multiple perspectives are brought to bear on it. The discussion on data collection indicates that triangulation is present. However, due to the way in which observations are analysed and taken at 'face value', it is argued that this study qualifies as belonging to a positivistic theoretical frame.

4.2.2 'Inside the Industrial Policy Garbage Can: Selective Subsidies to Business in Canada' (by Michael M. Atkinson and Richard A. Powers) – Study 10

Aim, theoretical concerns and research design

Atkinson and Powers aim to determine how bureaucrats respond to the problems associated with the implementation of selective assistance programs to businesses (1987: 208). The argument presented is that these programs pose distinct challenges as they mix economic and political frames of thinking. Politicians, or bureaucrats in public organisations, become responsible for activities that essentially take place in a free market, but they lack the economic rationale that underlies market mechanisms, therefore it is difficult to determine

when and where to intervene (1987: 208). However, following a political rationale is often not a viable option either. Political aims are very often expressed in terms that are vague when it comes to implementation (1987: 209). Despite the lack of clear goals, the nature of the program determines that only a select few businesses will receive assistance, and therefore bureaucrats play an important role in choosing who gets subsidised (1987: 208).

The authors argue that given the nature of the assistance program and given the lack of a viable rationale, the decision making process starts to fit the GCT. The garbage can process in turn leads to unexpected decision outcomes (1987: 209). The GCT is thus relates to the empirical context, in that certain traits of an organised anarchy are embodied.

The study focuses on the Industrial Regional Development Program, which was introduced in Canada in 1983. In a superficial way, the objectives of the program were clear. However, the authors report that: "From the outset…the pattern established by disbursements under this fund suggests that politicians and bureaucrats followed criteria not provided for in the formal descriptions" (Atkinson and Powers, 1987: 209). The authors do not report on how they sourced the data on the case, although it appears to be secondary data derived from archival material, media reports and other academic texts.

Conclusions and classifications

Atkinson and Powers conclude that (1987: 215):

1. GCT is consistent with the outcomes of the choices.
2. There was a difference between the explicated criteria and the criteria used to award funding.
3. The criteria used often corresponded to those of previous subsidy programs.
4. Different criteria were relied on as a result of the demanding nature of the choices that had to be made.
5. Choices were found to make high demands on bureaucrats' commitment and ingenuity.

The data and the analysis are predominantly qualitative. Quantitative data does play a role as the disbursements are expressed in monetary terms. However, these classifications are based solely on interpretation, or inference, as the authors do not comment on their data or methods for collecting it. The GCT is seen more as a variance theory, based on the fact that the outcomes of decisions are emphasised. The study recognises ambiguity and the effects

thereof, but symbolic order is not explored. The study falls more within a positivistic frame than an interpretivist frame. The data is thin, as only one theoretical perspective is brought to bear on the data. Even this perspective, the GCT, is not engaged with in depth.

4.2.3 'The Lid on the Garbage Can' (by Barbara Levitt and Clifford Nass) – Study 11

Aim, theoretical concerns and research design

Levitt and Nass seek to integrate the GCT with institutional theory to explain why garbage can-like processes do not yield the random outcomes that the theory predicts (1989: 190). The study takes place within within the context of editorial decision making in the industry of textbook publishing. Garbage can processes are understood to produce heterogeneous outcomes because of temporal order being dominant and because of the loosely coupled relation between decisions and outcomes (1989: 190 - 191).

Structured interviews, consisting of open-ended questions, were conducted with the editors of the ten best-selling textbooks in the fields of sociology and physics, in order to determine whether the GCT is suitable within the specific empirical context (1989: 191). It was established that the theory is appropriate as the interviews indicated that editors experience their environment as serendipitous, and because they described experiences that overlap with the three characteristics of organised anarchies. Unclear preferences, for example, are detected via statements regarding the different verdicts around success and failure depending on the point in time at which the judgement is made (1989: 192).

In order to determine the extent to which outcomes are homogenous, a quantitative technique, optimal matching, was used. The homogeneity is represented by the degree to which topics in textbooks overlap as well as the degree to which the order in which they appear in the volume overlaps. For the quantitative analysis, the authors chose to include data from the ten best-selling introductory publications in the fields of sociology and physics[38]. These publications were identified by interviewing editors and publishers, rather than using actual sales statistics (Levitt and Nass, 1989: 200-203)[39].

[38] It is assumed that the authors are referring to the best-selling textbooks in the U.S., as this detail is not specified.

[39] It is not clear how they determined an "initial" list of best-sellers that prompted them to interview specific editors (or how the list of editors to interview was otherwise obtained).

Conclusions and classifications

Levitt and Nass found that (1989: 303-205):

1. Garbage can-like processes are present within the technical core of the industry but the outcomes produced are homogenous.This is a result of paradigms within the field imposing constraints on the strategies used to produce the decisions.
2. Since the institutional environment imposes normative constraints on the components of the GCT, one could engineer for homogenous outcomes by opening up the technical core to the normative influences of the environment.
3. Within similar contexts, managers should avoid close supervision techniques as they would be sub-optimal strategies that are difficult to execute accurately and shouldopt for techniques similar to open-ended environmental scanning, that would anticipate and facilitate serendipitous events.

A combination of qualitative and quantitative methods are utilised within this study. Data is both qualitative and quantitative; the same applies to the way in which the analysis is conducted. It is noteworthy that although the main theoretical frame within which this article is situated is a positivistic one, the results suggest that an interpretivist process is both useful and necessary when studying decision making. In terms of testing for the GCT, this seems to have been done as though the theory contains elements of both process theory and variance theory. The data has integrity as a variety of collection methods were used to extract the data and multiple, diverse theoretical frames are used to make sense of the data.

4.2.4 'Exploring the garbage can: a study of information flows' (by F. Collins and P. Munter) – Study 12

Aim, theoretical concerns and research design

Collins and Munter aim to study the behavioral implications of informal information systems in organisations (1990: 269). More specifically, the aspects that were focused on include role ambiguity, job characteristics and the work unit communication process (Collins and Munter, 1990: 270). Informal systems are different from formal systems in that inputs and outputs are not standardized and hardly regular (Collins and Munter, 1990: 269). The authors argue that since we live in an information age, and since it has been established that informal information in organisations matters, more research needs to be done to look into the nature and implications of these systems (Collins and Munter, 1990: 270). In fact, so little is known that instead of testing for a hypothesis, the authors aim to contribute by using case studies to

establish hypotheses that may afterwards be tested for in subsequent studies (Collins and Munter, 1999: 270).

The GCT is the main theoretical frame used in the study. The fact that the theory is expressed in a general manner, and that experimental demands are fewer leads to the model being appropriate in this context (Collins and Munter, 1999: 272). Multiple standard instruments are used to gather and analyse data. Four diverse organisations were studied. The Draft and MacIntosh questionnaire is used to determine the differences between the information flows in the respective organisations. This questionnaire is targeted at unit information processing and the organizational factors that impact job characteristics (Collins and Munter, 1990: 272). Apart from this questionnaire, having the different groups in each organisation fill out two more questionnaires also contributed to the data. One questionnaire was on role stress and the other on respondents' efficiency, as judged by themselves. All managers kept information logs. These logs coded communications into problems, solutions or general – *a la* GCT. The managers also had to report on the direction of the communication, e.g. from manager to another or from others to the manager (Collins and Munter, 1999: 274). Part of the data is thus structured according to garabage can elements.

As for the analysis of the data path analytic techniques were used to establish the relationships between the communication variables, and also between the variables in the data on role stress and efficiency (Collins and Munter, 1999: 274).

Conclusions and classifications

Collins and Munter conclude that (1999: 276 – 277):

1. The first hypothesis that should be studied is that both problem senders and problem solvers are important in terms of problem identification.
2. The second hypothesis that should be tested for is that both general and problem type communications might lead to solutions being identified.
3. The third hypothesis is that, as is the case with solution identification, general as well as problem related communications are important.
4. The fourth hypothesis is that role stress is an important factor in the problem-general-solution linkages in communication.
5. The GCT provided sufficient structure for their purposes.
6. The implications for practice, is that managers should endorse general communications (within reason).

7. Communications flows can be improved by focusing on reducing role stress.

Even though some of the data is qualitative initially, the quantitative techniques used for the analysis turns it into quantitative data, which in turn is compared and analysed again. The different means of collected contribute to the level of integrity of the data. The GCT is used a variance theory. This is argued due to the emphasis on experimental demands and the way in which variables are made to relate and analysed on the basis of outcomes. This study fits comfortably within a positivistic theoretical frame: the emphasis on quantitative analysis and the lack of recognizing symbolic order contributes positively to this classification.

4.2.5 'The Garbage Can Model and the Study of Policy Making: A Critique' (by Gary Mucciaroni) – Study 13

Aim, theoretical concerns and research design

In this study, Mucciaroni seeks to illustrate the shortcomings of Kingdon's adaption of the GCT by showcasing the theory's indeterminacy within empirical cases of tax reform and deregulation (1992: 459). Furthermore, the article is aimed at evaluating the utility of using the GCT to understand changes to the items on the agenda. Specifically, the author sets out to determine whether the attempt to capture the 'cloud-like'[40] qualities of decision making, renders the theory indeterminate (1992: 462).

The selection of tax reform and deregulation as an instance against which the theory is tested is not arbitrary: they are both significant at a federal level and they both exhibit the irregularity and unpredictability that may be understood as the cloud-like aspects of political affairs (Mucciaroni, 1992: 462-463). The author reports that the empirical data is made up of interviews conducted in Washington in 1988, as well as empirical studies from two other publications on tax reform. In addition to these two publications, two more publications are used to form the empirical base of deregulation policy. The author provides no other detail on the interviews conducted (Mucciaronit, 1992: 436).

It is argued that for the theory to be tested, the abstract formulation that the three streams' intersection determines the items on the agenda, must be made more concrete. This is done by formulating middle level propositions, so that the relation between the variables becomes clearer. An example of such a proposition is that "the salience of problems entailing diffuse

[40] This is a metaphorical expression borrowed from Karl Popper, as quoted by Almond and Genco (1977), to refer to the irregularity, disorderliness and unpredictability that often characterises political phenomena.

economic burdens and discontent with government generally, lead to efforts to reduce policies with concentrated benefits and diffuse costs" (Mucciaroni, 1992: 464). The author develops a series of these propositions that merge the details of the empirical situation with the conceptual framework. The historical data is then discussed in terms of the relations between the variables in the theory.

Conclusions and classifications

Mucciaroni found that (1992: 482):

1. The GCT could not predict the items on the agenda due to a) the high level of generality of the original formulation, b) neglecting structural influences and c) overemphasising the independence of the various streams.
2. The theory must be adapted in order to be less 'cloud-like', so that accurate predictions may ultimately be produced.

The nature of the data used is secondary and qualitative; the analysis is also qualitative. As is the case with most studies that form part of the sample, the distinction between whether the study belongs to an interpretivist or positivist theoretical fame is complicated. However, due to the emphasis on predictive capacity and generating testable hypotheses, as well as the way in which observations are analysed, it may be concluded that the research fits better within a positivistic frame. The GCT is clearly understood to be a variance theory. Consequently, it is tested for in a way that fits within this view: the theory should be able to explain and predict the changes in the items on the agenda. The data is thick as the two theoretical perspectives – the original GCT and Kingdon's adaption – along with the author's way of relating the abstract formulations to the empirical context, are brought to bear on the data.

4.2.6 'A Load of Old Garbage: Applying Garbage Can-theory to Contemporary Housing Policy' (by Anne Tiernan and Terry Burke) – Study 14

Aim, theoretical concerns and research design

This study is aimed at testing the applicability of Kingdon's (2003) reformulation of the GCT. The theory is applied to housing policy in Australia since the 1980's. The authors seek to develop an understanding of why some issues receive attention from policy makers and some do not (2002: 85).

'Garbage can theories' are referred to as a collective and are primarily understood to be opposed to the rational view of policy development. Kingdon's reformulation portrays policy development as chaotic and random, and as producing a loose relationship between problems and the policy solutions that are intended to solve them (Tiernan and Burke, 2002: 85). Due to the fact that policy initiatives at the time did not seem to produce a betterment of the housing situation in Australia, the authors argue that Kingdon's theory might be appropriately matched to the situation (Tiernan and Burke, 2002: 85).

The authors go on to impose the components of the GCT on data on the housing situation in Australia. The solutions, or policies, the problems, and the politics within the situation are identified and discussed (Tiernan and Burke, 2002: 90-95). Their means of data collection are not explicated by the authors themselves. Proof for their claims take up the form of legal and official documents, data on socio-economic indicators, and research done by other researchers within the field of policy making or agenda setting.

Conclusions and classifications

Tiernan and Burke found that (2002: 95):

1. Public housing in Australia has weakened due to the wrong policies being coupled with the wrong problems in the beginning of the 1990's.

The data, which is mostly qualitative, is analysed in a qualitative way. The GCT is used as a process theory of decision making. The data seems to be relatively thin. Two theoretical perspectives, the original garbage can and Kingdon's adaptation, are employed; however these two frames are very similar. Data sources have to be inferred. Consequently, it is difficult to determine the level of representativeness. It is difficult to situate this study within either an interpretivist or a positivistic frame. The way in which causal forces and impact are discussed and elaborated makes it come across as having elements of an interpretivist view, but it is still largely positivistic.

4.2.7 'Competing ideals and the public agenda in medicare reform: The "garbage can" model revistited in Canada' (by Kalu N. Kalu) – Study 15

Aim, theoretical concerns and research design

Kalu aims to analyse the reasons for the stalemate with regards to medicare reform policy, at a certain stage in the U.S.A (2005: 23). The stalemate is being studied for two reasons. The

first is that Medicare, or compulsory health insurance for elderly U.S. citisens, was implemented by the federal government for the first time in 1965, and thus has a long, but also contentious history in U.S. policy formation (Kalu, 2005: 24). The stance on the policy changed in 1995 – at a time by which the broader political environment, as well as the health system had undergone significant change. An increasing wave of privatisation, the perception of privatisation's successes and concerns over the policy's financial viability played respective parts in reconsidering medicare policy (Kalu, 2005: 26). The National Bipartisan Commission on the Future of Medicare was created by Congress in 1997. The commission was tasked with conceiving of reform that would secure the policy's financial viability in future (Kalu, 2005: 27). However, the commission could not reach a consensus regarding "the virtues of a medicare program modeled on a competitive market" (Oberlander in Kalu, 2005: 29).

The GCT is married to the case of the medicare reform due to the author's understanding that the accommodation of conflicting preferences features at the theory's core (Kalu, 2005: 29). The commission being made up of members of different parties introduces goal ambiguity (Kalu, 2005: 27-28). Kingdon's adaption of the GCT is applied to the data and structured according to the different streams. The process through which the historical data was collected is not explicated.

Conclusions and classifications

Kalu concludes that (2005: 50-51):

1. The commission failed at its attempt at reform due to ideological differences between the two parties: these differences lead to issues being framed differently.
2. Ideological differences were observably pervasive in that they guided individual choices at certain nodes in the process.
3. The GCT provides a basis from which to analyse the phenomenon, but cannot accurately describe the policy process as the role of deliberate actions by participants are not accounted for by the theory.

The data and the analysis are qualitative. Only one theory is brought to bear on the data; this translates to the data being thin. Again, despite ambiguity being recognised, the study would not fit well into an interpretivist frame. From all the studies in the sample, this one poses the biggest challenge in terms of fitting the authors' approach into either process theory or variance theory. Chronological order does play a role, however, the dissection of the data

according to the various streams does attest to variance theory. On the basis of the point of critique raised against the theory, it is argued that the authors expected the theory to function as a variance theory of decision making. Methodology cannot not be commented on, since it is not made explicit.

4.2.8 'A 'Garbage Can Model' of UN Peacekeeping' (by Michael Lipson) – Study 16

Aim, theoretical concerns and research design

Lipson attempts to explain the change in the approach to peacekeeping by the United Nations after the Cold War. The change in approach could be summarised as a dramatic increase in the number of peacekeeping missions that were undertaken by the UN Security Council, with a corresponding increase in the number of personnel deployed. Secondly, peacekeeping was attempted in situations where principles that applied during the Cold War would have meant peacekeeping would not be undertaken. Lastly, the very nature of peacekeeping changed as 'second generation peacekeeping was starting to be practiced: the UN now endeavoured into missions that were aimed at addressing intra-state conflict and nation building (Lipson, 2007: 79).

The GCT of agenda setting is employed to account for this change. Kingdon's adaption of the GCT is thus the main theoretical frame that is imposed on the data (Lipson, 2007: 79).

The theory is argued to fit the empirical context as the UN could legitimately be viewed as an organised anarchy, according to the author. The organisation is characterised by uncertain preferences largely due to the differences between the preferences of the member states (Lipson, 2007: 85), unclear organisational processes, and fluid participation in organisational decision making (Lipson, 2007: 80). In addition to exhibiting the characteristics of an organised anarchy, the environment within which the UN operates is also understood to be ambiguous. The theory, which is understood to describe a state of ambiguity, therefore fits well (Lipson, 2007: 86), but is adapted somewhat in order to accommodate an international, rather than domestic, context.

The author discusses the data in terms of the components of the theory. The methodology surrounding the design choices of which publications and documentation to include in the study is not explicated. A series of empirical political studies as well as historical texts are cited.

Conclusions and classifications

Lipson found that (2007: 92 – 93):

1. By categorising the data on the events according to the garbage can's components, a) the end of the war may be understood as an opened policy window, whereas b) the intra-state conflict and the peacekeeping respectively may be seen as the problem and the solution that were coupled together.
2. The garbage can is useful in terms of an enhanced understanding of the contingent nature of the process.
3. The garbage can perspective may be utilised to infer general characteristics of a policy that would be likely to be adopted.

The data and the analysis thereof are of a qualitative nature. It is difficult to conclude regarding the integrity of the data, because the research design is not made explicit by the author. Both Kingdon's adaption and the original GCT are used in interpreting the data. The garbage can is utilised as a process theory. It is argued that due to the linear reasoning based on observed behavioural events, the study is largely positivistic.

4.2.9 'Garbage-Can Decision Making and the Accommodation of Uncertainty in New Drug Development Work' (by Styhre, Wikmalm, Olilla and Roth) – Study 17

Aim, theoretical concerns and research design

Styhre, Wikmalm, Olilla and Roth discuss the non-linear nature of decision processes within innovation-environments. For the authors, this non-linearity translates to garbage can decision making taking place, despite the orderly nature of scientific research and despite the tightly controlled processes and guidelines. Identifying decision making within this sphere as garbage can-like is based on behavioural studies within pharmaceutical companies indicating that organisational politics are prevalent. In turn, the authors relate this phenomenon to a high amount of uncertainty within the domain of scientific innovation (2010: 134-135).

The GCT is presented as an effective metaphor for how decisions are made in organisations. This is substantiated by the claim that most people who are experienced in terms of taking part in organisational decision making, can see the value in examining decisions in garbage can terms. The garbage can theory is linked to the companies in the pharmaceutical industry

via an observed correspondence between decision behaviour in these firms and some of the characteristics of an organised anarchy, such as fluid participation. Furthermore, it's easy to see that smaller cans (or decision situations) are situated amongst other cans and also within larger cans (Styhre et al., 2010: 137-138). The ties with the original garbage can theory do exist, but are weak.

Since decision making within this environment is characterised by uncertainty and non-linearity, the authors argue that participants are in need of 'coping strategies' with which to deal with emerging situations (Styhre et al., 2010: 138). The aim is to study the coping strategies employed within garbage cans. The authors explain that the term coping strategy is borrowed from psychology and that it refers to the capability of an agent to effectively handle emerging situations using skills, emotional responses and scripted performances (Styhre et al., 2010: 138).

The case presented is that of decision making procedures around the development of a new drug in a large, multi-national pharmaceutical company, the pseudonym of which is PharmaCo. The company is said to operate in the US, the UK and Sweden. The decision making processes of three different clinical trial management teams – which operate at a middle-management level – were examined. Each of these teams was situated at a different branch of the company, but all were located in Sweden. Teams are reported to have consisted of 'four functions' and one project manager (Styhre et al., 2010:137). No information is given as to the actual number of participants within each team.

The decisions made concerned confirmatory clinical trial studies that aimed to provide support for the benefits of a newly developed drug. The research team gathered data via participant observation during meetings and one hour long semi-structured interviews, which consisted at least in part of open ended questions. Interviews were conducted with three to five members of the three groups (Styhre et al., 2010: 139).

Conclusions and classifications

The authors found that (2010: 139 – 145):

1. Their hypothesis regarding the garbage can-like nature of the middle management processes within the firm was correct.
2. That four coping strategies are employed by the decision makers within middle management when faced with ambiguity:

a. the tendency to work towards understanding politics within the organisation;
b. the gathering of information that might be used in making sense of decisions that have been taken;
c. the development of scenarios that are applicable to the various possible outcomes of a decision process;
d. the support of emotional work on the part of co-workers.

The data is qualitative. The analysis is also qualitative. It is, however, difficult to tell whether the data constitutes a good representation as some of the relevant variables are not discussed. The data is thick as multiple theoretical perspectives are incorporated into the study. Two means of collecting data are employed: one would have been inadequate, but three would have attested to the merit of the research with more confidence. The GCT is applied more as a process theory (as opposed to a variance theory). The importance of sensemaking and interpretation within the empirical context is recognised by the authors, but their analysis is more positivistic than interpretivistic as it centres on observable behaviour.

4.2.10 'Customer orientation and management control in the public sector: a garbage can analysis' (by Fredrika Wiesel, Sven Modell and Jodie Moll) – Study 18

Aim, theoretical concerns and research design

The authors aim to comment on the tendency to treat citisens as if they were customers, when providing them with public services. More specifically, they study the effect of the customer focus on management control practices in a specific decision making process in a Swedish government agency (Wiesel, Modell and Moll, 2010: 551). The setting is the Swedish Road Administration (SRA). The agency is responsible for road construction and maintenance as well as road infrastructure planning (2010: 556).

The authors distinguish their attempt by stating that research within accounting management has responded to customer-orientation in one of two ways: 1) by adopting a critical theory perspective, from which the customer focus leads to the commodification of services and undermines democratic values; 2) by conducting empirical studies and using institutional theories to interpret the data (Wiesel et al., 2010: 552). The authors seek to combine these two approaches and they also aim to extend the insights that stand to be gained by employing

the garbage can theory (2010: 552). The argument presented is that these two strands are consistent with the view that a customer focus in the public realm induces garbage can situations, as customer focus introduces obtrusive forms of power into decision making and action in public organisations (2010: 556). The two strands offer opposing predictions regarding the secondary effect of the customer centred control practices. Critical theory advocates that ambiguity will be reduced and that customer orientation will become institutionalised. Institutional theorists venture more nuanced claims by drawing attention to the limiting effect of structural constraints and the ideology that characterise public organisations (2010: 556).

The specific decision process that is the subject of analysis concerns the attempt to immerse later control practices into Total Quality Management. These control practices were intended to give extant control practices a more customer orientated focus (2010: 553). The new control practices came to light via the development of "customer programmes" (2010: 557), a project that was undertaken over the time span eight months (2010: 557).

Data was collected over a period of three years. The collection process included 40 semi-structured interviews, observations of 13 formal meetings, informal discussions with key players and the study of archival material. Feedback seminars were held to control for the accuracy of the observations and inferences (2010: 557). The data is structured chronologically. The GCT is brought to bear on the data in that it is presented as a series of interrelated choice opportunities (2010: 558).

Conclusions and classifications

Wiesel et al. conclude that (2010: 572 – 576):

1. The customer programmes had little effect on the control measures, and resulting organisational action.

2. This is due, in part, to the lack of explicit integration between the customer programmes and the existent vertical control practices.

3. Critical theory perspectives are justified in that the customer focused control mechanisms did reduce the customer-orientated focus to its measurable aspects.

4. The above mentioned did not result in a noticeable constraint on the multiple interpretations of what customer needs entail. This culminated in a garbage can situation.

5. GCT accounts for the outcome in that the difficulty in integrating the new programmes was found to be due to the sheer complexity of managing ambiguity.

6. The specific institutional arrangements will determine whether customer orientation initiatives will effect professional values and conduct.

7. Garbage can processes moderate the potential power of novel control practices.

8. GCT can be employed productively if problems and solutions are not treated as endogenous to organisations. The theory becomes potent as soon as attention is paid to the broader organizational context.

9. The GCT is best applied along side other theoretical perspectives.

The data as well as the analysis is qualitative. The garbage can is used in a way that is more consistent with process theories of decision-making. The variety that characterises the approach to data collection enhances the validity of the results. Symbolic orders are recognised by the authors. Although these orders are not explored in depth, the integration of three theoretical perspectives to analyse the data brings about a thick description and makes it easier to locate the study within an interpretivist theoretical frame.

4.2.11 From policing the garbage can to garbage can policing' (by Pieter van Reenen) – Study 19

Aim, theoretical concerns and research design

The author aims to produce an explanation for the failure of policing reform efforts in Latin American countries (Van Reenen, 2010: 459). The GCT is utilised in this pursuit. It is argued that the theory is appropriate as the political environment in Latin American Countries resembles organised anarchy (Van Reenen, 2010: 461).

The GCT is applied on two levels. The author refers to 'policing the garbage can' when discussing the effects of the garbage can nature of political decision making, and its subsequent effects on policing (Van Reenen, 2010: 463). 'Garbage can policing', in turn, refers the phenomenon where policing starts to manifest as garbage can processes.

Multiple empirical studies on policing in Latin American countries form the data that are seen in terms of the GCT. The way in which the specific studies were selected is not explicated. The data is presented thematically, according to the distinction between the garbage can nature of political decisions that influence policing and the garbage can nature of policing activities themselves. The data is thus not structured according to the elements of the theory, nor is it structured according to chronological order of the events. Rather, what seems to be the author's interpretation of important drivers, categories and results organizes the data. The discussion of the drivers and the results of garbage can policing and garbage can decisions on policing incorporates language associated with the theory (see e.g. 2010: 464). The author also refers to central propositions of the theory throughout the discussion. An example of this kind of reference is the following (2010: 464): "The police let the requirements of the situation guide them instead of formal arrangements. This is logical, as 'garbage cans' translate to tough conditions for proper policing…Formal decision-making with a view to a long terms solution of policing problems is…hard to find in the garbage can."

Conclusions and classifications

Van Reenen's final conclusions include that (2010: 475 – 476):

1. Garbage can decision making, essentially, is a political problem. Or, in other words, garbage cans exist due to the failure of political processes to create order.
2. Garbage can policing is a result of the nature of political decision making on the policing matters.
3. Attempts at reforming the nature of policing should include structural change on the policy level, as well working at the culture within the police force.
4. Radical political change is unlikely to be a solution in Latin American countries.
5. It is more likely that policing would resemble garbage cans than that change would occur.

The study makes use of secondary qualitative data. The analysis is also qualitative. Only one theoretical perspective, along with the author's interpretation has been brought to bear on the data. It is difficult to determine whether the sample of studies used is adequate, as the greater domain – or population – is not sketched by the author. The garbage can is used more as a variance theory, than a process theory. Outcomes of decisions – by political actors, as well as members of the police, are emphasised. Symbolic orders are not recognized. Since it is obvious that the author categorises data, according to his interpretation of other studies, it makes sense to conclude that something of the interpretivist perspective is reflected.

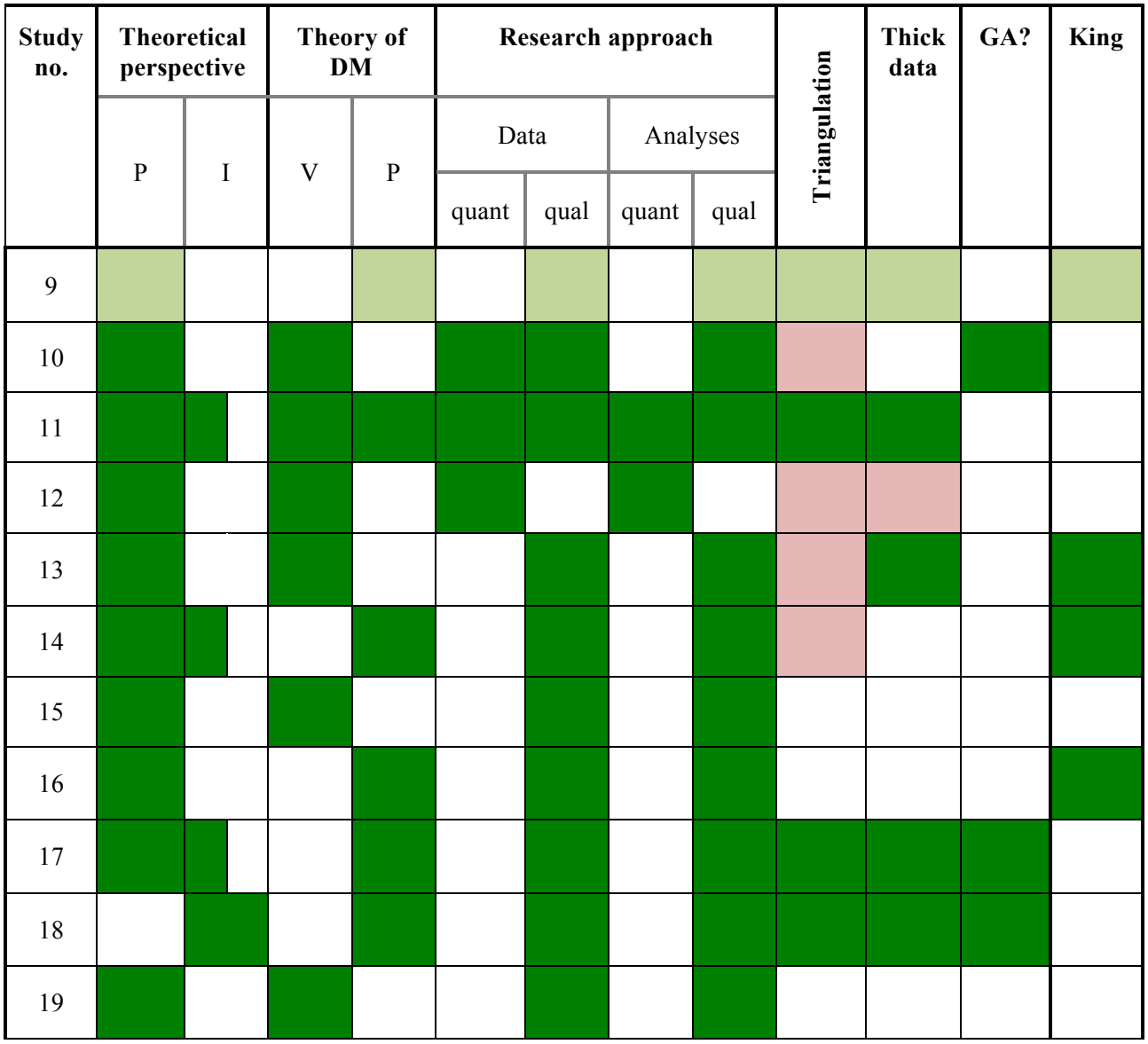
However, it has positivist elements in that phenomena are perceived and categorised at face value.

4.3 Discussion of the findings

Of the fourty-eight distinguishable conclusions accounted for in the previous sections, seven pertain to goal ambiguity. Another way of expressing the relationship would be to state that, out of the 11 texts that constitute the sample, three could produce insights on goal ambiguity. Once again, this result needs to be discussed in light of the traits of the studies, as well as the nature of the GCT. Also, the specific conclusions need to be discussed – even if there are very few, some or all of them might by profoundly significant within the frame of a TOF (as discussed in section 2.4).

The characteristics of the various studies, along with certain quality measures and whether the study delivered insights on goal ambiguity, are presented visually in Figure C (on the following page). This representation is similar to Figure B in the previous chapter. One column has been added to indicate whether Kingdon's adaptation of the garbage can is used to interpret the data. The different shade of green in the first row indicates that Kingdon's study is distinct from the others as the results illustrated are actually representative of twenty-three case studies. The red blocks indicate that those categories were not relevant to the specific study represented by the row.

Figure C



The studies that produced insights on goal ambiguity are studies number ten, seventeen and eighteen. Similar to the previous chapter's findings, these studies have very little in common that is also unique to them. Based on the sample, however, one can see that a study 30% more likely to produce insights on goal ambiguity if the GCT is utilised as a process theory. But what of the studies that are not succesful by this metric? The inverse applies in that a study is less likely to be unsuccesful when the GCT is utilised as a process theory of decision making, albeit only marginally: three out of the unsuccesful studies showed signs of using the GCT as a process theory, compared to four showing signs of viewing it as a variance theory. This

result is not due to the sample being biased towards process theories, as the same amount of studies feature in the variance and process theory columns respectively. Thus there is an observable pattern, if not easily observable: the process theory interpretaion of the GCT is somewhat more likely to deliver knowledge on goal ambiguity.

What is more noteworthy, especially since the same pattern emerged from the previous sample, is that a study is 50% more likely to explicitly state or recognise the significance, or relevance, of interpretative order if the GCT was used as a process theory.

A cluster of three conclusions from study number ten report on how, in a situation characterised by goal ambiguity, bureaucrats used goals they knew best, or that were familiar to them. The goal ambiguity, that is also reported to drain the bureaucrats emotionally and intellectualy, is thus overcome by the temporary suspension relatively new criteria. These conclusions relate to the theme of paying attention to intuitive responses. It extends a warning in that it cautions that goal ambiguity can take up different forms of employee energy. Also, from the perspective of a TOF, coping with ambiguity by reverting to previous states would not be an effective way of managing the strain. These conclusions thus alludes to a specific challenge that the TOF will have to overcome.

The coping strategies introduced at the end of study number seventeen, also bring us closer to understanding how people within organisations handle the experience of ambiguity, of which goal ambiguity forms a part. These conclusions are the result of the authors incorporating theory on coping strategies into their study. The combination of the garbage can with another particular kind of theoretical frame thus proves useful in terms of creating knowledge on goal ambiguity. One of the four strategies that were present in PharmaCo's trial management relates to the idea of a TOF in a way that is similar to the conclusions discussed in the previous paragraph. The study confrms that members of the organisation went through effort to find ways of dealing with emotional responses to non-linear decision processes. In other words, the emotional impact was recognised and addressed deliberatly.

Study number eighteen's conclusions regarding goal ambiguity are in keeping with those presented in studies ten and seventeen. Here it was found that when confronted with goal ambiguity and having to take action, people relied on norms to direct their action.

Testing for emotional responses to the experience of ambiguity is thus necessary in order to build a TOF. Prescriptive rules should address ways in which members could handle and

perceive emotional responses. It needs to be determined whether certain members of the organisation respond better to the experience of ambiguity than others; in this way, leadership will be able to engineer for certain members taking part in situations characterised by goal ambiguity while others are directed at functions and situations where pre-existent goals are clear.

The current visible means of overcoming, or handling the experience of goal ambiguity will have to be researched from the perspective of a TOF. Depending on which norms are relied on, this way of coping *might* be fruitful if acting before thinking is pursued. A big part of the rationale for a TOF is goal ambiguity's propensity to facilitate innovation. With this in mind, the reliance on known, familiar criteria when confronted with goal ambiguity is probably an effect that will have to be countered by a TOF.

Based on the results discussed at the end of the previous chapter and on the results of the second leg of the study discussed above, it is clear that empirical applications of the GCT were relatively unfruitful in terms of contributing knowledge on goal ambiguity that is actionable within the frame of a TOF. Before it is concluded that the theory itself is of limited use for researchers interested in goal ambiguity, the theory as well as the nature of the studies in which it has been applied need to be discussed critically.

4.4 Critical discussion

An exploration of the reasons why the GCT was unsuccessful at studying ambiguous goals in the case studies in the sample will aid the development of a prescriptive framework for future research. By pointing out the factors that inhibit the theory's capacity to produce rich descriptions on ambiguous goals, researchers may be equipped with knowledge of which type of theory and methodology is needed to research ambiguity in a meaningful way.

4.4.1 Critique of the garbage can theory

Bendor et al. (2001) provide the only systematic critique of the GCT and its lineage. This critique will be built on by incorporating other sources that have also commented critically on the theory.

Bendor et al.'s critique centres on the incompatibility of the verbal theory, or "the basic ideas" (Cohen et al., 1972: 2-3), and the FORTRAN simulation model that accompanied the introduction of verbal theory (this distinction was discussed in the introduction chapter,

section 1.4.1.2). The fundamental philosophy is criticised for not being good science, as its claims are not falsifiable (Bendor et al., 2001: 170). Certain aspects of the critique are vulnerable. These aspects will be pointed out.

4.4.1.1 Critique on the verbal theory

Bendor et al. report that the two versions of the theory are generally not treated as distinct and that this confusion, amongst other things, prevents the theory from making orderly scientific progress (Bendor et al, 2001: 187). The former part of the statement is substantiated by the difficulty experienced during the course of the current research effort. Testing for the verbal theory is complicated by the fact that the verbal theory and the implications of the first simulation model have been conflated by numerous researchers: Pinfield (1986: 366); Levitt and Nass (1989: 190); Moch and Pondy (1977: 255); Weiner (1976); Crecine (1986); Weissinger-Baylon (1986). The confusion with regard to the primary nature of the theory is exhibited when Bromiley refers to the garbage can as a 'perspective', an 'approach' and a 'framework' within a single study (1986: 122, 139).

Bendor et al. argue that progress can only be made by developing a causal logic which the original formulation of the theory lacks (2001: 187). Five points of critique against the verbal theory are aired, three of which are relevant for the current purposes.

The incorporation of a micro theory and the intendedly rational actor

Firstly, Bendor et al. argue that the theory should not be referred to as a theory of choice, as what it actually describes is a process and a structure. 'Choice', for the authors, implies decision making in which individuals take part actively, yet their macro theory is not complemented by a micro theory that describes what drives individual decision making (Bendor et al., 2001: 171). The lack of a micro theory is also noted and listed as a drawback by Hughes (1986), Weiner (2007) and Pinfield (1986).

The last point of critique aired by Bendor et al. clearly relates directly to the first point, to the extent that they should have been discussed within the same argument. I refer to the point that the GCT's rejection of the key tenet of the Carnegie School, namely the idea that individuals are intendedly rational, leads to the loss of the rigorous methodology associated with the behavioural tradition of the Carnegie School (Bendor et al., 2001: 274). For these authors, the theory forms part of the institutional school of organisation theory, rather than being part of a behavioural tradition in researching choices (2001: 174). Relaxing the assumption of exogenous goals, which is typical of micro theories within the behavioural tradition means

that it becomes impossible to theoretically predict behaviour and to generate falsifiable implications (Bendor et al., 2001: 171-172). Mucciaroni (1992) and Pinfield (1986) agree with Bendor et al. that the theory does not generate falsifiable claims. Mucciaroni argues that the formulation of the theory comes close to being a *truism*. The variables are deemed too vague and all-encompassing. As a result, the concepts function merely as categories according to which data can be organised (1992: 463-464). Pinfield's critique is that the confusion around the level of analysis leads to applications of the theory varying to a large degree (1986: 366).

Lipson (2007) and Moch and Pondy (1977), on the other hand, attest to the exact opposite in that their empirical studies have showcased the predictive capacity of the GCT. While Moch and Pondy argue that the theory does generate falsifiable hypothesis (1977: 355), upon closer inspection all the statements they list are implications derived from the computer simulation, not the verbal theory.

One can argue that the lack of a micro theory is a significant factor in explaining the empirical studies' lack of insight into goal ambiguity. Ultimately, the way in which decision making entities – either individual participants or organisational units – perceive their preferences or goals needs to be incorporated into a theory that aims to describe circumstances characterised by goal ambiguity.

However, it not argued here that the Cohen and colleagues should have incorporated rational choice presuppositions on the level of the participants. However, some assumptions regarding goal finding behaviour or perceptions around goals needed to be incorporated if the theory was aimed at describing goal ambiguity. Selznick supports this notion in stating that the understanding of social situations will only be achieved once methodological individualism is incorporated (1996: 274). This statement should not have to undermine the importance of macro phenomena. It indicates that larger phenomena are "produced in and through…behaviour of individuals" (1996: 274). Langley et al. express the same idea by stating that theories the GCT dehumanises the process by not recognising that decision makers are actors that become inspired, and have insight and memories which they utilise in the process of making decisions (1995: 268). Kalu has voiced a similar point of critique (2005: 51).

More importantly, Selznick also argues that individual behavoirs include individuals' *perceptions of self and of others* and that this behaviour *need not* conform to rational actor models (1996: 274).

Allowing for the inter-dependence amongst streams

Secondly, the central idea of the component streams being independent is criticised. Bendor et al. point out that people are the carriers of problems and solutions and that the streams therefore cannot be treated as independent (2001: 172). The same critique is aired by Weiner (1976). This is relevant to goal ambiguity because, as is the case with the need for micro theoretical assumption, it argues for participants being awarded a more prominent role in the decision making process. By viewing the streams as more dependent on participants, the possibility to study problems' and solutions' effects on goals is born. This approach was taken by Collins and Munter (1999). Their study on the behavioral aspects of informal information systems, shows that the GCT may be applied succesfully if the relationship between the streams is reenvisioned.

Shallow portrayel of organisational structure and the concept 'organised anarchy

Two points of critique that are valid, but that are less relevant to goal ambiguity is that the portrayel of organisational structure as well as the definition of 'organised anarchy' is vague. As for organisational structure, its origin, its design and the ways in which it changes are left unaccounted for. (2001: 172-173). This point has its predecessors: Padgett (1980); Carley (1986); Masuch and LaPotin (1989:43); Langley et al. (1995).

The problem with 'organised anarchy' is that Cohen et al. are not clear as to whether some or all of the characteristics of an organised anarchy need to be present for a situation to be classified as such. This brings about confusion as to which circumstances the theory aims to describe. In addition to the relation between the characteristics being unclear, the meanings of the distinct properties, goal ambiguity being one of which, are also not clear (2001: 173-174). This could be relevant to the research aims of this thesis. Mapping the different ways in which goal ambiguity may be understood enables a researcher to focus on a specific area. It could be problematic that conceptual nuances are not made explicit. However, other points of critique are more relevant to the aim of developing a prescriptive framework for research on goal ambiguity. A definition of goal ambiguity was established in the introductory chapter. Admittedly, this definition is broad, however, this leaves scope for development as more research on the phenomenon is done.

Summary

From this discussion the essence of the critique is the absence of active decision makers. The lack of a micro theory, the problems around the absence of intended rationality, as well as the streams being more interdependent than the theory claims, all relate to the role of the decision maker. These points of critiqe shed light on the theory's inability to deliver insight on goal ambiguity, with the exception of the remark on inteded rationality. If the aim is to build a TOF with the sought after insights on goal ambiguity, the assumption of intended rationality cannot be reintroduced.

4.4.1.2 Metaphor versus theory

A point that illuminates Bendor et al.'s critique on GCT, but which is not addressed within their critique, is that Bendor et al. recognise that some researchers refer to the GCT as a metaphor (2001: 171). Bendor et al. do not provide examples of studies where this is the case, however the following studies serve as examples: Dyckman refers to the garbage can as an image imposed on organisational activity (1981: 296); Anderson and Fischer (1986) have referred to the theory as a metaphor and have related this to the difficulty of testing for the empirical accuracy of the theory. Other authors have also explicated their understanding of the garbage can as a metaphor: Anderson (1983), Styhre et al. (2010), Elström (1983) Langley et al. (1995: 262).

Bendor et al. state that although the comparison to a metaphor is not unjustified, accepting the theory as a metaphor shields it from criticism (2001: 171). A metaphor is a literary device that is evaluated in a different way to social scientific theory (Bendor et al., 2001: 171). The authors argue that it is clear enough that the verbal theory was intended to contribute to social theory and therefore should be treated accordingly (Bendor et al., 2001: 171).

The point of critique (addressed in 4.4.1.1) regarding the rigor of the methodology relates directly to the unwillingness to accept that the GCT could be viewed or even utilised as a metaphor. This stance toward the GCT as a metahphor opens up the ideological tensions not only between Bendor et al. and Cohen et al, but also explains why other researchers have experienced the same set of ideas in radically different ways. Cohen et al. claim to to want to study ambiguous goals and its effect on organisational processes (1972: 1). Bendor et al.'s critique on the lack of methodological rigor, would be valid, if the aim were to develop a behavioural model that could be tested for in a quantitative way. However, this was not Cohen et al.'s intention. This exact point is made by Olsen in an article that serves as a

response to Bendor et al.'s critique. Olsen refers to Bendor et al.'s suggestions of incorporating rational principal agent assumptions as regressive, as it is unaligned with the aims of the GCT (2001: 191-192). He goes further in stating that Bendor et al.'s narrow view of what constitutes "valuable…science" (2001: 191), namely formal modelling, prevents them from taking part in the development of garbage can ideas (2001: 194). It is important to note that despite the explication that understanding organisational effects requires moving beyond functional-instrumental terms (2001: 195), Olsen does not suggest specific tools, concepts or models, that would help the researcher to venture beyond this view.

The 'conversation' between the authors makes it clear that Bendor et al. and Cohen et al. hold contradicting ideas of what constitutes proper scientific knowledge about decision making in organisations. From Bendor et al.'s emphasis on the falsifiability of theoretical claims and rejection of the garbage can as being similar to a literary device, it may be inferred that these theorists are situated at a more positivistic side of the spectrum. Olsen, on the other hand, emphasises the garbage can 'spirit' as one that challenges functionalist, instrumental ideas surrounding decision making in organisations (2001: 192). He goes as far as stating that by viewing decisions as purely instrumental, researchers would not be able to contribute to garbage can ideas (2001:194). Claiming that understanding is enhanced by incorporating institutionalist ideas implies that he values the inquiry into symbolic orders. Valuing symbolic order, in turn, suggests more of an interpretivist theoretical frame.

There is another tension, or conflict, regarding the way in which the theory is perceived, namely between applying the theory as a variance theory or as a process theory of decision making. Understanding this tension may yield insight into why the garbage can's applications have largely failed at delivering insights on goal ambiguity.

The depiction of the characteristics of the studies in Figure B (chapter three) shows that the GCT is mostly used as a process theory within the publications that form part of the GCRP. Figure C (chapter four) depicts that studies done independently have utilised the theory as process and variance theory to similar degrees..From this it can be inferred that the theory has the curious propensity to be applied as a variance theory and process theory. This dual propensity may have been predicted when one considers the following statement found in the original garbage can article: "In the garbage can model… a decision is *an outcome or interpretation* of several relatively independent streams" (1972: 2-3)[41] Depending on which

[41] The emphasis is my own.

one of the two is given more weight, the theory may be used as either a variance theory or a process theory.

Many studies in the sample use qualitative data and view GCT as a process theory, but none of these studies make use of the models that traditionally accompany process theories of decision making. Narrative models should be included into the attempt to understand the data (Poole and Van de Ven, 2010: 544-549). The opportunity for using narrative models is illustrated by the high correlation between studies that apply the theory as a process theory, and those in which the authors recognise the importance of symbolic order, as pointed out in discussions on both samples.

It is not being argued that viewing or using the GCT as a variance theory is incorrect or inappropriate. It is rather argued that using it as a process theory is best accompanied by sophisticated methods and theories for studying narratives. Additionally, it is argued that the sample shows that where the GCT is utilised as a process theory, if by a small margin, the chances of gaining insight on goal ambiguity are bigger. Furthermore, process theories of decision making are in keeping with Olsen's appeal (2001) to move away from a purely instrumental view on decision making, as the decision process is in sharper focus than the decision outcome. Since narratives and discourse are necessarily and obviously tied to human communication, interaction and interpretation, Selznick's appeal (1996) to focus on the individual's maneuvers will be adhered to.

Based on the results and these premises, a normative framework for studying goal ambiguity will now be formulated.

4.4.2 A normative framework for studying goal ambiguity in future

Based on the analysis of the nature of the 19 studies, as well as the critical discussion of the theory's traits, suggestions may be made as to how to study goal ambiguity in such a way that it would lead to a TOF:

1. Data needs to be interpreted using theories that allow for or incorporate active decision making entities, and which recognise that these entities engage goals, despite not engaging them in the way conceived of by rational choice theory.
2. Consequently, if the GCT is used to interpret data, an additional theoretical framework that fits the above criterion needs to be used alongside the GCT.

3. Using the GCT as a process theory might be useful for studying goal ambiguity, as long as methods and theories for studying narratives are incorporated in the analysis.
4. Goal ambiguity needs to be studied in its capacity as a phenomenon that causes emotional strain, amongs other forms of strain, and emotional responses, in members of the organisation. Ambiguity may be coped with, or managed, in ways that counter what needs to be achieved through a TOF.
5. Other themes that need to be researched in order for a TOF to be developed include: symbolic expressions (such as metaphors), tactile or visual experiences, the role of identity (that of the focal decision maker and the people he or she cooperates with), the idea of enacting the world, as opposed to having to predict its state.

4.5 Summary

Empirical research applying the GCT and conducted by researchers who are independent of the GCRP was studied. These studies were shown to have delivered very little knowledge on goal ambiguity that is actionable within the process of building a TOF.

The studies' failure to produce insights on goal ambiguity was discussed in light of the traits of the studies as well as the critique against the GCT. In as far as the attributes of the theory itself go, it was argued that the theory's ignorance toward active decision making entities has a negative impact on its capacity to provide insights on ambiguous goals. Furthermore, the application of the theory as a process theory of decision making, without combining it with theories and methods for understanding narratives, is unlikely to deliver insights on goal ambiguity. Therefore, these methods and theories should be used in combination with the garbage can when it is used to understand, or unpack, the process through which a certain decision has come to be made.

In terms of the sparse insight on goal ambiguity that was found, a TOF is likely to include theories on emotional responses to goal ambiguity as well as prescriptive theories for managing these responses in ways that to not counter the aim of a TOF.

Chapter 5: Conclusions

5.1 Main Conclusions

This thesis attempted to establish how research on goal ambiguity in organisational decision making should be done *if* the aim is to develop a TOF. Case studies applying the GCT were scrutinised to infer which type of study – in terms of both approach, or methodology, and themes - is more or less successful at delivering insights on goal ambiguity.

The GCT, originally developed fourty years ago, is a particularly influential descriptive theory on organisational decision making. In the process of drawing conclusions on whether the theory is capable of delivering insights on goal ambiguity, the theory itself is looked at through a critical lens. By dealing with both GCT and the notion of a TOF, the content of the thesis is relevant for both descriptive and normative theories on organisational decision making.

Although the idea for the development of a TOF was presented in the 1970's, very little empirical work has since been done to breathe life into the original fomrulation of the framework. The paucity of attempts has been ascribed to rational choice theory, along with its emphasis on clear, pre-existent goals, being deeply entrenched in a modernist approach to viewing both the world and knowledge on it. However, this thesis presents the argument that fostering ambiguous goals could very well be intelligent behaviour in a multitude of different spheres. Decision makers operating within conditions of goal ambiguity are in need of prescriptive tools and models with which to improve processes and judgements. These tools will either not come to exist at all or will have a slim chance of being effective if research on organisational decision making does not produce insights on goal ambiguity.

To develop prescriptions for research on goal ambiguity that would be useful in developing a TOF, case study data on organisational decision making was harvested for insights on the topic. The result of this harvest aimed to inform thematic prescriptions. It also aimed to identify patterns in the characteristics of the studies, so as to develop a normative framework for the approach and methods of future research on goal ambiguity. The extent to which these aims have been achieved will now be discussed by referring back to the research questions listed in chapter one.

5.1.1 What is the state of the art regarding a technology of foolishness?

It was shown, in chapter two, that few attempts at contributing to a TOF exist. There are plenty of examples of research that delves empirically and conceptually into the idea that goal ambiguity might be intelligent behavior. However, these attempts have not yet delivered a coherent normative framework for inducing action under conditions of goal ambiguity.

The research on a TOF that does exist adresses the following themes: the role of symbolic expressions (such as metaphors), the facilitative role of tactile or visual experiences, the role of intuition and emotional expression in the decision making process, the role of identity (that of the focal decision maker and the people he or she cooperates with), the idea of enacting the world, as opposed to having to predict its state.

5.1.2 What is the connection between goal ambiguity and a TOF?

The argument for ambiguous goals' potential to be an artefact of intelligent behaviour was made in chapter two. It was also shown that circumstances within which goals are ambiguous are plentiful and widespread. Decision making entities within these environments require a theory through which this form of intelligence may be developed and refined. A TOF would serve this purpose. Thus research on goal ambiguity that is geared for delivering particular insights is needed to build a TOF.

5.1.3 What can we take to constitute the GCRP?

For the purpose of ordering the case studies that were analysed, a distinction was made between studies that form part of the GCRP and case studies that were done independently of this programme. The constituency of this research program was discussed in chapter three. Bendor and his colleagues were the first to attempt a definition of what constitutes a garbage can research programme. Their definition included the following publications: 1) the original 1972 article, 'A Garbage Can Model of Organisational Choice'; 2) *Ambiguity and Choice in Organisations* (1976); 3) *Ambiguity and Command* (1986); 4) 'The New Institutionalism: Organisational Factors in Political Life' (1984); and 5) *Rediscovering Institutions* (1989). *Leadership and Ambiguity* (1974) is not included in the grouping.

The various texts were analysed with a focus on isolating the GCT's role and influence within each of the larger texts. Criticism by Selznick was considered. Subsequently, this definition was altered for the purpose of this thesis. Multiple measures or indicators were considered: references to the original article, the theory's components featuring as taken for

granted within some of the texts, overlapping themes, purported causal relationships between publications, the way in which the theory is brought to bear on the data within the various empirical studies and the way in which the garbage can, amongst other ideas and theories, is used to construct a new theory. The consideration of these factors yielded the following understanding of what constitutes the GCRP: 1) the original 1972 article, 'Garbage Can Models of Organisational Choice', 2) *Ambiguity and Choice in Organisations* (1976), and 3) *Ambiguity and Command* (1986). This understanding is supported by Cohen et al. in their recent review on the GCT's legacy (2012: 23).

5.1.4 Did the GCRP produce insights into goal ambiguity through the application of the theory to empirical data?

The content of chapter three clearly illustrates that the case studies that apply the GCT and which form part of the GCRP have produced very little insight pertaining to goal ambiguity. Two of the studies, out of a sample of eight, yielded knowledge on goal ambiguity. However, these conclusions relate situational characteristics, more specifically deadlines and response times, to goal ambiguity. It is recognised that while these insights might be used in future research on goal ambiguity, they do not fit in with the three prominent themes that currently characterise research on a TOF.

5.1.5 Did studies that impose the theory empirically, but have been conducted in a way that is independent of the GCRP, produce insights on goal ambiguity?

Case studies that apply the GCT but have been done independently of the GCRP have also produced few insights on the topic of goal ambiguity, as shown in chapter four. Three of the sample of eleven studies generated knowledge on the relevant phenomenon. The conclusions that drawn in study number ten report that when people are faced with ambiguous goals they are inclined to reduce the ambiguity by focussing on the goals that are familiar, or known to them. Ambiguity is reduced, since the experience thereof is both emotionally and intellectually taxing. The conclusion in study seventeen report on how members of the particular organisation invested effort into dealing with emotional responses to non-linear decision processes. Study eighteen reported on similar issues: goal ambiguity was overcome by relying on norms, or ideological predispositions. In terms of a TOF, these findings are congruent with the themes identified in chapter two, more specifically they pertain to addressing the role of intution or emotional expression. Testing for emotional responses to

the experience of ambiguity, and developing was to avoid its effects that could counter the aims of a TOF should thus form part of future research on goal ambiguity.

5.1.6 What is the dominant character of these studies, or applications?

As shown by figures B and C (in chapters three and four respectively), the dominant approach is that of qualitative data and qualitative analysis. The GCT was shown to have been viewed as both process theory and a variance theory of decision making. Overall, the process theory view is adopted by more studies than the variance theory view, however, utilisation as a process theory is especially dominant within the GCRP itself. The studies done independently are divided in half when it comes to this distinction.

Despite the process theory view being dominent, the studies exhibit the presence of a positivistic theoretical frame. The researchers categorise data according to the components of the GCT, and occasionally other theories, but take the observations at 'face value' and continue to present the categorisation and the discussion thereof as the full analysis. Quite often, the importance of interpretation and symbolic order is recognised (this is more likely to happen where the garbage can has been used as a process theory), however no interpretivist models or methods are used.

Most studies have incorporated collection methods that contribute positively to the integrity of the data. Similarly, most researchers have utilised more than one theoretical body through which to view the data. It may thus be concluded that the lack of insights on goal ambiguity is not as a result of low quality research.

5.1.7 Can we deduce the characteristics of studies that are both more and less likely to produce insights on goal ambiguity?

Based on the results of the analysis of the nineteen studies – eight discussed in chapter three and eleven discussed in chapter four – it may be concluded that a qualitative approach to studying goal ambiguity, which is situated within a positivistic theoretical frame, is unlikely to generate insights on goal ambiguity that can be put to use in building a TOF. It may also be concluded that the GCT, without the aid of models that consider, or incorporate, the role of active decision making entities, is unlikely to produce insights on goal ambiguity. The incorporation of the role of decision making entities should and need not imply the re-introduction of rational choice assumptions when viewing and understanding these entities' behaviour.

Finally, it may be concluded that applying the GCT as a process theory is more likely to produce insights on goal ambiguity than using it as a variance theory, *provided* that methods and theories that are equipped for studying narratives are incorporated in the analysis.

5.2 Contributions

5.2.1 Contributions to the literature on the garbage can theory

This thesis contributes to the literature on the garbage can by having shown that the GCT, by not providing for the influence of active decision making entities, has a limited capacity to produce insights on goal ambiguity. This knowledge aids the understanding of ways in which the theory may be most effectively and appropriately used.

It also contributes by arguing, conceptually, that the theory may be seen as a process theory of decision making, *à la* Poole and Van de Ven (2010). The establishment of this relation means that existing knowledgeon how process theories should be employed and how they should be evaluated, may be brought to bear on the GCT. This will enhance its capacity to produce actionable knowledge.

The third contribution is the aggregation of conclusions which have been reached by applying the theory during empirical research. This aggregation, or collection of conclusions, may be put to use in order to test for other aspects of the GCT.

Finally, by thoroughly analysing the only definition, or understanding, of what constitutes a GCRP, this thesis contributes to understanding the nature and the lineage of one of the most prominent models in the history of studying organisational decision making. Furthermore, the critical analysis of Bendor et al.'s definition of the GCRP has led to the explication of the intricate relations and differences between writings on the garbage can and writings on (new) institutionalism. This explication enhances the understanding of both schools.

5.2.2 Contributions to the literature on a technology of foolishness

This thesis' contribution to a TOF is a normative framework for conducting research on goal ambiguity:

1. Data needs to be interpreted using theories that allow for or incorporate active decision making entities, and which recognise that these entities engage goals, despite not engaging them in the way conceived of by rational choice theory.

2. Consequently, if the GCT is used to interpret data, an additional theoretical framework that fits the above criterion needs to be used alongside the GCT.
3. Using the GCT as a process theory might be useful for studying goal ambiguity, as long as methods and theories for studying narratives are incorporated in the analysis.
4. Goal ambiguity needs to be studied in its capacity as a phenomenon that causes emotional strain, amongs other forms of strain, and emotional responses, in members of the organisation. Ambiguity may be coped with, or managed, in ways that counter what needs to be achieved through a TOF.
5. Other themes that need to be researched in order for a TOF to be developed include: symbolic expressions (such as metaphors), tactile or visual experiences, the role of identity (that of the focal decision maker and the people he or she cooperates with), the idea of enacting the world, as opposed to having to predict its state.

5.2.3 Limitations of the study

The overall impact of the study is limited by the fact that only a sample of case studies done independently of the GCRP were analysed. It has been argued that these studies are representative (in chapter one), however, a good representation is still only a representation and therefore has limited accuracy.

Additionally, the theoretical perspective of the garbage can is not presented as the only way through which research that can contribute to a TOF may be done. The argument for why this particular theory presents a viable way was made in chapter one. However, other theoretical frames may certainly prove fruitful, as illustrated by study seventeen. This study applied a theoretical frame pertaining to coping strategies.

Furthermore, different types of empirical studies may be used in an attempt to gain knowledge on goal ambiguity. Case studies tend to provide answers to ‘how’ and ‘why’-questions, as the focus is directed at interactions within ‘real’ situations. However, as Black points out, they are not particularly well suited when researchers attempt to formulate or justify greater generalisations (1999: 48).

The last limitation pertains to the categories imposed on the studies in order to to analyse and evaluate them. Although these categories were appropriate and useful, there are more nuances to empirical studies and the theoretical frames within which they fit.

5.3 Suggestions for future research

The suggestion for future research is to pay heed to the normative framework suggested by this research. This framework is discussed in chapter four and in section 5.2.2. of this chapter. Observing behaviour and categorising these observations solely according to the components of a model for decision making that does not incorporate active decision making entities has been proven highly unlikely to deliver insights on goal ambiguity. Where versions of the GCT are used in future, these theories should:

1. Be complemented by models that do incorporate the influence of active decision making entities, or incorporate this influence themselves.
2. Be applied as process theories and should by implication incorporate theoretical tools that are appropriate for studying organisational narratives, such as discourse analysis.

These suggestions imply that decision theorists will have to study the symbolic, or interpretative, order that is present within organisational decision making with tools that have been designed to study these orders, instead of attempting to analyse and understand these orders by exclusively employing behavioural models and tools.

In terms of themes that need researching, researchers that seek to contribute to a TOF should focus on: symbolic expressions (such as metaphors), tactile or visual experiences, and/or the role of intuition and emotional expression in decision making processes, the role of identity, and the idea of enacting the world, thereby determining its nature.

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