Linking Stakeholder Literature and System Dynamics: Opportunities for Research

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ABSTRACT: *The research interest in the field of stakeholder identification, analysis and salience is growing. Stakeholder theories are being proposed and experts in the field are debating over the acceptability of these theories. Starting from the classic stakeholder literature, the paper explores different theories, applications and dynamics of stakeholders available in the literature. The paper concludes that the system dynamics methodology can contribute to understanding the dynamics of stakeholders.*

Keywords: Stakeholder literature, stakeholder, strategic management, system dynamics

INTRODUCTION

Stakeholder literature is in a state of explosion. Since Freeman (1984) published his landmark book, 'Strategic Management: A Stakeholder Approach', the concept of stakeholders has become embedded in management scholarship and in managers' thinking (Mitchell, *et al*., 1997).

About a dozen books and more than 100 articles with primary emphasis on stakeholder concept have appeared following Freeman's book (Donaldson & Preston, 1995). This paper discusses the state of the art of stakeholder research. Using a chronological map (Figure 1), we explore and classify stakeholder literature to understand the stakeholder concept in a better way.

The relevance of system dynamics in understanding stakeholder concepts is also explored in this paper. We suggest that the system dynamics methodology can provide a more systematic way for understanding the dynamics of stakeholders.

CLASSICAL STAKEHOLDER LITERATURE

The origin of 'stakeholder' in management literature can be traced back to 1963, when the word appeared in an international memorandum at the Stanford Research Institute (cited in Freeman, 1984). Stakeholders were defined as *'those groups without whose support the organisation would cease to exist'*. The core concept, in other words was 'survival'; without the support of these key groups, the firm will not survive.

During its formative stage, stakeholder theory itself had to fight for survival, when Ansoff (1965) in his classic book 'Corporate Strategy' argued for the rejection of stakeholder theory. According to him 'responsibilities' and 'objectives' were not synonymous but were made one in stakeholder theory.

By the 1970's stakeholder concepts began to surface in the strategic planning literature. Taylor (1971) predicted that the importance of stockholders would diminish and that, in the 1970's, businesses would be run for the benefit of other stakeholders too. King and Cleland (1978) came up with a method of analysing stakeholders in project management. Hussey and Langham (1978) developed a model of the organisation and its environment with stakeholders and used it in the corporate planning process.

Systems theorists also contributed to the development of the stakeholder literature in the 1970's. Ackoff (1974) developed a methodology for stakeholder analysis of organisational systems. He argued that stakeholder participation is essential for system design and the support and interaction of stakeholders would help in solving many societal problems. Churchman (1968) also contributed by developing systems theory to address social issues in an open systems point of view. The systems model of stakeholders emphasised participation and argued that problems should not be defined by focussing or analysis, but by enlarging or synthesising.

Many researchers were also concerned with the social responsibility of business firms. Post (1981) categorised the main lines of research in this area, covering many ideas, concepts and techniques (Sethi, 1971; Votaw & Sethi, 1974, Preston, 1979). The distinguishing feature of this literature is that the concept was used to include non-traditional stakeholders who were having adversarial relationships with the firm. The sub discipline of management called 'business and society' developed by researchers at the School of Management at Berkley (Votaw, 1964; Epstein, 1969) and Harvard Business School (Ackerman, 1975; Murray, 1976) argued for responsiveness instead of responsibility.

In the organisation theory literature, Rhenman (1968) used the term stakeholders explicitly to designate the individuals or groups which depend on the company for the realisation of their personal goals and on whom the company is dependant. Pfeffer and Salancik (1978) constructed a model of organisation -environment interaction and claimed that the effectiveness of an organisation derives from the management of demands, particularly the demands of interest groups.

Thus, classic stakeholder theory originated on the concept of survival, falls into four groups namely, corporate planning, systems theory, corporate social responsibility and organisational theory (Freeman 1984).

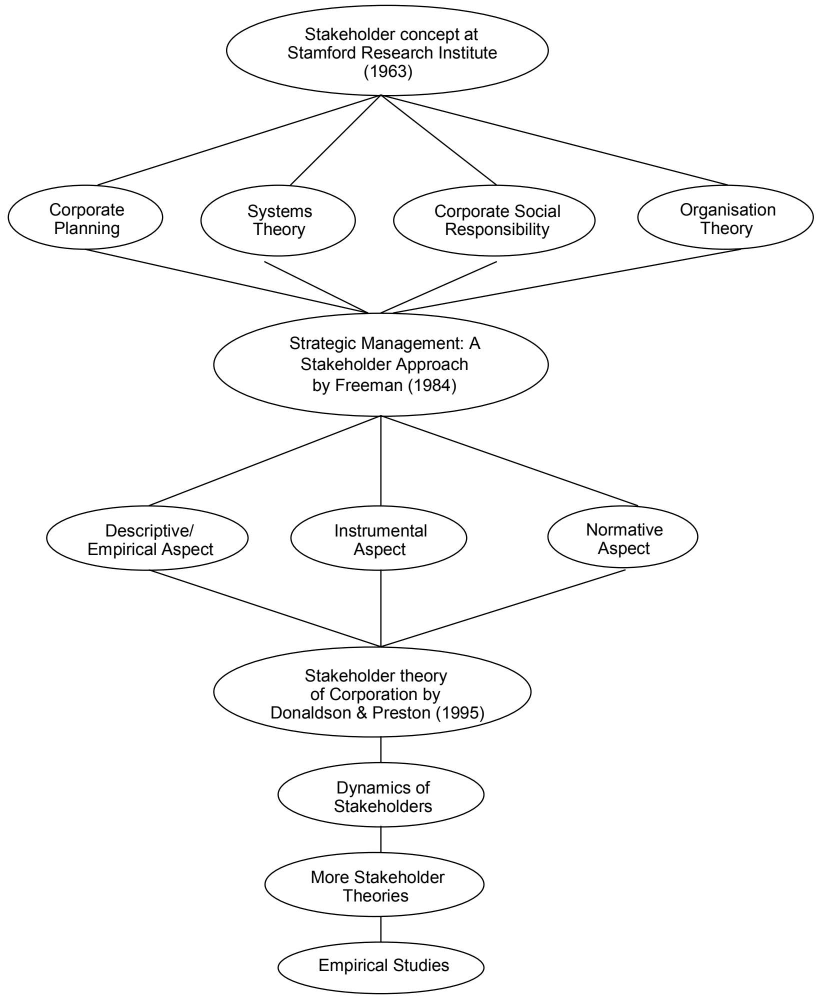


Figure 1: Stakeholder Literature Map

STRATEGIC MANAGEMENT: A STAKEHOLDER APPROACH

Researchers in the stakeholder field differ in their worldview on stakeholder concepts, but most of them acknowledge Freeman's (1984) book 'Strategic Management: A Stakeholder Approach' as a landmark in stakeholder literature. In his book, Freeman defines stakeholders as *'any group or individual who can affect or is affected by the achievement of the firm's objectives'*.

He proposed a framework, which fits three levels of stakeholder analysis - rational, process and transactional. At the rational level, an understanding of 'who are the stakeholders of the organisation' and 'what are their perceived stakes' is necessary. As a technique, Freeman uses a generic stakeholder map as a starting point. It is also possible to prepare a stakeholder map around one major strategic issue. As the next step, a stakeholder chart is prepared by identifying specific stakeholders based on the stakeholder map. Further, the stakes of the specific stakeholder groups is identified and analysed. He also uses a two dimensional grid as an analytical device to depict an organisation's stakeholders. The first dimension categorises stakeholders by interest or stake and the second dimension is in terms of power. He makes the grid more realistic by improving on the classical stakeholder grid to prepare a real world stakeholder grid.

At the process level, it is necessary to understand how the organisation either implicitly or explicitly manages its relationships with its stakeholders, and whether these processes fit with the rational stakeholder map of the organisation. According to Freeman, existing strategic processes that work reasonably well could be enriched with a concern for multiple stakeholders. For this purpose, he uses a revised version of Lorange's schema for strategic management processes.

At the transactional level, we must understand the set of transactions or bargains among the organisation and its stakeholders and deduce whether these negotiations fit with the stakeholder map and the organisational processes for stakeholders. According to Freeman successful transactions with stakeholders are built on understanding the legitimacy of the stakeholder and having processes to routinely surface their concerns.

Broadly, the emphasis of Freeman's book is to construct an approach to management that takes the external environment into account in a systematic way. He provides a solid theoretical basis for the understanding of the stakeholder concept and paved the way for extensive future research in the field.

ASPECTS OF STAKEHOLDER THEORY

Based on the foundation built by Freeman, stakeholder theory started spreading its wings. After Freeman's book, the way stakeholder theory was presented and used could be classified into three types. In their widely quoted paper, Donaldson and Preston (1995) calls it as 'alternative aspects of stakeholder theory'. These three aspects, namely, descriptive/empirical, instrumental and normative, are explored in this section.

As a descriptive/empirical approach, stakeholder theory was used to describe and sometimes explain specific corporate characteristics and behaviours. Brenner and Cochran (1991) used stakeholder theory to describe the firm. Brenner and Molander (1977) used it to understand the way managers think about managing. Wang and Dewhirst (1992) used it to analyse how board members think about the interests of corporate constituencies. Carkson (1991) used it to understand how some corporations are actually managed.

Secondly, as an instrumental approach, stakeholder theory was used to establish a framework for examining the connections, if any, between the practice of stakeholder management and the achievement of corporate performance. Many researchers (e.g. Aupperele, *et al.*, 1985; Preston & Sapienza, 1990 and Preston, *et al*, 1991) used conventional statistical methodologies to explain these connections. Others (Kotter & Heskett, 1992; O'Toole, 1985; and O'Toole 1991) used direct observation and interviews. The instrumental researchers observed that highly successful companies although very diverse in other ways shared a stakeholder perspective.

Thirdly, as a normative approach, stakeholder theory was used to interpret the function of the corporation, including the identification of moral or philosophical guidelines for the operation and management of corporations. As a normative theory it attempted to interpret the function of, and offer guidance about, the investor-owned corporation on the basis of some underlying moral or philosophical principles. Works of Carroll, (1989), Kuhn and Shriver, 1991; Friedman, 1970 and Marcus, 1993 falls into this area.

According to Donaldson and Preston (1995) these three aspects of the stakeholder theory are nested within each other. The external shell of the theory is its descriptive aspect; the theory presents and explains relationships that are observed in the external world. The theory's descriptive accuracy is supported, at the second level, by its instrumental and predictive value; if certain practices are carried out, then results will be obtained. The central core of the theory is normative. The descriptive accuracy of the theory presumes the truth of the core normative conception, in so far as that managers and other agents act as if all stakeholders' interests have intrinsic value.

DYNAMICS OF STAKEHOLDERS

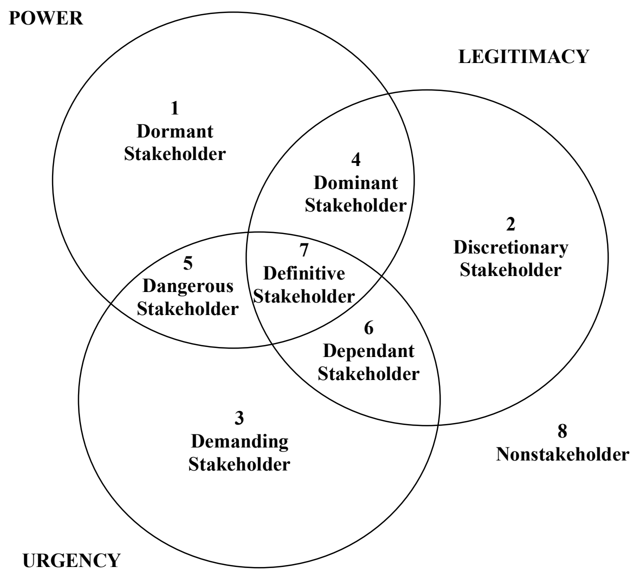
Another interesting characteristic of stakeholder concept is the dynamics of stakeholders. Over time, the mix of stakeholders may change. New stakeholders may join and wish to be included in any considerations, while others may drop out, through no longer being involved in the process.

The concept of the dynamics of stakeholders was acknowledged by Freeman (1984), and according to him, in reality stakeholders change over time, and their stakes change depending on the strategic issue under consideration. Alkhafaji (1989) also contributed to the understanding of this concept. To explain the dynamics, he defined stakeholders as the 'groups to whom the corporation is responsible'.

Another notable work on this concept was by Mitchell, *et al* (1997). They proposed that classes of stakeholders can be identified by the possession or attributed possession of one or more of three relationship attributes: power, legitimacy and urgency. By including urgency as an attribute, a dynamic component was added to the process whereby stakeholders attain salience in the minds of managers. By combining these attributes they generated a typology of stakeholders.

According to their typology (Fig. 2), if a stakeholder possesses only one of the three attributes, they are termed Latent stakeholders and have low stakeholder salience. If the only attribute present is power, such stakeholders are called dormant stakeholders; if it is only legitimacy, they are called Discretionary stakeholders and if only urgency, they are called Demanding stakeholders. Stakeholder salience will be moderate, if two attributes are present and such stakeholders are called Expectant stakeholders. Among the expectant stakeholders, those having power and legitimacy only are called dominant stakeholders; those having legitimacy and urgency only are called Dependent stakeholders and those having power and urgency only are called Dangerous stakeholders. Stakeholder salience will be high where all the three attributes are perceived by managers to be present in a stakeholder and they are called Definitive stakeholder. Further the dynamic qualities were illustrated by showing how stakeholders can shift from one class to another, when the salience of stakeholders increase/decrease by attaining/loosing one or more of the attributes. Later, Agle *et al* (1999) confirmed the model by empirically testing Mitchell *et al* (1997) theoretical model.

Dynamics of stakeholder is a very interesting and important aspect of the stakeholder concept. Further research and empirical studies are required to get a better understanding and to gain deeper insight of this area.



Source: Mitchell, et al. 1997, Figure 2, p874.

Figure 2: Stakeholder Typology

STAKEHOLDER THEORIES

Many stakeholder theories were developed and proposed during the course of development of stakeholder literature. Instrumental stakeholder theory by Jones (1995), The stakeholder theory of the corporation by Donaldson & Preston (1995), Toward a theory of stakeholder identification and salience by Mitchell *et al* (1997), convergent stakeholder theory by Jones & Wicks (1999) and divergent stakeholder theory by Freeman (1999), to name some of them.

Convergent Stakeholder theory proposed by Jones & Wicks was the central theme of five out of six articles published in the April 1999 issue of the Academy of Management Review. In the Convergent Stakeholder theory, Jones & Wicks examined the differences and similarities of the two divergent approaches to stakeholder theory, namely, a social science approach and a normative ethics approach. They argued that neither of the emergent forms of stakeholder theory is complete without the other and that the convergent stakeholder theory, which combines normative and instrumental elements, meets many of the criteria for successful integration of normative and empirical theory. According to them, it was useful to have a convergent Stakeholder theory, as a class of theories with specific characteristics, and they found it to be both normatively sound and practically viable.

As a response to the convergent theory proposed by Jones & Wicks, Freeman (1999) argued for a divergent theory. He felt that Jones' and Wicks' attempt at grand theorising goes awry on two separate grounds, their analysis built on the Donaldson-Preston typology of normative-instrumental descriptive and the linkage between instrumental theory and ethics consists of the nature of the means and ends that are linked together. According to Freeman what is needed was not more theory that converges but more narratives that were divergent-that showed different but useful ways to understand organisation in stakeholder terms.

In another response, Trevino & Weaver (1999), disagreed with Jones and Wicks' contention that they have developed a convergent stakeholder theory that moves stakeholder research toward theoretical integration. Their claim rested on two arguments. First, they questioned whether there is a plausible empirical stakeholder theory, either descriptive or instrumental, to integrate with normative theory. Secondly, they argued that the attempt to develop a convergent theory does not move stakeholder research much beyond its present degree of empirical/normative integration.

Gioia (1999) responded to convergent theory in terms of practicability, paradigms and problems in stakeholder theorising. He felt that this sort of theorising, would have more relevance and credibility if, instead of working from concept to concept, it worked from data to data. Yet another response to convergent theory was from Donaldson (1999) who felt that the glue, which Jones & Wicks used to converge instrumental and normative strands of stakeholder theory, is not sufficiently long lasting. He argued for a stronger, reconstituted glue – one that relies on analysing the psychology of the ordinary manager.

Clearly, there were some provocative issues in convergent theory that led to the articulation of more general concerns by these four responses. In the end it seems that this article made several contributions by initiating this debate (Gioia 1999). Also, this debate contributed to the growth of stakeholder literature, by triggering the thinking process of researchers for more empirical studies in the field of stakeholders.

EMPIRICAL STUDIES ON STAKEHOLDER THEORIES

After developing the stakeholder concept in its depth and width, researchers felt that the theory and models surrounding the issue of stakeholders were abundant but empirical research was in an early stage (Freeman 1999). The October 1999 issue of the Academy of Management Journal contained 7 articles dedicated to empirical research conducted in the field of stakeholders.Harrison & Freeman (1999) presented the six papers as a special research forum on 'Stakeholders, Social Responsibility and Performance'. This research forum was created to highlight research regarding the relationships between socially responsible organisational behaviour and various types of performance.

Berman, *et al* (1999) conducted empirical research to understand the relationship between stakeholder management models and firm financial performance. They used two models to determine whether organisations pursue the satisfaction of stakeholder interests for economic reasons or simply for intrinsic merit. Their first model called 'strategic stakeholder management model' reflects an instrumental approach, suggesting that concern for stakeholders is motivated by the perception that it can improve financial performance. In their second model, called 'intrinsic stakeholder commitment', firms are viewed as having a normative (moral) commitment to treating stakeholders in a positive way, and this commitment is, in turn, seen as shaping their strategy and impacting their financial performance. The results of the empirical tests supported strategic management model.

Using data provided by the CEOs of 80 large US firms, Agle, *et al* (1999) examined the relationship among the stakeholder attributes of power, legitimacy, urgency and salience; CEO values; and corporate performance. Their empirical study was based on the theoretical model developed by Mitchell, *et al* (1997) on stakeholder identification and salience. They found a strong support for the attribute – salience relationship and some significant relationships among CEO values, salience and corporate social performance. But they found no support for a salience-financial performance link.

Ogden and Watson (1999) examined a major contention of stakeholder theory, whether a firm can simultaneously enhance the interests of its shareholders and other relevant stakeholders. They used financial data relating to the U.K. water supply industry and the customer service performance indicators introduced after privatisation in 1989 to protect customer interests as a basis for their empirical analysis. They found that increasing customer service levels have a negative influence on profitability in the short term because of the costs associated with improving customer service. However, they also found that increases in customer service levels were linked to increases in market value, a reflection of investors' ability to ascertain the long term benefits from high levels of customer service.

Weaver, *et al* (1999) focussed on how external pressures and top management commitment influenced the nature of corporate ethics programmes adopted by large corporations. They found that external pressures are most likely to lead the ethics programmes that are easily decoupled with from organisational processes; policy communications like memos and newsletters would be a feature of such easily decoupled programmes. Well integrated practices such as ethics oriented performance appraisals were found in companies in which top management was highly committed to ethics.

Luoma and Goodstein (1999) in their research note examined the relationships between institutional influences and stakeholder representation on boards of directors. Empirical analysis of the data from 224 companies showed that only 14% of board seats were filled by non shareholder stakeholders. Their results indicated that variations in legal environments, industry regulation and firm size were associated with stakeholder representation on boards.

In another research note, Johnson & Greening used a structural equation modelling technique to test an integral model of the effects of institutional investors and various governance devices on corporate social performance. They found that organisations with higher equity ownership by pension funds and organisations with higher levels of outside director representation had higher corporate social performance on a number of dimensions.

In general, the results of empirical studies confirmed the theoretical models which were developed earlier. It also became clear that there exists a scope for more empirical studies to give a better direction to stakeholder research.

OPPORTUNITIES FOR SYSTEM DYNAMICS RESEARCH

One of the areas of the stakeholder literature, which offer exciting avenues for further research, is regarding the dynamics of stakeholders. The system dynamics methodology can be used to better understand the dynamics of stakeholders in a systematic way.

A review of the system dynamics literature revealed that system dynamicists have used the concept of stakeholders, although not always explicitly. Classical system dynamics (eg Forrester, 1961), public policy applications (eg Gardiner & Ford, 1980), group model building (eg Vennix, 1996), conflict analysis (eg Hsaio, 1998) and systems thinking methodology (eg Maani & Cavana, 2000) are examples of this usage.

In our opinion, system dynamics can make three major contributions to understand the dynamics of stakeholders. Firstly, group model building using system dynamics could be used to understand the present dynamics of stakeholders with respect to a particular issue. Such an exercise will help in highlighting the different perceptions of stakeholders. Secondly, a management flight simulator could be used to understand the future dynamics of stakeholders. Stakeholders could experiment different scenarios and examine their mental models using a flight simulator. This could help in altering the perceptions of stakeholders. Thirdly, the movement of stakeholders from a non stakeholder to a stakeholder and vice versa, and also the movement of stakeholders in different directions once they become a part of the stakeholder typology group, could be analysed more thoroughly using system dynamics methodology. Such an analysis will be very useful for a decision-maker, while managing a large group of stakeholders with conflicting interests.

CONCLUSIONS

Our review of the stakeholder literature revealed that the field of the dynamics of stakeholders offers opportunities for further research. An understanding of the past, present and future dynamics of stakeholders will help in managing the stakeholders successfully. A review of system dynamics literature gave evidence that system dynamicists have used the stakeholder concept. We suggest that group model building exercises, dynamic modelling and management flight simulators based on system dynamics methodology can help in capturing the dynamics of stakeholders. In conclusion, we propose that system dynamics can provide a systematic and rigorous way for understanding and analysing the dynamics of stakeholders, hence contributing to the further development of stakeholder theory.

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Endnote: 1. All references in Classical Stakeholder literature section can be obtained from Freeman (1984)

2. All references in Aspects of Stakeholder Theory section can be obtained from Donaldson and Preston (1984)