Organizational Bankruptcy: The Consequences of Failure on Director Human and Social Capital

Drake Mullens
Tarleton State University, TX, USA

We develop a model to explore the changes in human and social capital for directors on the board of a failed firm subsequent to organizational bankruptcy. With arguments rooted in signaling theory, we propose a negative relationship between bankruptcy and new director appointments, in addition to a negative relationship between bankruptcy and the prestige of directorships. We then develop propositions on how board tenure, board size, initial social capital, and frequency of bankruptcies in an industry moderate the negative relationship between organizational failure with human and social capital.

Key Words: Human capital, social capital, board of directors, bankruptcy

Introduction

The board of directors is one of the central institutions to ensure firms act in the interest of their stakeholders and mitigate the agency problem between management and shareholders (Fama & Jensen, 1983). While evidence suggests that an efficient market for directors and the desire to maintain a positive reputation inspire directors to act responsibly and become effective monitors (Fama, 1980; Fama & Jensen, 1983; Spence, 1973), the effectiveness of the board of directors as a monitoring institution is debatable (Dunn, 1987).

Despite efforts to toughen corporate governance through deliberate appointments of directors to their board, firms fail and find themselves in bankruptcy. While studies have examined the contributions of directors, in terms of their human capital (their skills, experiences, and reputation or prestige) and their social capital (their membership with and access to resources of other corporate boards), to firm performance (e.g., Bazerman & Schoorman, 1983; Certo, Daily, & Dalton, 2001; Galaskiewicz, 1985; Kor & Sundaramurthy, 2009; Westphal, 1999), few have considered the effects of firm-level outcomes on the directors reputation or future (re)appointments to other boards. Thus, the underlying question in this research is what happens to the human and social capital of the board of directors when a company files bankruptcy. With bankruptcies on the rise since the mortgage crisis began in 2006 and the financial crisis in 2007, it is important to understand the changes in human and social capital of the directors of bankrupt companies as these consequences may provide further insights and guidance to possible future actions by directors. We develop propositions about the impact of bankruptcy on the human and social capital of the directors such as the number of new board appointments, prestige of the directors’ appointments, director attributes, and board attributes. Overall, previous research suggests bankruptcy deteriorates the human, at least from a reputational perspective, and social capital for the directors on the failed firm. The deterioration may occur through fewer new appointments to boards and also decreased tenure on boards served at the time of bankruptcy.

In this study, we aim to contribute to existing research and argue that net changes in directorships provide an incomplete picture of the consequences to the director’s human and social capital. We build theory and propositions that the prestige of the director’s portfolio, the director’s tenure on the board, the size of the board and the rate of bankruptcy filings must be assessed in conjunction with the net changes in directorships. Just as with the number of appointments, we argue that while bankruptcy may reduce the prestige of directorships following a bankruptcy, previously acquired human and social capital may act as a buffer for directors in the event of a bankruptcy. In other words, high initial human and social capital may lessen the deleterious consequences of a bankruptcy. Next, we consider the size of the board. Since large boards reduce the contribution of each director, on average, we contend that board size will be positively related to social capital after bankruptcy filings. Finally, we examine the effects of the rate of bankruptcy occurrences within an industry. We propose that frequent bankruptcy occurrences within an industry will not carry the stigma that is detrimental to director human and social capital. Thus, we argue frequency of bankruptcy in a particular industry is positively related to human and
social capital. Finally, we assess the impact of the director’s tenure on a board. We contend that board tenure is negatively related to human and social capital. As tenure increases, the greater the director’s role in guiding the organization and the greater the opportunities to influence the course of action; thus, the highly tenured director may suffer greater losses in human and social capital in the event of a negative outcome such as a bankruptcy.

The remainder of the paper is structured as follows. First, we review the extant literature on boards of directors and bankruptcy. Second, we develop propositions and examine the relevant literature. Finally, we offer a brief discussion and conclusion.

**Literature Review: Director’s human and social capital and bankruptcy**

Scholars have suggested that a director’s ability to contribute to firm performance depends on the stock of human and social capital he brings into the organization (Hillman & Dalziel, 2003; Kor & Sundaramurthy, 2009). A director’s experience, expertise, knowledge, skills, and reputation compose his human capital (Becker, 1964; Laursen, Masciarelli, & Prencipe, 2012), the value of which may be enhanced by increased education, training, and experience (Becker, 1993). A director’s social capital refers to “the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed” by the director (Nahapiet & Ghoshal, 1998; p. 243). With higher levels of human and social capital, a director may be expected to be more effective in monitoring and counseling the top management team (Hillman & Dalziel, 2003; Stevenson & Radin, 2014).

This is consistent with the resource dependence theory that views directors as principal sources of management expertise and advice, as well as channels for procuring critical resources from the firm’s environment (Pfeffer, 1972; Drees & Heugens, 2013). Outside directors, who are usually financial or legal experts, marketing specialists, government officials, or community leaders, become excellent sources of advice and counsel because of the expertise, experience, and skills they bring into the position (Baysinger & Butler, 1985; Gales & Kesner, 1994). Inside directors with their insider information on intimacies of the operations of the firm provide top management a more accurate evaluation whenever making strategic decisions (Baysinger & Hoskisson, 1990). In order to secure key resources such as capital financing or policy-building influence under more favorable terms, it has been a common practice to recruit important stakeholders, such as financial creditors, capital investors, community advocates, suppliers, and customers, as directors (D’Aveni, 1990) as these individuals possess intimate knowledge involved in procuring the resources (Pfeffer, 1972). Mizruchi and Stearns (1993, 1994) have demonstrated the relationship of securing financial backing with having financial representatives as directors. Influential community members raise funds more effectively for profit and non-profit agencies whose boards they serve (Zald, 1967; Provan, 1980; Le, Kroll & Walters, 2012).

The resource-dependency concept of directors as mediums for obtaining beneficial resources from the firm’s environment through their interorganizational ties (Pfeffer, 1972; Drees & Heugens, 2013) overlaps with the social capitalistic view of directors as a means of tapping into the benefits accrued through their association or participation with other boards (Bourdieu, 1985). Social capital may be in the form of knowledge and information accessible through social networks (Burt, 1992). When directors are well-connected with other organizations in the focal firm’s dynamic environment, information exchange and resource acquisition are facilitated as transaction costs are reduced (Hillman & Dalziel, 2003). As director ties encourage information dissemination across firms (Burt, 1980; Stevenson & Radin, 2014), strategic information and opportunities (Pfeffer, 1991) and operating plans of other firms (Burt, 1983) are revealed to the focal firm. Thus, individuals who serve on multiple boards have been shown to influence strategic formulation and subsequent firm performance (Eisenhardt & Schoonhoven, 1996; Zhu & Westphal, 2013). Further, research has shown that firms with directors who are connected to critical elements of the environment for which an important resource is required consistently fared better than their industry peers whose directors lacked such ties (Pfeffer, 1972). And when compared to individual directors who have limited connections, outside directors with copious connections, like institutional directors, contribute more positively to firm performance (Peng, 2004).

Social capital is also important in further creating human capital (Coleman, 1988). Directors with ties to organizations that are strategically related are better advisors and counselors (Carpenter & Westphal, 2001). Consequently, the directors’ provision of advice and counsel improve firm performance (Westphal, 1999). Certo and colleagues (2001) also found board prestige to be positively related to performance as measured by initial public offering (IPO) underpricing. It follows that director reputation, a human capital borne by the director’s social capital, improves firm credibility and performance. Besides the firm’s reputation gaining from its prestigious directors, the firm’s legitimacy is also enhanced by the
status of the organizational ties its directors possess (Bazerman & Schoorman, 1983; Galaskiewicz, 1985). More recently, Kor and Sundaramurthy (2009) found that both human and social capital of directors contribute to the growth of the firm.

Because corporate directors are motivated to act in a responsible manner as a consequence of the efficient labor market for corporate directors (Fama & Jensen, 1983), a favorable reputation as an advocate for shareholder welfare increases the directors’ attractiveness as candidates for board appointments at other firms (Zajac & Westphal, 1996). After all, “prestigious or legitimate persons or organizations represented on the focal organization’s board provide confirmation to the rest of the world of the value and worth of the organization” (Pfeffer & Salancik, 1978; 145). Following this logic, a dismal performance for the firm could reflect badly on its board of directors and possibly hurt their chances of being appointed to additional boards. Such argument is grounded mainly on signaling theory, where signals representing actions of individuals are used as a measure of their abilities when assessing individual performance is difficult (Spence, 1973; Reuer, Tong, & Wu, 2012). External stakeholders make judgments about director quality based on indirect indicators, such as firm performance, that can be easily interpreted and evaluated (Certo, Daily & Dalton, 2001; Spence, 1973).

Despite the vast literature examining the influence director human and social capital on firm performance, studies exploring the effect of inferior firm performance, particularly bankruptcy, on directors’ human and social capital have been sparse. In an earlier study linking bankruptcy and board changes, Gilson (1990) found that only 1 out of 2 directors kept their position following a bankruptcy in the focal firm. Most of the studies focused on the specific dimension of director reputation often measured in terms of the number of board seats (e.g., Yermack, 2006; Helland, 2006; Fich & Shivdasani, 2007) and how this facet of board capital is affected by the breakdown of the corporate governance mechanism in events such as financial fraud (Helland, 2006; Fich & Shivdasani, 2007) and accounting restatements (Srinavasan, 2005). While Agrawal & colleagues (1999) found that fraud did not significantly affect the composition of outside directors within the focal firm, Fich and Shivdasani (2007) observed a decline, approximately 20% on average, in other directorships by outside directors of sued firms. Helland (2006) found a similar negative relationship between director reputation and public fraud allegations. In the case of accounting restatements, Srinavasan (2005) found increased loss in other directorships for outside directors who were members of the audit committee among firms making income-decreasing restatements.

In summary, previous research suggests that directors are critical to an organization as they provide important resources such as legitimacy, reputation, managerial expertise, and counsel. Appropriate selection of directors to the board is instrumental in securing key resources for the firm (D’Aveni, 1990). Based on the logic of Fama and Jensen (1983), Reuer, Tong, and Wu (2012), and Spence (1973) in his signaling theory, directors are motivated to act in the interest of the firm because the efficient labor market for directors and assessment of their quality based on firm performance. When a director serves on the board of a firm that files bankruptcy, signals may be sent to stakeholders about the quality of the director. This is suggestive of a decrease in the director’s social and human capital as represented by a negative net change in the number of directorships and a reduction in the prestige of the director’s portfolio. However, the bankruptcy will likely be evaluated in light of firm and director specific circumstances. Therefore, the degree of negativity present in the signal will be contingent upon the director’s initial human and social capital, the size of the board on which the director served, the director’s tenure on the board, and the frequency of bankruptcy in the focal firm’s industry. The contingent effects will be examined in the subsequent section.

Proposed Model
Propositions

Bankruptcy and New Appointments

The number of boards on which a director serves is indicative of his valuation on the market for corporate directors. As a director signals his worth to external stakeholders and the signals are well received, more firms will seek to appoint that talent to the board of directors in an attempt to receive higher quality advice and counsel. Furthermore, the number of appointments serves as an indicator for a director’s social capital (Hillman & Dalziel, 2003). According to Fama and Jensen (1983) and Reuer, Tong, and Wu (2012), outside directors serve on boards to signal their expertise and knowledge. The value of the directors’ human capital is dependent upon their performance as directors in other organizations. Performance of the board of directors is directly related to the performance of the overall organization. Extending Fama and Jensen’s (1983) supposition that directors’ human capital is dependent on past performance, Ferris, Jagannathan, and Pritchard (2003) examined the effect of firm performance on the number of directorships. They found past firm performance, on which a director served, is significantly and positively related to the likelihood of new appointments. Additionally, Ferris, Jagannathan, and Pritchard (2003) demonstrated past performance is positively related to tenure on a board.

The arguments that suggest firm performance results in increased or decreased appointments for directors can be traced to Spence’s (1973) signaling theory. When firms are in the market for new directors, they encounter an information asymmetry with respect to distinguishing between the expertise and abilities of potential directors (Fiss, 2006). To reduce the information asymmetry, decision makers examine the historical performance of firms on which the director was seated. Higher performance signals the ability to perform well in the future and can be used as a tool to differentiate between low and high quality directors. Bankruptcy is often viewed as the definitive exemplification of poor performance. In a chapter seven bankruptcy, the business is liquidated and fails to remain solvent, while a chapter eleven bankruptcy allows the business to reorganize or restructure to facilitate solvency. We posit that service as a director to a firm that files bankruptcy will be negatively related to new appointments on boards of other firms.

Proposition 1: Bankruptcy of the focal firm on which a director serves the board will be negatively related to the number of appointments for that director.

Prestige of Director Portfolios

In addition to the number of appointments, the prestige of appointments provides a more holistic view of social capital for a director. An appointment to the board of General Electric is associated with significantly more prestige than an appointment to a local mom and pop establishment. Firms wish to appoint prestigious directors to their boards to signal value, quality, and legitimacy (Certo, 2003). Directors wish to be seated on the most prestigious boards available to them to signal their expertise, knowledge and abilities (Mowery, Oxley, & Silverman, 1996). There, however, arises an informational asymmetry in the market for outside directors. Extending Spence’s (1973) signaling theory, which describes the process by which decision makers arrive at decisions when information asymmetries are present, boards seeking new appointees face information asymmetries when attempting to distinguish between high and low quality directors. High performing directors demonstrate their abilities by a record of exemplary firm performance. In an attempt to reduce the information asymmetry, decision makers can rely on the past firm performance of boards the director served to ensure only high quality directors are appointed to the board of their firm (Certo, 2003). Stated differently, outside directors signal their quality and expertise to decision makers by their past performance. In addition to a reduction in the number of new appointments, a director on the board of a failed company may face invitations to serve boards associated with less prestige. We argue that bankruptcy will negatively affect the signals sent to decision makers, and, therefore, bankruptcy will be negatively related to the prestige of a director’s portfolio.

Proposition 2: Bankruptcy of the focal firm on which a director serves the board will be negatively related to the prestige of the director’s portfolio.

Initial Social Capital as a Buffer

The market for corporate directors pays consideration to signaling effects (Kassinis & Vafeas, 2002; Kaplan & Reishus, 1990; Fama & Jensen, 1983; Ferris, Jagannathan, & Pritchard, 2003; Reuer, Tong & Wu, 2012). As previously discussed, signals, which are utilized to differentiate between high and low quality candidates, can be enhanced when an individual serves on a board of high performing organization (Spence, 1973). Contrarily, positive signals to decisions makers will be diminished when an individual serves on the board of a low performing firm. The overall signal sent to decision makers is the
sum of the performance of each of the firms an individual director was seated on the board. As the number of signals, again a signal is defined as the performance of a company in the director’s portfolio, increases, one bankruptcy in the director’s portfolio will have a diminishing effect. As the number of directorships a person holds increases, the performance of an individual firm will have a diminishing effect on the overall signal sent to decision makers. For example, the signal sent by a director serving only one board will be equal to the performance of that single company. If the single firm in the director’s portfolio files bankruptcy, the signal sent to decision makers will be that of extremely poor performance. The signal sent by a director serving seven boards will be the sum of the performance for each of the seven firms. If one of those seven firms files bankruptcy, the remaining six firms’ performance can act as a buffer. The overall signal sent to directors could still be positive. Therefore, we argue higher initial social capital, which is measure of the number of directorships, can act as a buffer for poor performance in a single firm. We expect as the number of directorships increases, the smaller the negative effect of a bankruptcy in the director’s portfolio. The negative relationship between bankruptcy and human and social capital is then contingent on initial social capital. When initial social capital is high, the negative relationship between bankruptcy with human and social capital will be weakened.

Proposition 3: The number of appointments (initial social capital) will attenuate the negative relationship between bankruptcy and number of appointments.

Board Size

Many attempts have been made to relate board size to board performance and overall firm performance; although, equivocal results are yet to be established. On one side of the debate, a large board provides more talent, knowledge, and advice (Zahra & Pearce, 1989; Nakano & Nguyen, 2012). On the other side of the debate, Goodstein, Gautam, and Boeker (1994) suggest large boards thwart the cohesion of the group, are less participative, and develop fewer strategic initiatives. The correctness or wrongness of the different views in the ongoing debate is beyond the scope of this paper. What can be agreed upon is, on average, a director appointed to a large board will have less influence on decisions than an individual appointed to a small board. In simplistic terms, as the number of directors on the board increases, blame for firm failure will be spread more thinly across a greater number of directors. In a hypothetical scenario where a board is singularly represented by one director, that individual director would be wholly responsible for the lack of advice, counsel, and provision of resources that resulted in the bankruptcy. When the board is comprised by a greater number of directors, it is the totality of the directors’ actions that was the basis for the firm failure; therefore, each director will be responsible for only partial blame. Because of the greater voice a director has on a small board, we contend that the impact of bankruptcy will more negatively affect a director on a small board.

Proposition 4: The number of directors on the board of the focal firm will attenuate the negative relationship between bankruptcy and number of appointments.

Frequency of Bankruptcy

Norms and sanctions are core components in social networks, such as is the case with directors serving multiple boards. Adherence to norms can result in acceptance, social support, and other forms of rewards (Coleman, 1988). Divergence from the developed norms may yield sanctions for an actor (Nahapiet & Ghoshal, 1998). In the context of firms and directors, bankruptcy could be viewed as a norm, or part of the business cycle, in particular industries. In other industries, bankruptcy could be viewed as shameful and a failure. The degree to which bankruptcy is viewed negatively or viewed as norm is dependent upon the frequency with which it occurs in the industry of interest. Let us be clear, even if bankruptcy is viewed as a norm of conducting business in an industry a firm files for bankruptcy, we do not believe directors will be rewarded. The social network, however, may provide support to a director in the event the focal firm fails. In industries characterized by few bankruptcies, deviation from the established norm may be of greater importance; deviation could abrade network ties and weaken social capital. The departure from few bankruptcies in an industry would be viewed more negatively than a bankruptcy in an industry characterized by frequent bankruptcies. Therefore, we postulate in industries that observe frequent bankruptcies, directors on the board of a firm that files bankruptcy will experience less deterioration in social capital.

Proposition 5: The frequency with which bankruptcy occurs in the focal firm’s industry will attenuate the negative relationship between bankruptcy and number of appointments.

Board Tenure

With respect to corporate boards, tenure of directors has been non-monotonically associated with
performance. Hermelin and Weisbach (1991) demonstrated at low levels of tenure there is not a significant relationship with firm profitability. However, for directors on the job for more than 15 years, each additional year further reduces profitability. Endured tenure of directors could be indicative of above average director abilities (Jensen & Murphy, 1990). Because of their above average abilities, they may have been given the opportunity to continue as a director (Hermelin & Weisbach, 1991; Zhu & Westphal, 2013). From our perspective, when we examine bankruptcy and the resultant changes in social capital, increased tenure is associated with “riding the ship to the boat graveyard”. Tenure suggests directors were active in the decisions that led to the bankruptcy of the firm. Further, short tenure on the board of a firm that filed bankruptcy could be the result of a director being appointed to resurrect an ailing firm. Therefore, we argue tenure on the board of a company that filed bankruptcy will be negatively related to social capital.

Proposition 6: Tenure on the board of the focal firm will accentuate the negative relationship between bankruptcy and number of appointments.

Discussion and Conclusion

The present study argues bankruptcy will negatively affect the social capital of the directors on the board at the time on the bankruptcy. Specifically, bankruptcy will reduce the number of new appointments for the directors on the board of the failed firm. Spence’s (1973) signaling theory indicates that firms examine the past performance of firms with which the directors served on the board. The historical performance signals the abilities and the expertise of the directors. The corporate market for directors will use the historical performance to discriminate between high and low quality directors. Additionally, organizations, especially new organizations, use the board of directors to signal the quality and the legitimacy of the organization to external entities (Certo, 2003). Thus, organizations have an incentive to attract and retain the most reputable directors as possible. As posited in proposition one, a bankruptcy diminishes the social capital and reputation of the directors on the board. The reduction in social capital will manifest in decreased tenure on social boards, as well as fewer new director appointments.

Just as organizations signal their quality and legitimacy through their boards of directors, directors signal their expertise and knowledge by the prestige of their portfolios as directors. By only examining the number of directorships, an incomplete picture is painted about the social capital of the director. The number of appointments could actually increase while the prestige of the director’s portfolio decreases. Therefore, in addition to the sheer number of appointments, we consider the prestige of the appointments and directorships in the director’s portfolio. Our belief is bankruptcy will reduce the prestige of the actor’s collection of directorships.

However, we argue that high levels of initial social capital can act as a buffer when a firm, on which the director was seated on the board, files bankruptcy. As the social capital increases and the number of boards served increases, one firm’s performance is but one of many signals that will be conveyed to the corporate market for directors, thereby mitigating the diminishment of social capital associated with bankruptcy. Although the bankruptcy will still blemish the director’s record of performance, the overall signal sent to the external decision makers will be the average performance of firms in the director’s portfolio. From a probabilistic view, the likelihood of a firm failure also increases as a director is seated on more boards, which also may be considered in the evaluation of directors by external decision makers.

Board size has been associated with firm performance both positively and negatively (Zahra & Pearce, 1989; Goodstein, Gautam & Boeker, 1994). Argument purporting a positive relationship between board size and firm performance are rooted in resources. As the board size increases, resources are more readily available to the firm. Resources in this respect could be described as privileged access to capital, communication channels with externalities, advice, and expertise (Zahra & Pearce, 1989). The negative relationship is argued to result from lack of cohesion, participation, and strategic initiatives (Goodstein, Gautam & Boeker, 1994). Irrespective of which side of the argument is correct, on average, as the board size increases, the individual contribution of each director is reduced. Because the marginal contribution will become less as the board size increases, the corporate market will pay consideration to the contribution of directors in the event of a bankruptcy. The lessened impact of an individual director on the bankruptcy will reduce the degree to which social capital is diminished. Therefore, our proposition suggests board size will be inversely related to changes in social capital when a firm files bankruptcy.

The commonness, the frequency with which it occurs, of bankruptcy in an industry will differentially affect social capital. In social networks, deviation from established norms results in sanctions and other consequences (Coleman, 1988). Thus, in an industry where bankruptcy is a rarity, directors on the
board of a bankrupt firm will face consequences. Our interest is in the corporate market for directors. There, the consequences will likely take the form of decreased tenure on boards as well as fewer new appointments. Conversely, some industries can be characterized by frequent bankruptcies. In those industries, bankruptcy may be viewed as a norm or part of the business cycle. The social network can provide social support and other assistance to directors involved bankruptcy when it is viewed as a norm. Additionally, the market for directors will acknowledge the norm and view bankruptcy less disapprovingly. Therefore, our supposition is the frequency with which bankruptcy occurs will be negative related to changes in social capital.

Lastly, we consider the effects of director tenure on social capital when a firm in the director’s portfolio files bankruptcy. Extended tenure on the board a firm that files bankruptcy indicates the director was present for the decisions that led to the demise of the company. Because the director was present for the decisions that ultimately led to the bankruptcy and didn’t initiate strategic change to remedy the problematic course of action, he or she will be more harshly penalized by the market for directors and the social network. Directors with short tenure on the board of a company that goes bankrupt likely inherited an ailing firm and poor decisions of previous directors. Therefore, they will be penalized less aggressively in the market. Our final proposition contends that tenure is positively related to reductions in social capital when a firm in the director’s portfolio files bankruptcy.

Overall, this research argues bankruptcy diminishes the availability of social capital to directors on failed companies following a bankruptcy. Further, we identify conditions under which the social capital of the board of directors will be more significantly or less significantly impacted subsequent to bankruptcy. This contributes to the extensibility of the social capital literature and signaling theory. Practically, our research can guide directors in developing and maintaining their social capital. The board literature has traditionally examined how the board affects firm outcomes. There is a paucity of works that consider how firm outcomes affect the director’s social capital. This research is intended to start a discussion on the role of firm outcomes and firm characteristics as determinants of director social capital.

Our analysis suggests a number of fruitful areas for future research. First, although our propositions rest upon a sound theoretical foundation, empirical confirmation would lend credence to the arguments contained herein. Second, in addition to empirical testing, the proximate cause of bankruptcy may influence the change in social capital. A bank failure in the midst of a mortgage crisis may very differently impact a director’s social capital than an Enron failure in a booming economy. Third, additional insights would be provided by considering director exit from boards. Directors can be observed exiting from boards as poor performance indicators are sent to the market. Will directors that exit the board prior to firm bankruptcy incur fewer negative consequences than directors that stay with the firm until bankruptcy? That is an important question to be answered with immediate practical and academic implications. Fourth, attention should also be paid to the type of bankruptcy filing. Chapter 7 and Chapter 11 bankruptcies could both be considered organizational failures. However, the impact on director’s social capital could be divergent. The liquidation of a business could be more detrimental to a director, and it is instructive for future research to consider this possibility.

References


