THE PROBLEM OF UNOBSERVABLES IN ORGANIZATIONAL LEARNING THEORIES.

A REVISIT TO THE CULTURAL RESEARCH METHODOLOGY

Keywords:
A Behavioral Theory of the Firm, Threat Rigidity Theory, unobservables, culture, methodology.

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Abstract:

The longstanding debate between A Behavioral Theory of the Firm and Threat Rigidity Theory persists because most empirical contributions have merely focused on rare events during adversity; namely organizational risk-taking. As such these contributions give insufficient attention to the most common activities of individual agents; i.e. conservative activities. By taking a cultural view on these organizational learning theories, we refocus on the observable actions of individual agents and interactions between organizational agents during adversity and success. We argue that these high probability events are a good start point to understand the debate better.

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1 INTRODUCTION TO A PERSISTENT DEBATE

Nearly all organizational learning theories assume that sunk costs and existing capabilities greatly reduce the possibilities for exploratory learning in organizations (e.g., March 2006). While it is generally accepted that organizational rarely learn new things, scholars keep on disagreeing about the conditions under which organizational learning does appear. Central in this debate are two classical theories: A Behavioral Theory of the Firm [ABTF] and Threat Rigidity Theory [TRT] (e.g., Ketchen and Palmer 1999; Lant and Hurley 1999; Mone et al 1998; Ocasio 1995; Shimizu 2007). According to ABTF, exploratory learning only takes place if conflicts between different agents are kept under control through processes of consensus (Cyert and March 1963). In TRT, exploratory learning only occurs if the organization does not restrict information processing, does not constrict control and if it allows to focus on other things than efficiency (Staw et al 1981).

This debate is an old one. It persists because the empirical evidence has done little to reduce the debate between the two theories. There are two reasons for this. First, most empirical studies have not sufficiently attempted to observe all elements that are described by organizational learning theories. Second[3], even if the contributions would have increased the empirical evidence, they still need to account for the fact that both organizational learning theories contain some elements that simply can not be observed because they are (state) unobservable. For example, it will be hard to nail down latent conflicts in ABTF; just as it will be hard to observe restrictions on information processing in TRT. Consequently, there is and will never be a simple litmus test to rule out one of the two organizational learning theories. Yet, much of the empirical contributions act as if a litmus test exists. Hence, it should be of no surprise that empirical results fall short.

In this paper, we will first describe the problem of unobservables in detail. Then we will introduce the cultural research methodology of organizational learning to shift the attention from what is not observable to what is observable. Finally, we draw lessons from the cultural view to sharpen the contrast between A Behavioral Theory of the Firm and Threat Rigidity Theory.

2 PAST APPROACHES WITH RESPECT TO UNOBSERABLES

2.1 Trailing evidence for organizational learning theory

There is a historical reason why organizational learning theories have not been verified as it should be. In 1963, Cyert and March were ahead of their time when they wrote in ABTF about bundles of processes (i.e., processes of quasi-resolution of conflict, uncertainty avoidance, problemistic search and organizational learning) in actual organizations. At that time there were no standard tools to test their process propositions (Argote and Greve 2007: 343). Even at the end of the 20 century authors have claimed that the gap between learning theory and empirical results was still not satisfactorily bridged. Rajagopalan and Spreitzer (1997:56-62) for example argue that the empirical evidence for organizational learning theories is weak because constructs are not

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[3] This reason is not specific to organizational learning theories. Godfrey and Hill (1995) have shown that many influential theories in the organizational economics and strategic management literature also contain unobservable constructs.

measured in a similar ways and because case study approaches have been used predominantly. These measurement problems prevented the development of a vast body of scientific evidence.

Currently, the gap between theory and empirical results has definitely become smaller. Organizational learning scholars have made great progress in providing empirical evidence for organizational learning theories. Argote and Greve (2007) give a good impression of the methodological challenges that have been overcome since ABTF was first published. They claim that there are nowadays many statistical possibilities to analyze longitudinal data and to construct aspiration levels.

It is however clear that the gap has not been fully bridged. It seems that one of the most urgent ways forward is to bring the individual back in the limelight of organizational learning theories (e.g., De Schryver 2009; Felin and Foss 2006: 11; Shimizu 2007) Felin and Foss (2006) argue that the individual behavior in many organizational contributions has been marginalized by homogenizing it. This attempt runs counter to the human heterogeneity which is a robust result from psychology at large. Thus instead of homogenizing individual behavior, the next step is to make as precisely as possible conjectures about how individuals are likely to behave in these theories.

2.2 Individuals in organizational learning theory

Before propositions can be made, we need to highlight the individual first in the organizational learning theories. This first step does not seem to be straightforward. The attempts that we found in the literature are unsatisfactory to us. Felin and Foss (2006) suggest to make the *prior* assumption that 'all' human beings choose rationally. Even if this assumption would be universally true[4], it seems to us that Felin and Foss (2006) are homogenizing again. Therefore, we do not follow their idea.

Another attempt is made by Shimizu (2007), who has combined a psychological theory, prospect theory (the individual level) with both ABTF and TRT (the organizational level). Yet, he also faces problems adding the individual in the organization. Shimizu (2007) needs to apply two subtle tricks, which rely on untested and probably wrong prior assumptions. The first trick is to argue that ABTF and TRT do not apply equally well all the time. In particular he posits that ABTF only applies when organizations face small losses and that TRT only applies when organizations face large losses. By a priori allocating timeslots of explanatory power to the theories, Shimizu (2007) shuns the debate between ABTF and TRT.

However in doing so, we believe that Shimizu (2007) drifts away from the original theory specification. Clearly, pegging down a process theory like ABTF to a specific zone, is not what Cyert and March had in mind. Also reducing TRT to the zone of extreme losses is problematic. According to Staw et al. (1981: 511-512), TRT applies to any threat and not just to the threat of survival. TRT is thus not restricted to large losses, but applies to any situation that feels threatening instead. We can imagine that strong survivors, who are also low performers, may experience feelings of threat because their aspiration levels are not attained. Indeed, Lant and Hurley (1999) argue that escalation

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[4] It seems to me that this assumption is in most cases true only if humans choice the action that they *think or feel* is best at a certain moment. It is to this stage unclear to me if such an approach would help us very far.

is typically happening close to aspiration, because they still believe that gaps can be closed by implementing the current strategy better.

The second trick of Shimizu (2007) is to assume that prospect theory may be used to explain organizational decision-making at any point of time. This assumption is difficult to hold because prospect theory typically describes risk-taking by description; a situation that rarely applies to managerial decision-makers. We believe that organizational agents are seldom forced to take risk. They rather prefer waiting for the appropriate timing to take risks. As such they can learn more before committing resources. Neither will agents immediately come to action once they are convinced that risk should be taken, because they do not like to be recalled by internal forces in the organization. As such, they will first spend considerably time to sell their idea to the internal organization before taking risks.

In sum, agents will postpone risk-taking when they feel uncomfortable and can learn form experience. Hertwig et al. (2004) have shown that risk-taking from experience differs significantly form risk-taking from description. Thus, since individual agents are rarely forced to make risky decisions (more specifically, only at the expiry date of real options), we are inclined to downplay the role of prospect theory in organizational decision-making.

While Shimizu (2007) has tried to specify the appropriate context for organizational learning theories, we think that contextualizing the individual in the organization will bring us further. Risk-taking form experience is the relevant context for individual agents in organization. It is also the context that is adequately described by organizational learning theories. ABTF for example assumes that decision-making in organizations happens in a context of quasi resolution of conflict, uncertainty avoidance and organizational learning. In such a context, managers will time their decisions carefully; they will also manage risks carefully.

Despite our methodological reservations, we should mention that Shimizu (2007) found empirical support for his conjecture. After applying the two tricks, Shimizu (2007) combines the effect of prospect theory with the effect of ABTF for small losses and the effect of prospect theory with the effect of TRT for large losses. Because the effects of prospect theory and ABTF reinforce each other and because the effects of prospect theory and TRT level each other off, he assumes a tapered negative relationship between organizational performance and organizational risk-taking. He then finds a tapered negative relationship between performance and divestiture decisions in a sample of US-based publicly held firms. Shimizu (2007 : 1512) also acknowledges that his empirical evidence is preliminary and concludes that 'organizational risk-taking is determined by complex interactions among different factors at both the individual and organizational levels'. It thus seems that Shimizu (2007) may have provided a way out of the debate between ABTF and TRT. But we should not believe that this is neither the only nor the best way out.

3   AN ALTERNATIVE APPROACH WITH RESPECT TO UNOBSERABLES

To recap, we have used Felin and Foss (2006) and Shimizu (2007) to illustrate two important things about the current state of organizational learning theories. First, both contributions suggest that it is important to show how a collection of individual agents brings about organizational behavior. Second, their approaches suggest that bringing back the individual in organizational learning theories creates new methodological

challenges. In this section we propose a realistic alternative by starting from the psychological result of human heterogeneity. We further show that human heterogeneity will lead to differences in opinion in organizations and that these differences in opinion are not easily reconciled. Since the reconciliation of differences in opinion will often happen in implicit ways, we can point out better where the debate is situated.

3.1 Human heterogeneity

The first step we take is assuming that agents are rarely forced to make decisions in organizations. We instead assume that organizational agents will communicate their inclination to act to other constituents. In doing so they display how their risk-propensity is. This process of deliberation allows them to verify how other agents think of the situation. Different organizational decision-makers will most likely propose different kinds of actions when being faced with the same decision. This occurs because threats and opportunities always put all agents in an uncomfortable position. There is always the chance of making a costly mistake (Shapira 1995). A decision to pursue an opportunity may turn out to be a costly move, because in the end it appeared to be unrewarding. Yet, deciding to ignore the opportunity may equally imply missing out valuable resources. We just do not know. Similarly, faced by a threat, individuals should decide what is worse: ignoring the threat that turns out to be real or putting a lot of efforts in a threat that does not materialize in the end.

Differences in opinion will occur because managerial risk-taking ultimately depends on the individual experience of the agent with risk-taking at large and on his risk-propensity with the particular decision as many psychological scholars have shown (e.g., Hertwig et al 2004; Sitkin and Pablo 1992; Sitkin and Weingart 1995). Once we accept that there are possibly slight differences in managerial risk-propensity between any two organizational agents, there is room for large differences in opinion about how the organization should proceed. This will inhibit the organization from responding automatically to whatever stimulus. We illustrate that even the smallest disparity between two agents can lead to substantial differences in opinion by means of the Variable Risk Preference Model [VRPM] of March and Shapira (1992).

The VRPM needs two axioms to describe the decision-making of an agent. The first axiom is that managerial risk-taking increases monotonically as performance is away from a reference point (like an aspiration level, or sign of bankruptcy). The second axiom of the model is that an agent always takes into account more than one reference point to evaluate information. Like in the original model, we will only assume two reference points: a fixed survival reference point and a variable reference point set by the aspiration level. At any time agents can draw their attention to one reference point. Once the agent has picked a reference point, the risk the agent will take according to the model can then be determined via the first axiom.

FIGURE 1 VARIABLE RISK PREFERENCE MODEL FOR ONE AND TWO AGENTS
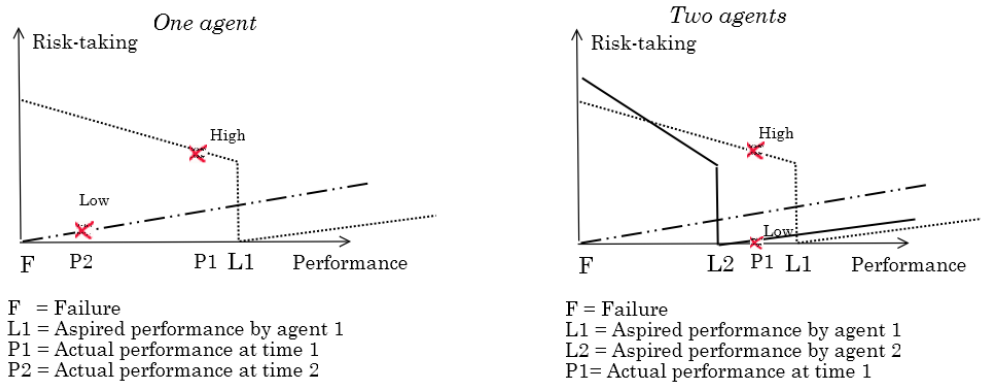
(a)   (b)

Source: adapted from March and Shapira (1992: 175).

The original VRPM model includes only one agent. It is graphically displayed in Figure 1 (a). Assume that the first agent focuses on the reference point which is situated closest to the observed performance level (P_1). In Figure 2.1 (a) performance (P_1) almost reaches the aspiration level (L_1). Therefore the agent will most probably take risk to achieve the aspired performance. If the risk-taking does not pay off and the organizational performance deteriorates sharply to P_2, then the agent will decide to focus on survival (F), because the performance is closer to it. Consequently, he declines to take risks. In a situation where agent 1 is the only decision-maker, high risk propensity will immediately lead to action and low risk propensity will immediately lead to in-action.

We now introduce the second agent in Figure 1 (b). Since agents are not completely alike, we assume – quite arbitrarily[5] - that the second agent only differs from the first agent in his aspiration level. In Figure 1 (b), agent 2 is less ambitious but willing to take more risk when his aspiration level is not met. Beyond that, we assume that the two agents are alike. Both agents have the same attitude towards survival. They also chose the reference point that lies closest to them. Figure 1 (b) therefore has only one extra line representing that agent 2 is more easily satisfied then agent 1. The complete model indicates that agent 1 may focus on F or L_1 and that agent 2 may focus on F or L_2, depending on what the actual performance (P) is.

Now, assuming that actual performance is P_1, agent 2 is not willing to take many risks, because the observed performance (P_1) is closest to the aspiration level (L_2). Since performance is to the right of L_2, agent 2 declines to take risk. However agent 1 is inclined to take risks, because the observed performance (P) is close to L_1 and to the left of L_1. Clearly, a difference in opinion has emerged. Agent 2 will consider performance satisfactory and strongly declines to take risk, while agent 1 will consider performance disappointing and will be keen on taking more risk. The risk-taking of agent 1 constitutes a problem to the other. They now should focus on how this difference in opinion can be reconciled.

In such a case, postponing the decision may be a sensible option. When performance would restore in the future above L_1 or would fall below L_2, the differences in opinion will vanish almost automatically and joint decisions can easily be made. However when

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[5] We coude assume more human heterogentiy by letting more parameters differ.

performance remains between L_1 and L_2, the differences in opinion will drag on. Postponing is thus not always the solution. Moreover, learning by repeated observation can worsen things. There is evidence that humans downplay the odds of extreme events when monitoring performance because they only take into account small samples of repeated information. It is suggested that they trim the sample by selecting the most recent information (Hertwig et al 2004) or by selecting information that is most favorable to them (Lampel and Shapira 2001). Hence learning from repeated measurements does not have to reduce the differences in opinion because different agents may - deliberately or unconsciously - rely on different subsets of information.

We therefore assume that differences among individuals in risk-taking propensity are most likely to result in differences in opinion. The question then becomes how and whether these differences can be reconciled. There are broadly speaking two possibilities. First it may be that agents interact until a common response emerges. Alternatively, it is possible that at some point the interaction stops and each agent goes its own way.

For the purpose of this paper we will only focus on the situation where individuals try to come to a shared answer. There are many ways to resolve the differences in opinions collectively. Brunsson (2007: 121-122) differentiates 5 different ways to balance between the conflicting demands of organizational agents. Organizations can let the demands of one agent dominate and ignore the other; agents can impose an action and cultivate a difference between the action and optimistic talk as a solace to the discomforted; agents can try to find a compromise in which everyone is more or less happy; they can logroll; and they can attend demands of different agents sequentially. There is clearly some overlap between the mechanisms.

In this paper we will focus on the solutions that are encapsulated in ABTF and TRT. In ABTF the focus is on actions that are possible, i.e. on consensus based responses. In TRT the focus is on feelings of threat, i.e. on acts of domination. We want to present a methodology that gives us reasons to believe that, in the case of TRT, one agent is actually able to tell what other agents should do, and in the case of ABTF, that agents actually agree to follow a common course of action. Since it is hard to nail these processes down, we take a detour to the cultural approach on organizational learning. Cultural organizational learning scholars have after all in the past been able to expose how tacit bottom-up interactions emerge.

3.2 A cultural view on learning

In a cultural view, organizational knowledge is assumed to be tacit (Cook and Yanow 1993). It means that organizational agents are at the same time able to produce and reproduce what organizations do; simply by joint action; and at the same time unable to express what organizational action implies. Cultural scholars therefore focus their research on the individual actions (which may include talk or meaning making) to identify organizational culture and organizational learning.

In a cultural view organizational behavior is observed once individual actions are picked up by other individuals in the organization. Multiple agents then start to share a common set of actions and a community of practice emerges. Organizations thus act by collectively producing goods, services, or talk that individuals would never been able to

produce by themselves. In the same vein, Cook and Yanow (1993) assume that organizational learn by collectively mastering new processes of action and interaction. Clearly, Cook and Yanow (1993) have no problems with the distinction between the individual and organizational level. Still Yanow (2000) argues that careful interpretation of concrete actions and interactions of individuals in the organization is needed to infer organizational behavior from it.

While the cultural methodology is normally associated with inductive research approaches, we believe that the advice of Yanow (2000) is also of use in a hypothetico-deductive context. A cultural approach then matches well with the realistic research approach of Godfrey and Hill (1995) to tackle unobservables in organization theories. They suggest not spending time trying to proxy unobservable constructs but propose instead to measure the observable outcomes of unobservable constructs and to use them for hypothetico-deductive research. Both contributions thus suggest to collect data about what has been actually been done and said by different organizational agents. Moreover, since there is human heterogeneity in organizations, we also need to rule out when and whether different agents in the organizations act in concerted or in individual ways. In the next section we therefore try adopt a cultural view on ABTF and TRT so that a comparison between the theories can be made by means of real data.

3.3 A cultural view on the debate

3.3.1 ABTF

According to ABTF, organizations make decisions after a process of quasi-resolution of conflict, uncertainty avoidance, problemistic search and organizational learning (Cyert and March 1963). ABTF suggests that agents will seek solutions by encountering with others, by learning from the actions of others, by taking their goals and capabilities into account. By understanding how others behave, by sharing information with others, agents try to legitimize their decisions. Consequently, agents in ABTF will abstain from actions that do not resonate well with the powerful rest of the organization. Still agents will not easily abandon their stakes and plans either. As a result, each agent will seriously challenge the risk propensity of fellow agents if it endangers their plans. This will result in efforts to find compromises. The organizational attention therefore shifts away from the problem (or business opportunity) to the conflicts or differences in opinions inside the organization. This shift in attention is likely to bring about a bias towards imperfection because available imperfect solutions will drive out far away but possibly superior solutions (March 2006). As a consequence, temporary and imperfect solutions will be pushed forward. Clearly, the process is ongoing because finding consensus for possibly imperfect solutions is always hard to achieve. Seeking consensus therefore occurs during periods of large losses, small losses, small wins and large wins. It happens all the time.

Although the process is ongoing, ABTF expects differences in intensity. During periods of adversity, consensus seeking corresponds with *problemistic search*. During periods of abundance it corresponds with *slack search*. Cyert and March make the distinction because they see organizational decision-making process as a widening search for satisficing solutions. The process of consensus seeking is most intense during periods of adversity when solutions are needed. The outcome is however unclear. Adversity may force agents to engage into risky actions that they had not considered before. Adversity

may also trigger agents to lower the aspirations and decide to explain adversity away. Problemistic search then results in a share commitment not to take risk but to focus on common talk.

The picture of ABTF on organizational risk-taking is much clearer when organizations are successful. Success convinces stakeholders to stay in the organizational coalition. Success then leads to slack search for opportunities but also to uncertainty avoidance. Consequently, all risky initiatives that may endanger the existing coalition will be warded off. It is an accelerating mechanism: the more success, the less likely it is that actions, which may reshuffle the current distribution of power, will be taken. Success leads to an extreme dedication of the chosen strategy (see also Miller 1999). Agents in successful organizations will only consider actions that strengthen the dominant coalition. Success may thus result in attempts to implement strategies better and attempts to replicate earlier successes.

In sum, from ABTF we should expect to observe little organizational risk-taking in general. While exploratory learning will be highest during periods of adversity, it is far for sure that organizational risk-taking will occur then. Because of the high uncertainty that organizational risk-taking actually will occur, we divert our attention to activities that most likely will occur. Thus, apart from isolated organizational risk-taking during adversity, we expect concerted meaning making during adversity and concerted conservative actions during periods of success.

3.3.2 TRT

TRT focuses more on domination to reconcile differences in risk-taking propensity. Staw et al. (1981) assume that threats will lead to an extreme dedication by the top to the chosen strategy. Strictly speaking, this dedication lacks rationality because there are no signs that the strategy is working well. Since it will not be easy to convince other agents to stick to the a-rationally chosen paths, force will be needed. In order to impose a feeling of confidence in the current strategy or in the capabilities of the dominant agents, threat rigid agents will take brusque actions that are aimed at removing dissident others or aligning them.

Because forceful actions imply a lot of energy and costs, active enforcement will occur occasionally. In particular, enforcement is likely to occur after a sharp and uncontrolled increase in the number of negative performance signals. These signals are likely to instill fears that control over the organization will be lost. The top of the organization therefore decides to take various actions. They constrict control, they reduce information processing and they focus on efficiency (Staw et al 1981). The constriction of control implies increased centralization, strengthening of tightly coupled links and dissolution of weak links. A focus on efficiency may serve two purposes. It can be seen as a solution to put a halt to the stream of negative information signals. Cost cutting can also be seen as a means to regain power by the top when cost cutting imply that power sources are being eliminated. To recap, counter to ABTF, threat rigid agents will not explain away adversity. Instead, we expect that conservative actions (by the top of the organization) will be taken. It implies that unnecessary risks or experiments are being eliminated.

During periods of success, TRT does not explain clearly what will happen. The costs of enforcement suggest that organizations will relax the information restrictions, loosen control mechanisms and will no longer single out efficiency as a top priority. There are thus possibilities for exploratory learning. We should however not assume that pent-up agents suddenly will start challenging the current strategy. Especially when the top does not enforce or stimulate this behavior, it seems unlikely that much organizational risk-taking will occur.

In sum, from TRT we should expect to observe a lot of concerted activity but little organizational risk-taking in general. While exploratory learning will be highest during periods of success, it is far for sure that organizational risk-taking will occur then. Because of the high uncertainty that organizational risk-taking actually will occur, we divert our attention to activities that most likely will occur. Apart from isolated risk-taking during success, we expect concerted meaning making during adversity and concerted conservative action during periods of success.

3.4   Propositions and methods

Clearly, there are some interesting parallels between ABTF and TRT. First, both theories suggest that organizational risk-taking is limited and that the processes of exploratory learning are short. The theories only disagree on the timing of exploratory learning. In ABTF it may occur during adversity; in TRT it may occur after success. We therefore should no longer restrict the focus on periods of adversity to stop the debate. We rather should extend the analysis to periods of success like Lant and Hurley (1999) and Chattopadhyay et al (2001) have already done.

Second, both organizational learning theories argue that conservative actions, i.e. actions to implement or defend the current strategic orientation, will occur frequently. In ABTF strategic exploitation occurs during success. Shared efforts to communicate why problems are not being tackled, may, according to ABTF, also occur during adversity. Similarly, in TRT different actions to enforce control during adversity will be taken. Since there are different interpretations of the kind of conservative actions by ABTF and TRT, the debate between ABFT and TRT can be rewritten by shifting the research focus from low probability exploratory learning to high probability conservative actions.

TABLE 1: A CULTURAL RESEARCH AGENDA

Focus on	ABTF	TRT
Signs of adversity	Short process of exploration (individual or concerted) -------------------------------------- Strategy implementation or concerted meaning making *(**NEW**)*	No strategy change -------------------------------------- Concerted strategy implementation *(**NEW**)*
Signs of success	No strategy change Concerted strategy exploitation *(**NEW**)*	Concerted strategy implementation or individual short process of exploration *(**NEW**)*

We moreover argue that propositions on conservative actions will make the contrast between the two organizational learning theories sharper. Yet, since the debate is tough and the differences between ABTF and TRT are subtle, we have decided to add redundancy into the research framework. We essentially propose to make predictions for different sorts of observable actions, to focus on different agents, and to consider methodological triangulation. This cultural research agenda is outlined in Table 1.

3.4.1 Focus on strategy changes

In line with past research (see Argote and Greve 2007; De Schryver 2009 for overviews), we acknowledge that strategy changes have the potential to discriminate between the two theories. During adversity, there is an increasing possibility that failing organizations change their strategy in ABTF but not in TRT. In ABTF the organization does not know what to do when it is failing. Therefore, some agents may be exploring ideas that are fundamentally new to them. According to ABTF, organizations are increasingly willing to consider strategy changes because there is information that the existing strategy does no longer succeed in achieving the goals. Yet, constraints simultaneously force organizations to stick to the current strategy and implement imperfect solutions. Hence, ABTF does not a priori rule out strategy changes. This is not the case in TRT where organizations are assumed to know what they do when they are loosing. After threats organizations will implement strategies better because organizations have decided that they will stick to their strategy. Consequently, organizations under threat will only consider strategy implementation.

Although it has been less common to explore strategy changes during periods of success, it makes as much sense to analyze strategy changes during success as it makes sense to analyze them during adversity. In ABTF strategy changes will not occur because fundamental strategy changes are difficult to sell in successful organizations. In TRT, strategy changes are possible after periods of success because there is no longer a constriction of control and a focus on efficiency. Since TRT only suggests that exploration is no longer discouraged, the process of exploration after signs of success should be short in TRT and may result in strategy changes. We therefore think that using strategy changes during success is an unexplored research area to resolve the debate between TRT and ABTF.

3.4.2 Focus on strategy- implementation

We also propose to complement the analysis of strategy changes with an analysis of strategy implementation. Here the cultural focus on organizational learning can come to full play. By focusing on what is actually going on in organizations, we should be able to separate individual actions from interactions between organizational agents. Because the two organizational learning theories essentially describe organizational decision-making, empirical evidence of individual risk-taking can, by definition, be no support for neither organizational learning theory. Instead we should deduce propositions at the organizational level and compare them with the observed interactions between agents.

To find support for ABTF, we should find concerted action during periods of success because consensus is then strongest. We also expect for ABTF to find concerted meaning making when organizations do not take risks during adversity.

Similarly, to find support for TRT, we should find concerted action during periods of adversity because enforcement is then salient. To come to meaningful propositions for ABTF we make the distinction between the top and the middle management in TRT. Because of constriction of control, it is more likely that top management will replace middle managers during signs adversity. We do not expect top management turnover then because the top management tries to stay in control of the organization. We also expect that foremost middle managers will be forced by the top to implement strategies better. Finally, to find an organizational response in line with TRT, we expect that the top of the organization, not middle managers, restricts the information. If it were middle managers who restrict information then the results would rather point out towards individual behavior. If these three hypotheses are corroborated, there is evidence of enforcement and of organizational behavior as explained by TRT.

3.4.3 Multimethod approach

The last move towards redundancy is more technical. Given that organizational decision-making is a tacit process, double-checking research findings becomes imperative. Interpretation of research findings will become more robust when more independent tests are performed on the same theory. We therefore would like to see an increase in the number of independent tests, even in a traditional quantitative hypothetico-deductive research setting. In the research setting that we propose, one that requires the data collection of multiple actions by different agents, methodological triangulation must be straightforward.

Moreover there are currently many statistical techniques abound for highlighting the longitudinal nature of organizational decision-making. Two straightforward methodologies fit with the organizational learning theories. The first technique is piecewise linear regression which is able to show when individual agents take risk. The technique is applicable to organizational decision-making because it assumes that organizational agents prefer waiting for the appropriate timing to take risks, instead of being forced to take risk. The second technique, which borrows loosely from process research techniques (Poole et al 2000), captures interactions between agents by means of progressions and fits well with a cultural view on organizational learning.
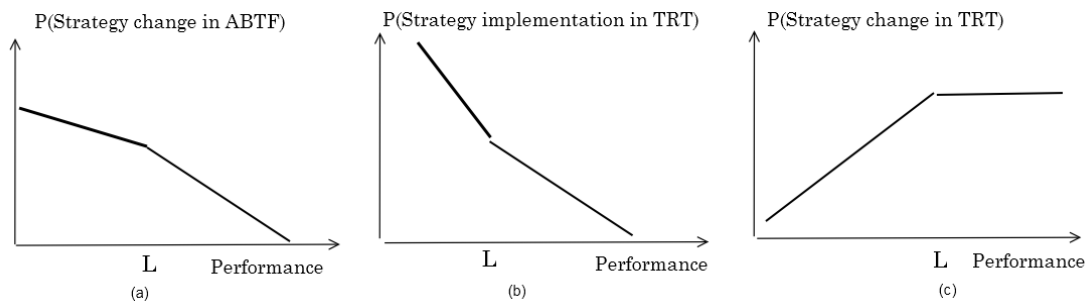
The piecewise linear regression technique tries to identify whether actions are taken as if it is business as usual, whether actions are delayed longer than usual, or whether actions are speeded up. To our knowledge it has been first applied in an organizational learning context by Greve (1998) to test ABTF. In De Schryver et al. (2008) and De Schryver (2009), we have attempted to extend the technique to TRT.

When actions are taken as if it is business as usual, piecewise linear models will show a plain linear relationship between performance and the likelihood that the action will be taken. The linearity suggests that decision-making goes smoothly. There is an automatic accommodation to the current state of organizational performance. Shifts in performance do not lead to extra deliberation in the organization. The relationship between organizational performance and action can be negative or positive depending

on the kind of action. For example, negative linearity indicates that above standard performance stalls generally considered unpopular actions as much as substandard performance triggers these unpopular but necessary actions.

When there is a sudden increase in resistance, piecewise linear regression techniques will show a non-linear relationship between performance and the likelihood that the action will be taken. This kind of relationship is used for example in Greve (1998). As shown in Figure 2(a), Greve (1998) assumes that the relationship breaks up at aspiration level. On the right side of aspirations, the relationship is steep because high implementation costs make that organizations stall risky decision-making. There is neither a performance trigger from positive performance feedback, nor intrinsic motivations to jeopardize the coalition by risk-taking. On the left side of aspiration the picture is completely different. Negative performance feedback triggers agents to look for risk. Still, the solutions are resisted by other parties in the organization, inflating the perceived implementation costs. Because difficult-to- sell risk may occur,1) once safer alternatives have failed, or 2) once there is enough support for the risk, or 3) if aspirations cannot be lowered, the relationship between performance and risk-taking is negative but flatter than it is on the left hand side.

FIGURE 2: PIECEWISE LINEAR MODELS AND RISK-TAKING BY EXPERIENCE

Piecewise linear regression techniques can also be applied to TRT. We think that two kinds of non-linear relationships adequately describe TRT. Figure 2 (b) describes the actions taken to enforce control, i.e. increasing excitement for strategy implementation, constricting of control, and reduction of information. In times of adversity, we expect that actions to implement strategies better are extremely popular because the top of the organization has forcefully imposed them. At the beginning of the problems, there may already be an increase in the probability because many different initiatives will be considered to solve the problem. As long as there is no enforcement, agents may consider the course of action that suits them best. Therefore, some agents will propose better strategy implementation and others agents will propose variations on the strategy. When performance deteriorates more, signals will no longer be ignored by top management. They will push the number of strategy implementation efforts upwards. During periods of success, we assume that actions to implement will still occur but at a decelerating rate because the focus is no longer on efficient implementation of the strategy (see also Beck et al 2008).

Finally, Figure 2(c) describes the nonlinear relationship for strategy changes in TRT. When performance starts to disappoint, TRT assumes that top management perceives the costs of strategy change higher than the costs of strategy implementation. On the contrary, middle management perceives the costs the other way round. Perceived low

implementation costs will push managers to institute strategy changes. When the risk-taking has failed, TRT predicts that top management subsequently will take over control and reverse the attempts of the middle managers. Therefore, strategy changes are most likely to happen when the turmoil started, not when the organization is trying to regain control. Consequently, TRT corresponds with a positive relationship between performance and strategy changes when performance is disappointing. During periods of success, it is unclear whether middle managers will consider risk-taking in an organizational setting of latent control. We therefore draw a horizontal line between performance and strategic change when performance is satisfactory.

Since it is also important to test for interactions between agents, we present a second simple test. In a regression setting these tests can simply be performed by adding (lagged) change interventions as main effects or as interaction effects. The choice of the effects should of course depend on the propositions of organizational learning theories. In ABTF a short sequence of change interventions may be an indication of incremental search. Then, we test whether imperfect solutions are tried out and reversed subsequently. We can also test for combinations in TRT because a threat rigid response implies that a focus on efficiency is combined with a restriction in control and combined with a restriction in information processing.

4   CONCLUSION

We argue that parts of the debate between TRT and ABTF are unnecessary. Incomplete research methodologies have added much confusion. The debate can thus be scaled down by extending the research agenda. The focus should be more on the organizational context in which organizational learning and decision-making actually occurs.

We have shown that organizational behavior after success has been less researched empirically without substantial reason. Both theories make clear claims about decision-making during periods of success and adversity.

We also encourage the efforts of other scholars to introduce the individual back into the debate. The contribution made here is significantly different from earlier attempts because we contextualize individual decision-making in the organization instead of the other way around. In doing so, we were drawn by the down-to-earth cultural research methodology of organizational learning. The consequence is that our attention has drifted from intentional strategic change to concerns with operational effectiveness.

Unlike the swings of a pendulum, we have tried to retain the strengths of the traditional hypothetico-deductive research approach with the strengths of the cultural interpretative research approach. It results in this paper in multiple propositions on strategy change, strategy implementation, individual and concerted action.

These propositions should of course be tested. (Preliminary empirical results can already be found in De Schryver (2009)). We have become aware that this research methodology will not stop the debate because there are intricate parallels between the two theories (see also Ocasio 1993). Still this research agenda does more good than harm; simply by reducing unnecessary controversy between the theories. We hope that better tests will lead to new insights that on their turn lead to a theoretical reconciliation of both the differences and parallels between ABTF and TRT.

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