

# MAKING SENSE OF IMPROVISATION

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## ABSTRACT

Improvisation is a critical, yet neglected area of organizational learning. As Henry Mintzberg documented in his study of managerial work, there is an extraordinary amount of managerial activity that is spontaneous in nature. Yet we have few theories or tools to help us understand and manage the spontaneity. Improvisation, defined as intuition guiding action in a spontaneous way, is proposed as a way of enhancing the quality of action taken in the moment. This paper provides a brief description of improvisation and its links to organizational learning. A simple categorization is applied to the management literature on improvisation from which a framework is developed to delve more deeply into the richness of the topic.

The phone rings. You answer. You respond.

“You” may be a CEO being presented with an investment opportunity, a customer service representative hearing from an irate customer, or a sales manager receiving an order. Whether you are responding to a phone call, a knock at the door, or a chance meeting in the hall, spontaneous activities permeate your day. In

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his study of CEOs, Mintzberg (1973, p. 36) observed that over 90 percent of their verbal contacts were ad hoc. The sheer number of spontaneous actions within organizations would seem to imply that improvisation is a well-studied topic in management literature. However, improvisation has received minimal attention from management theorists and practitioners. In part, this is due to the assumption that there is no skill or quality to improvisation, or at least none that can be taught. A related problem is that improvisational action is often considered inferior to planned action; one reverts to improvisation only when planning breaks down. However, Mintzberg has described the pitfalls of planning concluding that planning tends to "undermine both creativity and strategic thinking...discouraging truly novel ideas in favor of extrapolation of the status quo, or marginal adaptation" (1994, p. 158).

We assert that there is a skill to improvisation, and that the quality of improvisational action varies. Furthermore, improvisation is an important facet of management, and a critical part of organizational learning and strategic renewal. This paper begins with a brief description of improvisation, followed by a discussion of the link between improvisation and organizational learning. A simple categorization is applied to the management literature on improvisation from which a framework is developed to delve more deeply into the richness of the topic. Finally, implications for researchers and managers are presented.

## DEFINING IMPROVISATION

Although Mintzberg documented the ad hoc nature of managerial action, we must ask whether all ad hoc action is improvisational. The short answer is "no." That actions are ad hoc or spontaneous is only one dimension of improvisation. The second dimension is that actions are guided by intuition. We put forth the following definition of improvisation: *intuition guiding action in a spontaneous way*. Naturally, there are degrees of intuition and spontaneity of action, but we can depict high and low levels of each, as shown in Figure 1.

Returning to the phone vignette presented at the outset, we know that each of the three scenarios, as well as many others we could conjure up, are ad hoc or spontaneous in nature. There is no time to plan, we answer the phone and respond. It is interesting to note, however, that we can convert a spontaneous situation into one which is less spontaneous by negotiating some time before giving the response, as many will do with a phone call. The CEO presented with an investment opportunity may want to check with others before committing resources. However, in many instances, time is the scarce resource. Failing to respond in the moment may result in a lost opportunity. The CEO may lose the investment opportunity if swift action is not taken. On the other hand, the customer service representative who can provide an immediate response to the irate customer may help to improve the customer's view of the company. The sales manager who is able to commit to the cus-

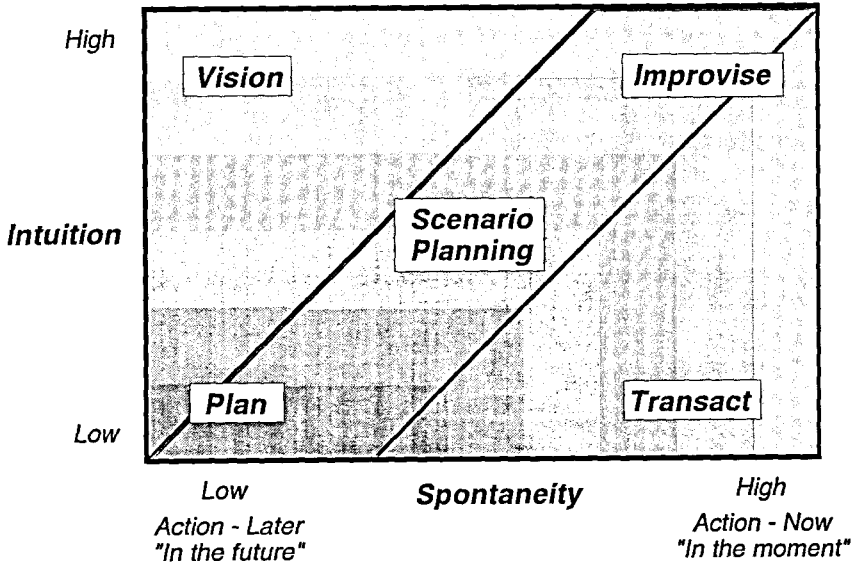


Figure 1. Positioning Improvisation

tomer over the phone may secure the order. Therefore, while we may be able to negotiate more time, a cost may result from our delay.

Degree of spontaneity is only one dimension of improvisation. The second dimension is the degree to which intuition guides action. Many spontaneous responses are fairly routine in nature, with relatively little or no intuition applied. The customer service representative may simply follow a set of procedures for dealing with the irate customer. The sales manager may simply offer a quote to the customer placing an order, based on a formula established by others who have determined the appropriate costs and margins. On the other hand, the response may be fairly intuitive with no set standard, policy, or procedure to rely on. The sales manager may need to make an immediate commitment with only an intuitive feeling for whether the company has the capability and capacity to produce the product at a particular price.

To clarify what we mean by intuition, we concur with Behling and Eckel who suggest that intuition is “choices made without obvious formal analysis” (1991, p. 47). However, as Behling and Eckel pointed out, there are many further interpretations of this broad definition. More specifically, we support the view that intuition is an unconscious process based on distilled experience.

This emphasis on the unconscious process underscores the creative quality of intuition which is not bound by the necessity of fully articulating our thought process or rationale. The emphasis on distilled experience supports Simon’s view of

intuition as “analysis frozen into habit and into the capacity for rapid response through recognition” (1989, p. 38). Intuition as distilled experience recognizes that the quality of intuitive response depends upon the expertise or patterns of experience in a particular domain. Cappon distinguishes between intuition as “negative energy” or the potential stored in the batteries of the collective memory, versus that which is discharged as “positive energy” through words, numbers, drawings, and actions (1994, p. 15). We view distilled experience as the negative energy or potential, and the unconscious process as the means of tapping that energy.

There are other definitions of improvisation which we drew on, but could not fully support, including the notion that intuition incorporates creation and execution at the same time (Solomon, 1986); is imagination guiding action in an unplanned way (Chase, 1988); and is the ability to “make do” with available resources (Weick, 1993a). We concluded that the degree to which action is guided by intuition was more precise than either creation or imagination; and that the degree of spontaneity was a more accurate reflection of the process than either an “unplanned way” which begs the question—what is planning?, or “at the same time” which is too limiting. That improvisation is about “making do with available resources” is assumed by the spontaneous dimension of our definition, since it represents the context for action.

The two dimensions of improvisation as demonstrated in Figure 1 help to distinguish different types of organization activities. For example, the “transact” and “improvise” modes run the risk of being lumped together if we fail to consider the intuitive nature of the actions. As well, what we have referred to as “vision” may be confused with “improvise” if we focus solely on the intuitive dimension, but fail to consider the time orientation of the action. We use vision to underscore the future orientation of this mode of operating. Where intuition has some currency is in the mode of operating where executives brainstorm about the future. Distinguishing vision from planning on the basis of intuition is consistent with Mintzberg, who stated that: “Visionary leaders likewise integrate decisions, in their cases informally, or if you prefer intuitively. Yet to encompass their behavior under the planning label would again seem to broaden it beyond reasonable (and current) usage” (1994, p. 12).

We have positioned “scenario planning” in the middle since it is a methodology that attempts to draw the future into the present. “Using scenarios is rehearsing the future. You run through the simulated events as if you were already living them. You train yourself to recognize which drama is unfolding. That helps you avoid unpleasant surprises, and know how to act” (Schwartz, 1991, p. 200). At the same time, the creation of scenarios blends elements of planning and visioning. Schwartz defines scenarios as “a set of organized ways for us to dream effectively about our own future” (1991, p. 4).

It is important to note that our definition of improvisation is neutral with respect to performance. Improvisation is not necessarily good. There is variability in both

the quality of improvisational action and its suitability under various conditions. However, we believe that a better understanding of improvisation will enable us to enhance the quality of action.

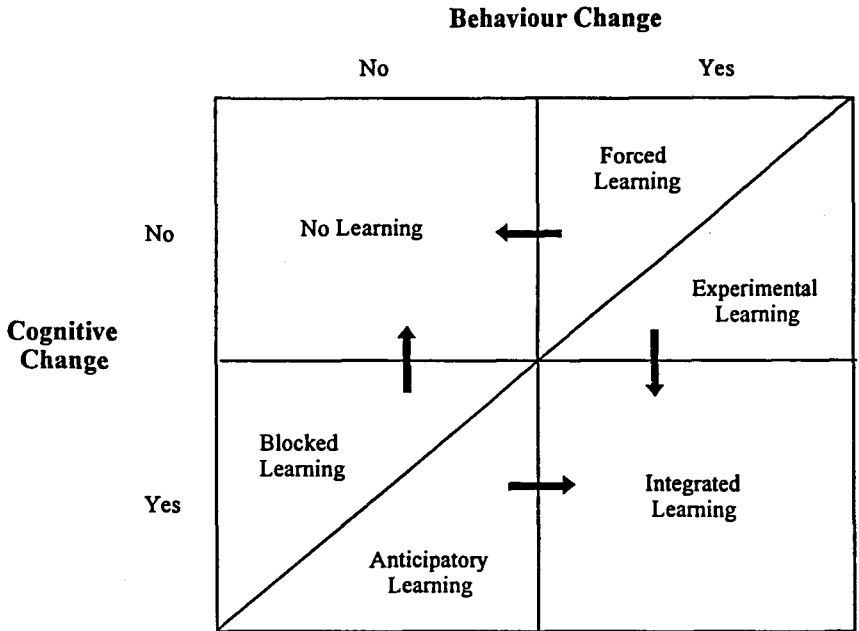
In summary, improvisation is an important facet of organizational life. Mintzberg (1973) has established the pervasiveness of spontaneous action. Stalk (1988) has focused on the importance of "time" as a competitive advantage, which suggests that the need for spontaneous action may become even more prevalent. Simon (1989) and Agor (1989) have summarized the arguments regarding the prevalence and importance of intuition, and Simon argues for the importance of the intersect between spontaneity and intuition: "Every manager needs also to be able to respond to situations rapidly, a skill that requires the cultivation of intuition and judgment over many years of experience and training" (1989, p. 38).

## IMPROVISATION AND ORGANIZATIONAL LEARNING

In our view organizational learning requires organizations to plan, vision, scenario plan, transact, and improvise. But of these five activities, we seem to know less about how to improvise effectively. In part this is because intuition has largely been neglected by organizational learning researchers. In our research we have argued that any theory of organizational learning needs to explain where new insights and ideas for the improvement of current practice originate (Crossan, Lane, & White, 1996). We include intuiting as one of the four "I's" of organizational learning, with the other three being interpreting, integrating, and institutionalizing. However, as we have defined it, intuition on its own is not improvising. Intuition becomes improvisation when it is applied to action in a spontaneous way. The dimension of spontaneity has been equally neglected. We must keep in mind that it is not simply organizational learning that will create competitive advantage, but the *rate* of organizational learning.

The intersection between intuition and spontaneity melds together cognition and action. And the link between cognition and action (behavior) is an important facet of organizational learning (Crossan, Djurfeldt, Lane, & White, 1995). At the simplest level we can think of individual learning as a combination of changes, or lack thereof in cognition and behavior, as depicted in Figure 2. Clearly, where there is no change in either cognition or behavior there is "no learning," and where an individual has undergone changes in both there is "integrated learning."

Much of our attention in learning has been directed toward "anticipatory learning" where changes in cognition precede changes in behavior. Unfortunately, many cognitive changes never manifest themselves in behavioral change because other beliefs override or "block" the situation. And as Festinger (1957) and Heider (1958) noted, our thoughts and actions seek a balanced state. As a result the tension or lack of balance may resolve itself into the "no learning" quadrant.



**Figure 2.** Cognition—Behavior Link

Similarly, while organizations have often “forced” behavioral changes on employees, these changes often only endure while the force (policy, rule, norm, threat) is in place. There has been less attention given to “experimental learning” where changes in behavior precede changes in cognition. The likelihood that the new behaviors will prompt changes in cognition is supported by a mind-set that suspends judgment while trying out new behaviors. One route to experimental learning is through improvisation. Given the subconscious nature of intuition, action precedes understanding with improvisation. We act, and then make sense of it afterward.

It is interesting to note that the scenario planning methodology attempts to: “suspend our disbelief in all the futures: to allow us to think that any one of them might take place. Then we can prepare for what we don’t think is going to happen” (Schwartz, 1991, p. 203). The challenge in scenario planning is to create the suspension of disbelief in the absence of action. The more real the scenarios and the more “in the present” they appear to be, the greater the likelihood that they will capture the imagination of the participants. Role playing is used extensively in scenario planning to help simulate future states.

Although we have focused on the individual level, neither organizational learning nor improvisation is limited to the individual. Improvisation is particularly

instructive in developing our understanding of the cognition-action linkage at the group level since it focuses on the nature of relationships and interactions required to be collectively spontaneous. It also serves as a useful way to think about how organization structures and systems impact the flexibility and spontaneity of organizations. In talking about the fallacy of detaching thought from action, Mintzberg concludes:

while thinking must certainly precede action, it must also follow action, close behind, or else run the risk of impeding it! Formal planning poses the danger of distancing that connection and therefore discouraging action. That is why, at least under difficult conditions, planning may be better conceived as an interpreter of action than a driver of it, and why action itself may be driven by thinking of a less formalized and more involved nature (1994, p. 294).

### IMPROVISATION LITERATURE

Given the lack of theory on improvisation in management, we are not surprised that the literature tends to fall into two camps: one that “describes” organizational process as improvisational, and one that “prescribes” organizations as more improvisational. There is also a sharp distinction between literature which examines improvisation at the organizational level and literature which examines it at the individual and group levels. However, given the sparsity of literature on the individual and group levels, we have condensed them under a behavioral heading, as illustrated in Figure 3.

#### Organizational-Descriptive Approaches

The descriptive literature that deals with improvisation at the organizational level relates primarily to the emergent or incremental nature of strategy. In general, literature within this category is presented in contrast with traditional

	<i>Descriptive</i>	<i>Prescriptive</i>
Organizational	Observations of organizational strategy’s improvisational or unplanned nature—strategy as process, often created and implemented simultaneously	Tools which position improvisation as an instructive way of looking at organizational strategy and design—improvisation as an alternative metaphor for organizations
Individual/Group Behavioral	Observations of patterns of improvised managerial behavior	The development of improvisational skills to enhance the quality of managerial decisions

**Figure 3.** Distinctions in Management Literature on Improvisation

approaches to organizational strategy that emphasize planning methods and the prediction and control of future environments.

The concept of emergent strategy is well established in management theory (Mintzberg, 1988). Mintzberg suggests that only a portion of any strategic activity is executed according to plan. The planned or intended strategy has some unrealized components, which are discarded or neglected when they are no longer appropriate. The remaining portion of the intended strategy is the deliberate strategy, or the activity that takes place because of some prepared plan. New strategic components that emerge from the actions taken are then incorporated into the organization's strategy, creating a realized whole. The emergent nature of strategy is what we refer to as improvisation. Mintzberg (1994) argues that all strategic activity involves some blend of intended and emergent strategy.

Pascale (1984) provides a vivid example of improvisation in a description of Honda's penetration into the North American motorcycle market. A Boston Consulting Group (BCG) study cited by Pascale suggested that Honda had redefined the American motorcycle market with an emphasis on small motorcycles, which, because of their success in Japan, afforded Honda the advantage of high volumes and low production costs. The BCG study makes the claim that Honda's competitive advantage in the market was the result of a premeditated and methodical plan.

In fact, as Pascale points out from interviews with the six Honda executives who were given the responsibility for the launch, the introduction of highly popular small motorcycles which "transformed the market" was a reluctant step taken by the Honda team. Production problems with the larger machines, combined with some pedestrian interest in the small machines the Honda executives had brought over for their own use, combined to make the introduction of small motorcycles the only viable alternative for Honda. In four years Honda had established a market share of 63 percent of the American motorcycle market.

While the eventual outcome may have an elegant logic in retrospect, we must not confuse the original intention with the logic of the outcome. Weick (1969) cites that much of our social understanding is derived from retrospective sense-making; as the BCG study suggests, the motivation to establish retrospective logic may overwhelm our sense that actions are not always the result of preconceived planning.

The example of the development of the "Post-it Note" by the Minnesota Mining and Manufacturing Company (Peters & Waterman, 1982) provides another example of improvisation. The technology used in the product was the result of failed product development. The adhesive 3M was attempting to develop required a great deal of bonding, and a failed experiment produced the adhesive now used in the Post-it Note product. The "failed" adhesive could be removed from paper products without tearing the paper, a remarkable achievement in its own right. But by the standards of the intended outcome, the adhesive was an abject failure. By recognizing the opportunity, 3M transformed the office supplies market and introduced a product that is now common in offices worldwide.



In recognizing that the strategy of organizations is often shaped in some way by reactions to unpredictable events, researchers have also found that top executives tend to deal with these unpredictable situations in a logically incremental fashion (Quinn, 1978). Decisions are improvised within the constraints of the organization's structures and systems, and according to the political behavior of the individuals involved. The premise is that these emergent activities acquire the logic of the organizational systems, subsystems, and structures. Quinn's observation is that a significant portion of organizational strategic direction is affected by these improvised increments or responses to opportunities.

The central argument in these examples is that strategies are often not a successful series of decisions derived from premeditated actions. Rather, they evolve from the day-to-day actions of a variety of individuals in a spontaneous and often intuitive fashion. The common element is that strategy is a learning process which demands that strategic opportunities which arise over the course of implementation are not always predictable; and that competitive advantage and success often arise out of an organization's ability to see these opportunities, use them, and capitalize on them. They are examples of organizations creating and revising their strategies in response to the moment. They are observations of organizational improvisation.

### Behavioral-Descriptive Approaches

While the previous examples indicate that organizational strategy may operate in a way that allows a certain degree of flexibility to take advantage of opportunities, organizational action is the culmination of individual actions. Barnard (1938) was among the first to articulate the view that the softer, more intuitive side of management activity is a crucial element to successful managerial decisions. Mangham and Pye (1991) report that a large percentage of the actions taken by top executives rely, to a large degree, on the judgment of the executives, in union with their analytical skills. Although Mintzberg (1973) identified that managers spend very little time on planned activities, his observations about what they did pertained more to the roles they adopted than the managerial characteristics associated with the activity. He did note, however, that the activities could be characterized by their brevity, variety, and fragmentation.

The ability to act spontaneously is perhaps most commonly observed when the opportunity for analysis is removed because of extremely critical time pressures. Situations of crisis requiring immediate action without the benefit of prior analysis provide a useful look at improvised behavior. Several studies (Kreps, 1991; Bosworth & Kreps, 1986; Powers, 1981; Weick, 1993a) have indicated that improvised behavior is useful in times of crisis or disaster. Disasters have the effect of legitimizing the improvisation of roles (Powers, 1981; Blumer, 1963) and of presenting events which could not have been predicted, making improvised behavior a necessary complement to disaster planning (Kreps, 1991; Bosworth and Kreps,

1986). Weick (1993a) positions the skill of improvisation as a factor in maintaining conditions of order in environments that appear chaotic. In these cases the researchers see planning as a facilitating framework which, combined with improvisational skills, assists adaptation. Therefore, we need not see structure as conflicting with our ability to adapt to changing circumstances.

An example of improvisation being useful in periods of crisis is examined in detail by Weick (1993a). In a depiction of a documented prairie fire disaster that killed several firefighters, Weick examined the actions of one of the survivors. This survivor devised a way out of an approaching fire by building an escape fire in front of himself, and then lying in the ashes and allowing the approaching blaze to pass over him. The solution he devised had not been previously learned—he simply incorporated information that he already knew, and created a solution which matched the circumstances. Those who did not survive relied on their instinctual flight response and ran away, later to be engulfed in the quickly approaching flames. Weick's assertion is that an individual used to routinely drawing order out of chaos is flexible enough to deal with these situations calmly. He calls this activity "bricolage"—making do with the materials that are available to create solutions that are required in the moment. As noted in our definition of improvisation, we assume that individuals must make do with available resources if they are to act "in the moment." In the case of crisis the scarcity of other resources, not just of time, provides the context around which intuitive insights to "make do" with the resources must be developed.

The behavioral/descriptive studies have characterized the fragmented and brief nature of managerial activity, as well as the use of judgment and intuition as critical aspects of management. Crisis situations have provided an opportunity to either observe or reflect on improvisation.

### Organizational-Prescriptive Approaches

Even though improvised action exists within organizations, managers often have difficulty viewing actions as something other than a series of rational, planned decisions. Management literature that deals with organizational improvisation in a prescriptive way has concentrated on new operating metaphors that help alter manager's paradigms. Although there has been controversy on the use of metaphors to advance organizational theory (Pinder & Bourgeois, 1982; Bourgeois & Pinder, 1983; Morgan, 1983), we support the case made by Morgan (1980, 1983), Weick (1991), and Tsoukas (1991) that metaphors help to provide meaning through the elaboration of patterns of insight. Even the opponents of the use of metaphors have recognized their value in the early stages of research (Pinder & Bourgeois, 1982).

There are only a few articles in the management domain that take a prescriptive orientation to improvisation at the organizational level (Perry, 1991, 1994; Weick, 1993b; Crossan, Lane, Klus, & White, 1996). Perry (1991) presents the view that

organizational strategy may be seen through the lens of jazz improvisation. His central premise is that organizations might be better off if they started to conduct themselves with the sense of flexibility and environment negotiation that jazz improvisation implies. This approach might make organizations more responsive to customer needs, thus affording competitive advantage. He proposes that such flexibility might occur as a result of the application of two processes: vision-based improvisation, in which actions are improvised within a given strategic intent; or opportunity-based improvisation, in which actions are improvised to find the maximum number of strategic possibilities (reliant on lateral thinking, described by De Bono, 1973). Further, he suggests that organizations, rather than choosing between one approach or the other, will likely employ some combination of the two.

We have contrasted traditional theater with improvisational theater to highlight the differences between the two forms (Crossan, Lane, Klus, & White, 1996). Traditional theater begins with a script which dictates the direction and life of the performance. The director ensures that the script is faithfully delivered and selects a group of actors to fulfill prescribed roles which are well defined and, largely, unalterable. Sets are constructed to provide the necessary locale and atmosphere for the script and finally, costumes are designed to provide further clarity and focus. In contrast, improvisation uses no script, sets, props, or costumes. Where the traditional play operates by necessity on focus, control, and a predetermined environment, improvisation is flexible, open, and unpredictable. In traditional theater planning is the cornerstone to a successful performance as the acts are orchestrated, the interactions are rehearsed, and the script, director, and actors control the environment. In improvisation actions are spontaneous, and the audience fuels the actors.

An analogy can be made between traditional theater and business. A business operates under an overall corporate strategy and set of policies (script). This blueprint determines the plot, or the nature of the business in terms of goals, products, markets, and competitive advantage. Organizational structures delineate the functions and interactions of employees (actors), whose role it is to operate within that strategy as specialists confined to a specific function. The CEO (director) plays an integral role in ensuring that the strategy unfolds as intended. Assets (sets) and, in some cases, uniforms (costumes) facilitate the delivery of the strategy. Many businesses tend to operate like a play, emphasizing planning and control. However, such organizations may need to become more improvisational if they do not want to fold in the same manner plays do when they have finished their run. They may learn from the jazz analogy, which demonstrates how improvisation actually builds on traditional structures. We conclude that good improvisation relies on the traditional technical skills gained through practice.

Weick (1993b) advances a metaphor of organizational design as improvisation, as he systematically attempts to break down the architectural metaphor prevalent in approaches to organizational design. He presents the notion that the design is a function of the negotiated actions of its members, and that the design of an organization is in a constant state of change. His metaphor presents an alternative

viewpoint to the predominating theory that organizational structures exist on paper or within organizational charts.

These metaphors are particularly valuable since they highlight that there are varying degrees of quality to improvisational activity; there is good and bad improvisation, and it is a skill that can be learned. They also suggest how improvisation may be improved, by highlighting the individual and group behaviors which support it. Some of these behaviors are explored in the following section.

### Behavioral-Prescriptive Approaches

Given the dearth of descriptive literature on improvisational behavior, it is not surprising that there is a lack of prescriptive literature. What little there is comes from two sources. The first offers prescriptions from theatrical improvisation; the second presents prescriptions from the management domain concerning various components of improvisation, including intuition and creativity.

We reviewed the literature on theatrical improvisation and worked with the Second City Improvisation group to understand the characteristics of good improvisation (Crossan, Lane, Klus, & White, 1996). It is important to note that there are characteristics of good improvisational process, but that such a process does not necessarily yield positive results. However, a good process will enhance the likelihood of a positive outcome. Although good improvisation is ultimately judged by audience response, the participants themselves know when they are creating a good improv set. The stories and actions flow seamlessly and effortlessly with creative narrative lines that unfold in unexpected directions. A number of factors contribute to good improvisation. Some of the salient points are that good improvisation arises when the actors let the environment shape them rather than trying to shape the environment, and when they take incremental steps rather than big leaps in the development of the story line. As individuals they focus on spontaneity and right-brain thinking. As a group they stress trust, friendship, and reciprocity. Overall, good improvisation involves making mistakes, which requires an environment that is receptive to people taking risks, perhaps looking silly, and possibly making errors.

Instances of improvisation being used as a prescriptive technique are limited, though there are reports that improvisational theater techniques are helpful in advancing the behavioral flexibility required in disaster situations (Callahan, 1986). Although this evidence is largely anecdotal, it suggests that building skill in improvisation aids in the development of confidence in drawing order out of chaotic situations.

There is literature that does not directly address the concept of improvisation but deals with prescriptive measures to the challenge of rapidly changing environments, which yields important insights about some of the salient components of improvisation, including the development of intuitive or creative abilities (see Agor, 1986, 1989; Johnson & Daumer, 1993), and the development of team skills

or listening skills. Consistent with the prescriptive/organizational literature, the behavioral literature suggests that good improvisation carries the individual responsibility to prepare diligently and to enhance the technical skills that make the improvised action possible and effective.

## IMPROVISATIONAL FRAMEWORK

To synthesize the literature on improvisation we need a means to link the descriptive and prescriptive literature, and the individual/group behavioral literature with the organizational literature. The ultimate link will be a theory. For the moment we will present some components of improvisation in the form of a framework that helps to link the various literatures. In doing so we will move outside the management domain to incorporate literature on improvisation in the arts. At the individual level we have determined that intuitive insight and technical ability are critical characteristics; at the group level we need to consider group dynamics; and at the organizational level we must examine the structure that defines improvisational action. Motivation, awareness, and understanding is, ultimately, an individual phenomenon, but is directly affected by the structure of the situation as discussed below.

As an overview we have recognized varying degrees of structure imposed on situations which tend to heighten or dampen improvisational action. We consider external structure a limiting factor in that it establishes the boundaries of appropriate actions. The other factors are enhancing factors, suggesting that an increase in any of these factors increases the number of choices from which we may select appropriate actions. We propose that a key factor enhancing improvisation is the awareness, understanding, and motivation to improvise. The quality of the improvised actions depends, however, on the intuitive and technical ability of the participants and their ability to interact as a group. Creative and innovative ideas and solutions place pressure on the external structure to expand and include them. This situation is prevalent in music, when previously uncharted musical territory is explored; initially, no audience finds it appealing. Over time, if sense may be made of the music, the external structure of musical appropriateness is expanded. This is a slow process. It is noteworthy that the quality of creative action is always judged by the rules of the external structure, but that the forces at play in creative idea generation place outward pressure on the structure. Figure 4 illustrates this point graphically.

### Enhancing Factor: Intuitive Insight

Given our definition of improvisation, intuition surfaces as a key characteristic and serves three critical functions in the process of improvisation. First, it facilitates the identification of a range of possible creative solutions. Second, it aids in the selection of the appropriate solution from the range of possibilities. And per-

haps of most importance, the subconscious processing of ideas enables extremely rapid responses.

Some researchers have cited the development of intuitive ability as a determining factor in the achievement of appropriate decisions in the absence of full analytical information (Agor, 1986; Mintzberg, 1976). They view intuition as an enhancement of analytic skills rather than a replacement, their assumption being that the analytical information might be available at some point in time, but time factors do not permit full analysis. Further, Barnard (1938) and Mangham and Pye (1991) refer to judgment as a necessary characteristic of successful executives. In a study of master chess players, Simon (1989) explores the notion of expert intuition, or the condition that high levels of expertise and experience impose on the speed of decision making. The ability that experts possess to quickly discern appropriate actions within a given structure is governed by their intuitive ability to recognize patterns and act appropriately, based on experience that suggests proper and improper courses of action.

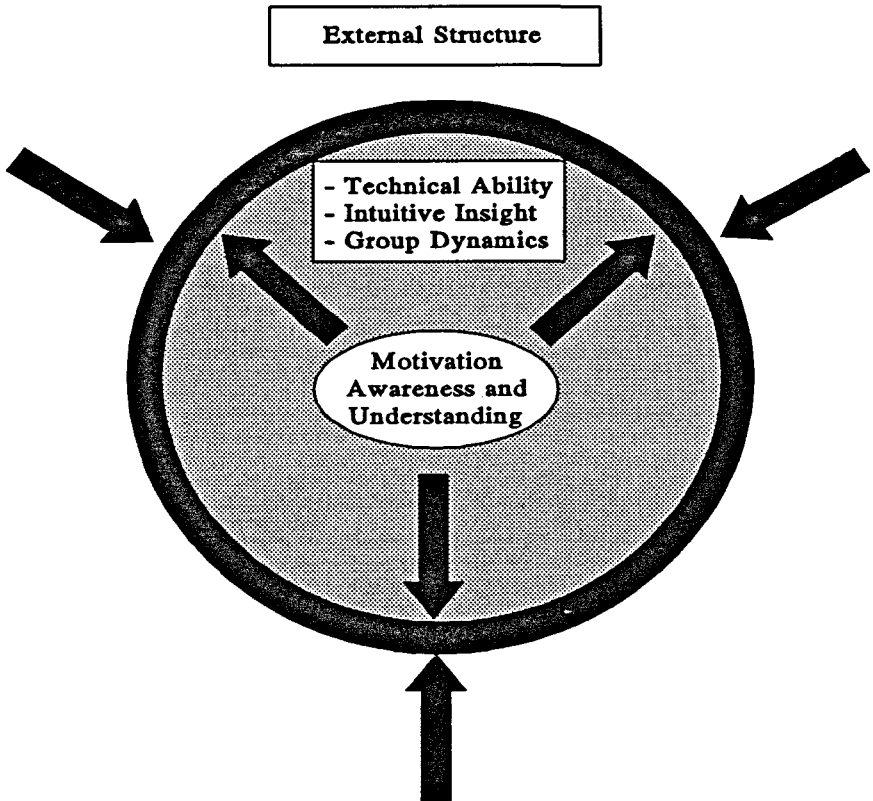


Figure 4. Improvisation Framework

This "expert" intuition is a useful frame in that it allows for the discussion of the selection among choices within the external structure imposed. While Simon does not discuss the process through which the expertise is developed, it is clear that experience alone does not produce the eventual expert level of competency. Rather, the ability to recognize patterns that are either appropriate or not appropriate combines with previous experience to accumulate a knowledge base from the current experience. Therefore, we may assume that chess masters possess the capability of learning from their experience and avoiding inappropriate actions.

Likewise, the ability of the musical improviser to use evaluative judgment to discern appropriate choices from the range that arises from his or her intuition is a crucial quality of successful musical improvisation (Zinn, 1981). In particular, Zinn presents the development of the evaluative judgment as the more difficult, and more valuable skill for the improviser.

Mintzberg (1976) presents these skills of pattern recognition as skills generally handled by the right hemisphere of the brain, and postulates that most managers are conditioned to utilize the left hemisphere, responsible for linear, analytical thinking. His belief that the right hemispheric functions might be improved is consistent with the literature on artistic improvisation (Johnstone, 1981; Spolin, 1983; Chase, 1988). Intuitive ability and creativity may be enhanced under the proper conditions, and the development of intuitive skills is a reversal of conditioning processes that discourage us from seeing possibilities within given situations.

While the ability to recognize the range of choices within the external structure relies on the development of expert intuition, other forms of intuitive development are necessary for the generation of insights that push the limits of the external structure. It is recognized in forms of artistic expression that individuals who are able to expand the range of creative possibilities must venture outside familiar territory. Simon's chess master example supposes that the structure of the "game" is fixed at all times: the rules are fixed, and the environment is knowable. We can apply this example to management function. In some organizations an appropriate response to the organization's external environment is that the rules of the game are relatively fixed, and that expert intuition, or judgment, is an invaluable resource. If, however, an organization experiences an unexpected alteration in its environment, the ability of its members to adjust to new environmental conditions is crucial. In fact, in this case, reliance on expert intuition may be more of a hindrance than a benefit.

Several definitions of intuition refer to activities lying outside the bounds of the rapid processing of experience information. DeBono (1973) refers to the process as lateral thinking, Behling and Eckel (1991) call it entrepreneurial intuition, and Morgan (1993) coins the term "imaginization." Whatever the label, the important point is that an organization's view of its external environment is often inconsistent with that reality and, therefore, the ability to venture outside the perceived structure is a fruitful exercise. We should note that a distinction is made between the external structure imposed by the organization on the individual, and the exter-

nal structure imposed by the environment on the organization. These distinctions may be artificial, but individuals should recognize when these two structures are inconsistent with one another, and have the ability to determine the appropriate structure within which a range of possibilities may be generated.

Mintzberg (1976) cautions that intuitive or systematic thinking must be articulated through some translation into linear order. Weick (1969) further suggests that this order is imposed through action and retrospection. Improvisation improves an individual's ability to evaluate intuitive insights and to develop skills both in considering a complete range of creative possibilities and in determining appropriate action. It also provides the instant translation of intuitive insights into logical linear processes. In this respect it is the marriage of left and right hemispheric brain functions, and affords the maximum utilization of intuitive thought.

It is clear that intuitive skills are a necessary component in the improvisational process, and that an increase in intuitive ability affords an individual a critical tool in allowing decision making to take place. However, if the quality of improvised action is important, the ability to generate a full range of possibilities is paramount, and depends on what the individual is capable of executing.

#### Enhancing Factor: Technical Ability

Two of the most profound insights from the prescriptive literature on jazz improvisation are that there are varying degrees of improvisational quality; and that good improvisation builds on a well-developed foundation of traditional skills in the domains in which it is applied, whether it be theater, music, or management. Whereas intuition might be appropriately termed a cognitive skill affecting the ability of the performer to develop and sort out choices, technical skill affords the performer a finite number of choices. The higher the technical skill, the greater the degree of choice.

In the realm of music, Zinn (1981) has made a distinction between noncontrolled and controlled improvisation. Improvisation that is performed with a lack of musical knowledge or physical technique is noncontrolled. In evolving to controlled improvisation the musician acquires both knowledge and technical abilities, and along with them the ability to transform them into "logical musical conclusions."

At its most rudimentary level improvisation may involve a haphazard series of utterances that may appear to make no sense. This type of improvisation is demonstrated by an infant learning to speak or, in some situations, by someone attempting to learn music by first experimenting and becoming comfortable with his or her instrument (Chase, 1988). This type of improvisation embodies the earliest stages of the acquisition of technical skill. We should note that some researchers view the acquisition of knowledge through experience and experimentation as a prerequisite to the acquisition of technical skill. This theory suggests that impro-



visation begets skill, which affords more choice, which in turn affects the complexity and quality of improvised activity.

From a management perspective a variety of skills could facilitate improvisation. These include the specialized skills to perform a particular job such as engineering, computer programming, or teaching, or the more general skills of listening, speaking, leadership, followership, and social interaction.

### Enhancing Factor: Group Dynamics

While the complexity of any improvised action is dependent on the individual characteristics described earlier, improvised action occurs within the framework of social interaction. The nature of this interaction has a bearing on both the number of creative possibilities generated by the individuals and the negotiation of choices among the individuals.

Both Johnstone (1981) and Spolin (1983) suggest that theatrical improvisation depends on the resolution of the question of individual status. While Johnstone holds the view that differences in status must be used to a degree in forming the theatrical product, Spolin views the attempt to garner status as destructive to the improvisational process. Whatever their specific views on the status of performers, they agree on a fundamental underlying premise: that in theatrical improvisation "blocking," or the systematic discouragement of the ideas of a person in the group, is counterproductive to the creative process. Spolin suggests that the competitive frame that accompanies a need for high status has an eventual result of discouraging the status, and thus the inputs, of others.

Blocking involves the imposition of some form of evaluative judgment on the actions of another by saying "no." Johnstone (1981) further points out that a preference for saying "no" is rewarded by the safety that statement affords; those that prefer to say "yes" are rewarded by the adventures they have. Improvisation, then, is a process of determining possibilities, often within groups. The state which allows for the generation of ideas without apparent penalty is the preferred state because it allows optimization of possibilities.

In jazz improvisation the status of the individuals within the group may depend on their levels of technical skill or inventive capacity. During an improvised passage a negotiation process determines which of the ideas being presented is the strongest one. The competitive framework within which this creation process operates suggests that players with lower status must be willing to have their ideas compete with those of higher status players, to maximize the range of creative choice.

The process of negotiation required in both theater and jazz improvisation relies in large measure on the quality of attention that the individuals pay to the process of creation. While this attentiveness and concentration may be required in individual forms of improvisation, the need is heightened with the addition of individuals to a group. The larger the group, the more complex the process of negotiation

becomes, and the more sophisticated the individuals' listening skills must be. Dean (1989) suggests that the improviser first learns to develop musical creation as an individual, then as a soloist within a group, and then as a group improviser. The skills required become more complex along the progression because they require heightened senses of listening to the inputs from the other players.

Spolin (1983) illustrates this need by her insistence that students in improvisational theater employ a point of concentration often involving one or more of the senses. Her premise is that improvisation is a complete interaction of an individual with his or her environment, and that an integral part of the environment includes the other members of the group, and their inputs. The point of concentration allows them to take in these inputs and make sense of them. The negotiation that occurs within a group, then, is less a product of competitive fights for status, than the attentive selection of the appropriate direction based on the best available inputs of the participants.

Because this negotiation takes place instantly there is a requirement of the individuals within an improvising group to be in a behavioral condition which allows this negotiation to take place. One of the primary aspects of this condition is a state of awareness and attention to the surroundings.

Since much improvisational activity occurs at the intuitive level, a climate of friendship and trust governs the situation rather than a climate of professionalism and logic. The absence of such an improvisational climate may be the greatest barrier to improvisation.

### The Limiting Factor: External Structure

All forms of improvisation occur within some form of external structure. Weick (1969) points out that all enacted activity must be interpreted with some form of grammar that produces sense out of previously equivocal displays of information.

The earliest documented form of Western theatrical improvisation provides some insight here. *Commedia dell'arte* was among the first sources of popular drama in Western Europe around the middle of the sixteenth century. It traditionally involved troupes of actors who would perform a standard set of characters that were common to the form. As a result, most troupes would have the same set of characters, with which audiences would have some familiarity. Actors would perform *all'improviso*, and appear to be producing the plot development while they were performing (Frost & Yarrow, 1990). Pietropaulo (1989) reports that the spontaneity in these performances was limited. Characters were relatively fixed, in that each actor often performed the same role throughout his or her career, while learning appropriate ranges of responses to given situations. Thus, any situation presented allowed a fixed number of standard possibilities from which they could choose a response appropriate to the setting. The improvisation in this case was bounded by an elaborate structure which limited the number of creative options

with which the actors could work. Within the structure the number of choices was sufficient to produce different end products with each performance.

The technique used in *commedia dell'arte* of selecting from a finite range of choices is referred to in music as *aleatoric* (derived from the Latin for "dice") (Dean, 1989). While this form of improvisation restricts the musical improvisor's choices, other structural factors contain the creative possibilities of the performer. One is musical style, which although a highly subjective area, governs the "feel" of the music. As such, it is doubtful that Gregorian Chant, performed in its familiar form, would represent jazz music. The concerto cadenza developed in the eighteenth and nineteenth centuries allowed a display of spontaneous technical virtuosity on the part of a solo performer, but these improvisations were contained within the style of the composition that was being presented (Dean, 1989).

Other elements restricting creative choice are the instruments, which afford only certain types of sound to the performers, and, in Western music, the 12-tone scale, which divides the octave into 12 equal parts. Although some forms of Eastern music have much finer divisions of the octave, these also govern the style of the music and the range of choices accordingly.

In theatrical forms of improvisation the basic structure imposed on the product likewise may vary. Spolin (1983) suggests that the goal of the improvisation is to "solve the problem" put forward to the actors in a situation. The practice of ad-libbing typically occurs within traditional forms of theater when rehearsed elements are forgotten or upset. The spontaneous action that takes place must be sufficient to get the performance "back on track" and, as such, must be performed within the confines of the character's personality and the direction of the dramatic action. Improvisational sketches often employ some form of dramatic structure (which may be as simple as a beginning and an ending).

In organizations the external structure is similarly a series of constraints that limit the available actions from which members may choose in a given moment. This is consistent with Simon's (1992) view that organizations impose a bounded rationality on the actions of individuals within them. It is also consistent with the notions of strategy as logical incrementalism (Quinn, 1978) and as emergent (Mintzberg, 1988). The Mintzberg (1975) study of managerial activity and the explanation (Mintzberg, Raisinghani, & Theoret, 1976) of the structure of unstructured decisions indicate that any spontaneous action within an organization is to some degree bounded by the constraints of what makes sense within an organization.

Mintzberg presents research which shows that "the analytic approach to problem solving produced the precise answer more often, but its distribution of errors was quite wide. Intuition, in contrast, was less frequently precise but more consistently close" (1994, p. 327). Different structures will provide differing degrees of tolerance for error.

This is not an argument that all actions make sense to an organization, but rather that the degree of structure imposed on a set of actions limits the choices available for appropriate action, and that the appropriateness or quality of the action is mea-

sured against the structure itself. Weick (1969) makes the point that actions taken allow sense-making to occur; without action there is nothing to judge, and nothing to interpret, and therefore a maximum degree of ambiguity.

### Enhancing Factor: Motivation, Awareness, and Understanding

At the outset of this paper we suggested that there was a planning bias that impeded both the study and application of improvisation. The absence of an improvisational climate may be largely the result of a lack of awareness and understanding of improvisation, and hence the absence of motivation to engage in a new and different way of doing things. As Claxton (1984) described, there are four barriers to individual learning: the desire to be competent, comfortable, consistent, and confident. The "4 Cs" become an even greater barrier in improvisation given the spontaneous and intuitive nature of the action. To engage in improvisation an individual must be personally motivated to risk the "4 Cs."

Extending Johnstone's (1981) observations about improvisation to an organizational level we suggest that organizations which embrace a planning orientation are rewarded by the control, comfort, and apparent safety it affords; organizations that embrace an improvisational orientation are rewarded by the adventures they have. An adventurous orientation is quite different from a control orientation, and making the adjustment requires different mind-sets and skill sets. Without an awareness of the need for improvisation, or an understanding of what it entails, there will be little motivation to engage it.

Although "motivation" has been presented as a separate dimension from the limiting factor of "structure," it is not surprising that the two are tightly coupled. We would expect that a structure that limits improvisation will not yield a high level of motivation to engage in it. Harper (1989, p. 114) discussed the use of intuition at NASA:

NASA executives knew that situations could arise that may not have preformulated answers or when time would be short, and the astronauts would have to make decisions without the benefit of computer simulations or additional studies. In these situations their intuitive skills would have a significant influence on the mission's success and their personal safety. NASA officials knew intuition is like a parachute. You hope it will not be used, but when all the sophisticated systems cannot help you, it's nice to have around.

Under ordinary conditions the structure of the situation at NASA rules out improvisation. However, when the systems break down, as we saw with Apollo 13, there is both motivation and structure to improvise.

## RESEARCH AND MANAGERIAL IMPLICATIONS

Although there are many research implications we would like to focus on three areas of improvisation: (1) what we should study; (2) where we should study; and

(3) how we should study. We shall also extend these implications about research on improvisation to organizational learning.

### What We Should Study In Improvisation

In this burgeoning field of research there is ample opportunity for development in a variety of areas. Our use of the term "should" is stronger than we might like, but points in the direction of some salient research needs and opportunities which arise from this paper. The five implications regarding improvisation follow the flow of the paper. The first is the need to engage in a dialogue about the definition of improvisation. We have focused on spontaneity and intuition as two defining dimensions. We have found these dimensions to be particularly useful in distinguishing improvisation from other activities in organizations such as planning, visioning, and transactional activities which have not been formerly teased apart.

Every definition, however, makes certain assumptions, elevates some aspects, and even discounts others. For example, we have assumed that in order to act spontaneously we must make do with available resources, which is a central feature of Weick's (1993a) definition. Elevating, rather than assuming, the aspect of resources in the definition will turn the spotlight of research in a slightly different direction. This is quite appealing in the case of crisis where the challenge for intuition is to make creative use of the available resources. However, it may be misleading in other circumstances where the only scarce resource is time. We have also assumed multiple levels of analysis in our definition: individual, group, and organizational. Whether it is productive to make this explicit is not clear. Our bias in these early stages of theoretical development is to simplify the definition, with elaboration developing through discussion. This does, however, require researchers to engage in greater inquiry to understand; they cannot simply rely on their own interpretation of the definition. Although we have been quite thoughtful about the definition presented here, there is a need and opportunity for researchers to engage in a dialogue about the definition of the phenomenon.

Engaging in a dialogue about definition will help the research community articulate the meaning of improvisation, and will help to avoid the pitfall of overreliance on metaphor that Pinder and Bourgeois (1982) have raised. However, getting locked into definitional debates is another potential pitfall. On a parallel front, there is an opportunity to begin to formulate a bridge between the descriptive and prescriptive perspectives through the development of theory. We have advanced several characteristics as a step in this direction. We need to question whether there are other critical characteristics that we need to consider, as well as to generate a better understanding of the characteristics presented here. In understanding these characteristics we have a tremendous opportunity to tap into other literature bases to augment the theoretical development. For example, we have identified technical skill as an important characteristic. As we develop a better understanding of the kind of technical skills required to improvise, we will be able to tap into

research on communication and leadership, for example. Pursuit of theory will also help to sharpen the definition of improvisation.

Each of the characteristics we have advanced represents an opportunity for future research. However, there are two that are particularly thorny: motivation and structure. We describe them as thorny because they embody what we think are some of the most difficult issues about improvisation: When should individuals, groups, and organizations engage in improvisation? Why do they engage in it? Why don't they engage in it? Although presented as two separate areas for future research, motivation and structure are tightly intertwined, as discussed in the body of this paper. Future research needs to address the types of structures in which improvisation flourishes, when it works, and when it does not. The NASA example provides a glimpse of the boundaries dividing improvised, planned, and transactional behavior. Although motivation will be tied to structure, there are individual elements related to psychological dimensions such as the "4 Cs" that warrant examination. That there is a planning bias that impedes improvisation is a fundamental question that researchers need to address.

Although it seems premature to seek to understand the link between improvisation and performance before we have either defined the concept or developed a theory, we assert that by seeking to understand when improvisation works and when it does not, we will be in a better position to develop a useful theory. If we can talk about the quality of improvisation in the arts, how do we determine the equivalent in management?

Our intent in this section has not been to constrain the direction of future research, but to identify a few areas of productive research that arise from the concepts presented in this paper.

### Where We Should Study Improvisation

We would like to advocate a broad range of opportunities for research. There is still much to be gained by examining improvisation in the arts where it has had a long tradition. As a research community we have borrowed well from the arts, but we believe we can learn even more by studying improvisation outside of the management domain.

Following in the Mintzberg tradition we have a strong bias to study the phenomenon "where it lives" as well. Observation of improvisation in organizations will help to clarify definition, characteristics, performance-related issues, and metaphor translation. However, this type of field research poses challenges in delineating between transactional and improvisational actions which do not exist in the arts, for example, where it is clearer that the jazz or theater improv group is improvising. However, studying organizations in the early stages of development may yield more improvisational behavior.

Organizations that deal with crisis on a regular basis present another opportunity to target improvisation. Although we may feel like ambulance chasers, hospi-

tal emergency rooms, fire stations, and lifeguard operations, for example, present us with opportunities to observe improvisation in real time, and to extract reflections from participants about the nature of improvisation.

Finally, we can work in the laboratory to advance our understanding of improvisation through simulations, and controlled experiments. This type of work may be particularly valuable in examining the effectiveness of intervention techniques, such as individual or group training in improvisation.

### How We Should Study Improvisation

The foregoing discussion about what we should study, and where we should study it, leads to our advocacy that the methodology should fit the research issue. We should use a variety of methodologies from participant observation and field-based research, to survey methodology, to experimental laboratory work. However, the employment of a variety of methodologies creates a challenge for integration. The pursuit of diverse methodologies creates a higher need for well-articulated concepts that build on one another in order to form a foundation for theoretical integration.

We will suggest one unusual approach to research on improvisation—that researchers should experience it in the context of a group that makes improvisation their profession, such as a theater group. Unfortunately many of us do not possess the musical skill to experience musical improvisation, but we all have the minimum level of communication skills to participate in theater improvisation. Applying our own understanding of improvisation we believe that it is by doing that we will understand.

### Implications for Organizational Learning

Others in this volume will have articulated important research implications for organizational learning. However, by examining improvisation as a facet of organizational learning, we would like to raise three key implications. The first is that the application of intuition to action in a spontaneous way has been a neglected area of organizational learning, and there is much to be explored in this area. In these closing statements we will provoke thinking by suggesting that what many researchers and practitioners seek as they latch on to organizational learning, is an understanding of what seems to be the mysterious process of developing unique interpretations in a rapidly changing environment. In reading this description of improvisation some might actually equate improvisation with the domain of organizational learning—a conclusion that leads us to the second implication.

Learning is not synonymous with improvisation. We see improvisation as one facet of organizational learning along with a variety of others, including planning, visioning, scenario planning, and transacting. Organizational learning depicts organizational transformation using a learning lens which serves to elevate the

cognitive-behavior interface. Organizational learning involves both the intuitive and spontaneous aspects of the creation of new insights, and the institutionalization of those insights in systems, structures, and procedures.

Finally, we have emphasized that there are varying degrees of quality of improvisation: there is good improvisation and there is bad improvisation (and everything in between). The same may be said for organizational learning. Every organization learns, and that learning is not necessarily productive. We do not adorn either improvisation or organizational learning with a halo. We do suggest, however, that they are processes that can be managed to enhance their effectiveness.

### Management Implications

Although this paper has adopted a theoretical orientation we would like to conclude with some managerial implications. We have identified the prevalence and importance of improvisation, and have suggested that individuals and organizations may have a planning bias that impedes improvisation. At a minimum we hope this paper raises managers' awareness of improvisation and the potential biases that may exist. Equipped with an understanding of its importance, managers might open their organizations to researchers who will want to study improvisation "where it lives." Finally, managers may want to heed the same advice given to researchers. One of the best ways to begin to understand improvisation is to experience it.

## CONCLUSION

Improvisation is a part of daily organizational life, and a vital aspect of organizational learning. Sometimes it is done well; sometimes it is done poorly. However, we know very little about what characteristics separate the two extremes. In this paper we have tried to move a step forward in clarifying some terminology, presenting some research, and identifying some critical qualities of improvisation. The tradeoff between prudence and exploration will continue to vex organizations caught in turbulent environments. It is clear that improvisation is, and will continue to be, a thorny area for management theorists and practitioners. We are excited about the opportunities presented by the study of improvisation as an area of research, the opportunity it provides in informing the larger body of research on organizational learning, and its potential for management. As a research area it is not without the challenges and complexity that are familiar to the researcher of organizational learning. Our ability to draw on the practice of improvisation in the arts provides us with a better understanding of the complexity, and in our minds, keeps the challenge within our grasp.



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