

Individual improvisation in artistic collective teams

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ABSTRACT

The paper investigates the role of individual proactivity and team characteristics in shaping individual improvisation in the context of artistic collective teams. We considered 134 individuals belonging to 25 teams and we developed a multilevel model for analyzing our hypotheses. Results show that both individual characteristic of proactivity as well as the team context affect the likelihood of improvising for individuals belonging to artistic collective teams. Our study corroborates the results outlined by previous research outlining that improvisation is not an inherently individual phenomenon; rather improvisation is also affected by the characteristic of the environment individuals are involved in.

Keywords:

Improvisation, team collaboration, innovative climate, hieratical models, artistic collective

INTRODUCTION

Improvisation, considered as the occurrence of spontaneous and creative behaviours, has become an important issue both for scholars and practitioners as it represents a possible reaction when individuals and organizations need to face emergent issues (Brown and Eisenhardt, 1997; Kamoche and Pina e Cunha, 2001). Improvisation is particularly relevant in uncertain activities as these cannot be entirely understood a priori, do not rely on the application of routines, and require flexibility and fast, extemporaneous action (Flamholtz et al., 1985; Kamoche and Pina e Cunha, 2001; Kirsch, 1996).

The study of improvisation within organizational boundaries has increased in the last years, ranging different domains such as organizational learning (Miner et al., 2001), technology implementation (Orlikowski and Hofman, 1997), and new product development (Kamoche and Pina e Cunha, 2001). The reliance on improvisation in business studies can be traced back on the fact that traditional top down, precisely defined approaches to complex activities may hinder the ability of dealing with uncertainty (Kamoche and Pina e Cunha, 2001). Improvisational action, through a creative process that allows the development of novel and useful solutions may enable individuals to continuously adjust (Crossan et al., 2005) and face the need for rapid responses to such complexity (Smith et al., 1994).

Despite recent studies in the improvisation domain focused on the business environment, improvisation has its roots in performing activities and arts, such as jazz and theatre, studying improvisation in such contexts offers great opportunities to grasp further insights from the

phenomenon that could be extended to the managerial debate. Relying on performing art, Halpern et al. (1994, pp. 13–14) argue that “true improvisation is getting on-stage and performing without any preparation or planning,” and that “improvisation is making it up as you go along.”, thus improvisation can be considered as the blending of “making do” (which represents the creativity facet of improvisation and “letting go” (which is the spontaneous aspect of improvisation).

In the field of performing arts, studies on improvisation have been carried out using jazz and music as metaphors (Corneliussen, 2006; Pina e Cunha et al., 1999). However, it is less likely to find studies referred to visual arts, design and more in general contemporary art, which are based on speech, gestures, and movements that can be considered the “raw materials” of everyday life and social interaction (Lawrence 2001). Although organization scholars studied improvisation in art setting, empirical research on improvisation at the team level remains limited in several significant ways. First, there is limited quantitative empirical work on improvisation in teams (Vera & Crossan, 2005). Much of the discussion of improvisation has been in the conceptual domain. Second, improvisation studies either in the artistic and organizational domain have generally focused on only one level of analysis at a time, either examining the relationship between individual-level improvisation and individual outcome (Weick, 1993) or that between team-level improvisation and team innovation capability (Vera and Crossan, 2005). As Crossan and Sorrenti (1997) have noted, more comprehensive cross level investigations are needed in this area because individuals are likely to draw on available cognitive, affective, social, and material resources. Thus, we argue that members’ interaction in an artistic team, which mostly relies on members social, cognitive and affective resources to perform, may affect the timely availability of resources, resulting in an increased individual likelihood of taking spontaneous and creative actions for recombining those resources. Third, prior research has focused on the centrality of improvisation in individual and group outcomes, such as innovation effectiveness (Kamoche and Pina e Cunha 2001), while less emphasis has been placed on the team and individual characteristics that are likely influence the degree of individual improvisation. In doing so we rely on the fact that individual improvisation is particularly important because it is the primary level at which improvisation occurs in artistic sessions (Vera and Crossan, 2005). Thus, our study focuses on individual improvisation within the team, recognizing the team member as the primary actor who takes spontaneous and creative action on the spot (Vera and Crossan, 2005).

Moreover, the velocity by which individual spontaneous action occurs allows teams to keep themselves aligned with the evolution of the representation. Furthermore, teams may learn

from improvised behaviours because individual improvisation may trigger the change of established mental models through action pressure, offering new perspectives on the evolving situations that get meaning while performed in real time (Weick, 1998). Therefore, on the light of the research gap depicted above, this study contributes to the literature on improvisation in complex cultural and artistic projects by investigating the cross-level effects of team- level interaction processes on individual improvisation. Investigating both the individual and team characteristics on individual improvisation offers significant contributions to extant literature on improvisation in organizations, allowing them to get insights on how to build and manage a team whose members are able to depart from routine and embrace in spontaneous and creative behaviors.

The validity of studying improvisation with the team performing setting can be rooted to three main reasons. First, complex cultural and artistic projects are regularly conducted through teams, which represent social entities through which individuals are influenced. In the development of our team- level antecedents, we focus on task-related interaction (team collaboration) and on the development of a climate which favors the abandonment of routines and preconceived behavioral trajectories (i.e. team innovative climate). We hypothesize that team collaboration and team innovative climate are positively related to individual improvisation, by relying on the argument that is the singular actor who decide to improvise and act on her own feet. We consider also the individual tendency of being proactive, thus relying on the argument that proactive individuals are those who are more likely to abandon the routines and look autonomously for different ways to accomplish a certain task.

Second, teams often develop routines that yield activities and solutions learned from past experience. However, particularly in dynamic environments, a heavy reliance on established routines may limit the organizational search for new cognitive pathways (Levitt and March, 1988), contrasting the ability to be innovative and create effective artistic performances. A better understanding of how team processes relate to individual improvisation in complex artistic projects complements and contrasts the more adaptive through internal experimentation and contributing to the development of a context that favors adaptation to contextual changes (Magni et al.,2009). Therefore, our study contributes to previous literature by answering the following questions:

- 1) How does individual proactivity affect individual improvisation?
- 2) How does team collaboration affect individual improvisation?
- 3) How does team climate affect individual improvisation?

Given the cross-level design of this research, we test our hypothesis using multilevel modeling on data from a sample of 134 individuals belonging to 25 European artistic collectives (teams), who regularly perform in the field of visual arts, design and theater.

THEORY AND HYPOTHESES

Improvisation

Improvisation is defined as the process of composing creative solutions to emergent problems within a short timeframe (Vera & Crossan, 2005). To capture the degree to which teams improvise, Vera and Crossan (2005) conceptualized and empirically validated the concept of improvisation as a team process which simultaneously entails creativity (Amabile, 1988) and spontaneity (Weick, 1998). Whereas conventional wisdom suggests the existence of a temporal sequence between composition and implementation of an action, the spontaneity facet of improvisation deviates from this convention by viewing composition and execution as co-occurring in time (Moorman & Miner, 1998a;). The time-dependent nature of spontaneity is such that actors react and compose actions by recombining immediately available resources in a “bricolage” action (Pina e Cunha et al., 1999). As a creative process, improvisation attempts to develop something new and tied to the situation. The value and importance of creative actions has been underscored in non-routine task environments where the means-end relations associated with established routines become ambiguous. Improvisation occurs when actions are simultaneously creative and spontaneous (Moorman & Miner, 1998; Vera & Crossan, 2005). In sum, the convergence of creativity and spontaneity in teams occurs through the joint, interdependent activities of team members who form a collective system allowing the individual improvisational actions aimed at developing novel solutions within a short timeframe (Weick, 1998). In a classic illustration of improvisation in action, Hutchins (1990) recounts the story of a navigation team whose ship unexpectedly lost its navigation and propulsion systems while pulling into port. The team was able to maneuver the ship into a narrow harbor by devising non-routine workarounds within a limited time interval (Hutchins, 1990). The actions taken to overcome the loss of the ship’s navigation and propulsion systems are reflective of improvisation in the sense that they were non-routine and were executed spontaneously, without the benefit of elaborate pre-planning.

By relying on this conceptualization of improvisation we derive three hypotheses at different level of analysis. In particular, we argue that individual improvisation is affected by the individual tendency of being proactive. Moreover, we argue that at the team level of analysis,

Level-2: team

Level-1: individual

individual improvisation can be affected by the way through which team members interact, and by the contextual climate within the team itself. In other words, we argue that team members who are proactive and who operate in a favourable team context are better poised to improvise. Hereafter, we develop the theoretical rationale leading to these hypotheses, and figure 1 depicts the model.

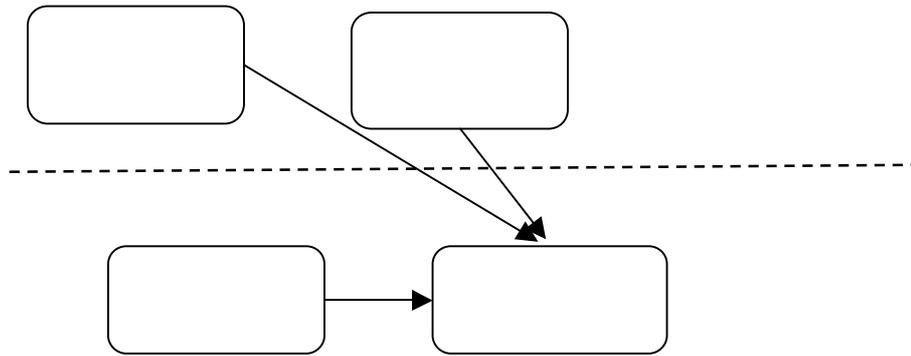


Figure 1. Research model

Individual proactivity and individual improvisation

Proactive behavior can be considered as “taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions” (Crant, 2000). Previous research points out that proactive individuals are those who feel as being relatively unconstrained by contextual constraints and have an impact on molding the environment (Bateman & Crant, 1993). Specifically, proactive individuals are likely to identify and grasp emergent opportunities, showing initiative and persisting in changing the status quo (Bateman & Crant, 1993). Conversely, individuals that are considered less proactive tend to be less likely to identify opportunities, and therefore are more likely to passively receive the stimuli coming from the context, thus adapting to the changes rather than leveraging on the contextual cues to challenge the status quo (Crant, 1995). Previous research outlined the impact of individual proactivity on different outcomes such as job performance (Crant, 1995), career success (Seibert, Crant & Kraimer, 1999), organizational innovation (Parker, 1998), team performance (Kirkman & Rosen, 1999). By relying on the positive effect of proactivity in different domains, we believe that individual proactivity may affect individual willingness to improvise and abandon common routines. Indeed, since proactivity refers to the individual tendency to challenge the status quo and to actively shape the course of actions, team members with higher level of proactivity are more likely to depart from routines and embrace behaviors that are more spontaneous and creative in nature.

Indeed, since proactive people identify opportunities and act on them, it is likely that they embrace a spontaneous action when they identify a chance and they act in a bricolage way to craft a novel solutions by relying on existing material. Thus we hypothesize the following:

H1: Individual proactivity will be positively associated with individual improvisation.

Team collaboration and individual improvisation

Team collaboration represents one of the most salient aspects related to team processes because it focuses on the ability of team members to interact together toward a shared goal. Specifically, collaborative teams are those in which team members integrate their efforts and exchange valuable information for reaching their goals. Moreover, collaborative teams are characterized by the ability to openly discuss their expectations and constraint in order to proper manage different points of views and to work in a synergetic way (Jassawalla and Sashittal, 1998). Thus, collaboration allows team members to better focus their efforts, and if the team is able to work in a smoothly fashion, its members will be less tied to planning because the easiness of real time adjustment without misunderstandings and confusion (Liang et al. 1995). Individuals belonging to such teams are more likely to depart from the routines and they would be more likely to rely on the support and cooperation from others in order to develop creative and innovative actions right at hand. This aspect has been also taken into account by Frost and Yarrow (1990) in an artistic performance setting. Indeed, they argue that while performing together, each team members should be responsible for the others and the emerging performance cannot be observed as the separate contribution of each individual member of the team (Sawyer 1999). On the light of this we argue that:

H2: Team collaboration will be positively associated with individual improvisation.

Team innovative climate and individual improvisation

While collaboration is tied to team processes, team innovative climate is connected to the existence of a context within the team which favors the emergence of innovative behaviors by members. As defined by Van der Vegt et al. (2005), innovative team climate can be defined as the perception that the processes, the behaviors and the norms within a team promote the generation and the implementation of new ideas. Specifically, innovative climate is based on behaviors that are aimed at encouraging the development of new ways of doing things by challenging the status quo and learn by grasping beyond the team boundaries. Innovative

climate has been recognized as a factor which influences individual and team outcomes. For example, innovative climate is tied to organizational performance (Daellenbach, McCarthy, & Schoenecker, 1999). As such, members belonging to a team that has a highly innovative climate are more likely to discuss and challenge one another in a constructive way without the fear of being blamed, but with the aim of exploring new perspectives and finding new way of approaching a certain activity. Because of the creative nature of improvisation, we argue that creating a context in which individuals are more likely to experiment it would encourage to depart from routines and to face emergent issue in a spontaneous and innovative way without the fear of retaliation from the other members. Moreover, since an innovative climate favors the acquisition and experimentation of novel approaches coming from the external environment, individuals within teams characterized by innovative climate will be more likely to act in a bricolage fashion by connecting internal consolidated actions with external knowledge. On the light of this we hypothesize the following:

H3: *Team innovative climate will be positively associated with individual improvisation.*

METHOD AND RESULTS

Setting and measures

Teams involved in the study were showing the same features described by Hackman (1987). For instance: team structure is clearly defined. Moreover, despite some members' daily actions may be described as autonomous, most of the team's outcomes was showing a high degree of interdependence in a simultaneous fashion because teams were performing as a group of members rather than single individuals. Due to their inner nature, artistic collectives pursue dynamic balances originating from improvisation, as well as from creative, spontaneous behaviors: it is therefore extremely suitable to look at them to draw remarkable managerial significance from it.

The surveyed sample teams comprise of 25 arts collectives, with an average of 6 members per team. The examined teams are active in the fields of visual arts, architecture, design and experimental theater.

The examined teams - already well known, are committed to research, to getting insights, devising and implementing several projects, which despite the diverse arts languages (a value in itself, as prominent theorist and curator Germano Celant wrote, "*Nowadays art is made of*

everything, and happens everywhere, without linguistic and territorial boundaries"), are aimed at an active spectator, one who interacts with the outcome of the art work.

Arts collectives working in the visual arts, for instance, do not devise works exclusively aimed at traditional, mainstream art scenes, as is the case of museums or art collectors' homes: in fact, these teams' creations are mainly related to the "relational" sphere of the arts, pursuing an active dialogue with the viewer, the latter thus becoming a main character within the entire process.

Moreover, they do not employ traditional communication techniques, but rather draw upon different repertoires deriving from other sectors, such as the theater. In this framework, the artistic enterprise - including the activities of the examined arts collectives and their individual members - operates through an ongoing dialogue made of diverse languages, communication techniques, formulas and skills, with the distinct capacity of establishing direct contacts with their public.

We collected data through a fully standardized questionnaire containing five-point Likert-type scales. To obtain more reliable ratings of the team-level constructs under consideration, multiple respondents from each team participated. Of a total of 138 individuals targeted for the survey, 134 usable surveys referring to 25 teams were completed. Hereafter we report the measures we adopted.

Individual improvisation

Individuals' extent of improvisation was measured through a seven-item scale by Vera and Crossan (2005) for assessing the degree to which individuals perform creative and spontaneous behaviors, which represent the two facets of improvisation. The coefficient alpha was .77 for this scale.

Individual proactivity

Individual proactivity was assessed through a four-item scale derived from Bateman et al. (1993). The items tapped into the individual tendency to look for new ways to make the difference and look for improvement, to be the engine of change and to look for new challenges to face. The coefficient alpha was .65 for this scale

Team collaboration

Our team-level measure of team collaboration was assessed through a five-item scale tapping into the team ability to share information, supporting each other toward the final goal as well as integration and help among members. The coefficient alpha was .78

Team innovative climate

A four-item scale adapted from Van der Vegt et al. (2005) measured the teams' level of innovative climate by tapping into the existence of a team context in which team members are encouraged to challenge the status quo, they are supported in getting knowledge outside the team and they interact in a fair way. The coefficient alpha was .65 for this scale.

Control variables

We also included individual-level and team-level control variables. At the individual-level we controlled for age and gender, as prior research pointed out that demographic characteristics may influence individual perceptions. Following Hoegl et al. (2003), at the team-level we included team size as a control variable. The larger the size of a team, the more opportunities individual team members have to access different resources. However, large teams may also be more complex in nature, thereby hindering the individuals' ability to get the required information in a short time frame, constraining the emergence of improvisation. Table 1 shows descriptive statistics, correlations, and scale reliabilities.

	Mean	SD	Age	Gender	Team size	Proactivity	Collaboration	Innovative climate	Improvisation
Age	35.84	8.33	-						
Gender	.33	.47	-.12	-					
Team size	6.32	2.42	.00	.22*	-				
Proactivity	3.87	.62	.33**	-.05	-.06	-			
Collaboration	4.05	.59	.05	-.03	-.20*	.28**	-		
Innovative climate	3.95	.55	.00	-.03	-.13	.28**	.73**	-	
Improvisation	3.81	.53	.13	-.07	-.00	.33**	.39**	.45**	-

Table 1. Descriptives and correlations

Results

Given the hierarchically nested structure of the data and the cross-level relationships in the research model, it was necessary to use an analytical technique that is robust to nonindependence of observations and can account for variance at different levels of analysis simultaneously. The first step of multilevel analysis is to determine if some of the variability in the dependent variables can be attributed to team-level phenomena. Therefore, we examined an ANOVA for individual improvisation—our dependent variable. The results of the ANOVA suggests the presence of difference between teams on individual improvisation ($F=2.81$; $p<.001$). The results of the HLM models predicting individual improvisation are presented in Table 2. In model 1 we introduced individuals controls which do not have a

significant impact on individual improvisation. In model 2 we inserted the individual level predictor (i.e. proactivity) which has a positive and significant effect on individual improvisation (coeff.= .31 $p < .001$). Results corroborate H1, in which we predicted a positive relationship between individual proactivity and improvisation. H2 posited a positive cross-level relationship between team collaboration and individual improvisation. The coefficient for team collaboration is slightly significant and positive in predicting improvisation (coeff. =.28 , $p < .10$), thus highlighting a slightly positive relationship in the hypothesized direction. In Consistent with H3, the coefficient for team innovative climate is positive and significant in predicting individual improvisation (coeff.= .46, $p < .05$), thus corroborating our cross-level hypothesis.

Table 2. Multilevel model results

	Individual improvisation			
	1	2	3	4
Level-1				
Gender	.12	.12	.13	.10
Age	.00	-.00	.00	-.00
Proactive personality		.31***	.31***	.30***
Level-2				
Team size			.02	.02
Team collaboration				.28+
Team innovative climate				.46*
Model fit				
AIC	177.74	167.77	169.36	163.03
LogLikelihood	167.74	155.77	155.36	145.05

Notes:

Level-1 n = 134 individuals; level-2 n = 25 teams.

Gender (0 = men, 1 = women)

+< .10 * $p < .05$, ** $p < .01$, *** $p < .001$ one-tail test.

DISCUSSION

Our research contributes to the field in several ways. First, we contribute to the research on improvisation by embracing a multilevel approach which allowed us to take into account in a simultaneous fashion both individual and team level variables. This approach allowed us to consider improvisation both a phenomenon that can be traced back to individual characteristics but also as a behavior that is derived from social construction and interaction between individuals. Second, our study takes into account the field of performative arts, within which empirical studies on improvisation were still at an immature stage. The results

of our study points out the importance of preparing performing teams to improvise in order to face the complexity of contemporary artistic performance. Moreover, from a managerial standpoint, our study provides suggestions to managers who want to build teams able to react to the emergent challenges of the environment. Specifically results suggest that organizations should consider to involve proactive individuals and to work on the development of a climate that favors innovation and interaction among members.

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