

WHEN THE MUSE TAKES IT ALL: A MODEL FOR THE EXPERIENCE OF TIMELESSNESS IN ORGANIZATIONS

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I propose a model in which I describe the way individuals experience timelessness by becoming engrossed in attractive work activities, the contextual conditions that facilitate or hinder that process, and the effects of timelessness on the creativity of organizational members. Building upon multidisciplinary perspectives, I suggest that timelessness is a constellation of four experiences: a feeling of immersion, a recognition of time distortion, a sense of mastery, and a sense of transcendence.

If we take eternity to mean not infinite temporal duration but timelessness, then eternal life belongs to those who live in the moment (Wittgenstein, 1974: 147).

Quick now, here, now, always—
A condition of complete simplicity
(Costing not less than everything) (Eliot, 1943: 59).

Timelessness is the experience of transcending time and one's self by becoming immersed in a captivating present-moment activity or event. Scholars and poets have suggested over the years that the timeless intensity of the present moment is a gateway to creativity and joy (Dewey, 1934; Kolb, 1984; Sandelands & Buckner, 1989; Whyte, 1994). Creativity in particular is associated with highly intrinsically motivated states, called "ecstasy" (May, 1994) and "flow" (Csikszentmihalyi, 1990), in which total involvement in the task at hand results in loss of self-consciousness and the sense of time (Csikszentmihalyi, 1997; Massimini & Carli, 1988). The term *timelessness* is used in the literature to describe individuals' complex experience of such states (cf. Hartocollis, 1983; Mainemelis, in press; Ornstein, 1986). Empirical research has shown that the life context in which organizational members experience more of those intense states is

not leisure but work (Csikszentmihalyi & LeFevre, 1989; LeFevre, 1988).

In the organizational literature timelessness has been discussed as an experience of the flow state and has been linked occasionally to work feelings (e.g., Sandelands & Buckner, 1989), transformation (e.g., Quinn, 2000), meaning (e.g., Denhardt, 1986), and creativity (e.g., Ray & Myers, 1989; Sosik, Kahai, & Avolio, 1999). Although scholars have given some attention to this topic, they have not theorized timelessness, to date, in organizational science. As a result, three questions remain unanswered: What is the process by which individuals experience timelessness in organizations? What are the personal, task, and work environment factors that facilitate or hinder that process? What are the implications of timelessness for organizational life?

In this article I explore these questions by integrating knowledge from diverse disciplines. Research on timelessness has been highly interdisciplinary and informed by the literature on time experience and creativity. In the literature on time experience, researchers have examined the affective and cognitive processes involved in the way individuals construct, experience, and perceive time. This literature indicates that an individual experiences timelessness during a focused state of consciousness, in which the individual temporarily loses the sense of time and the consciousness of the self (Hartocollis, 1983; Ornstein, 1986; Pöppel, 1988). In the creativity literature researchers have described timelessness as an experience one has in ecstasy and flow—two affective states during which one

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is conscious of neither time nor one's self (Csikszentmihalyi, 1997; May, 1994). These highly intrinsically motivated states are conducive to creativity (Gardner, 1993a; Mainemelis, in press; Massimini & Carli, 1988; Sosik et al., 1999), which is defined as the work output of an individual that is novel, original, and useful (Amabile, 1996; Russ, 1993).

In the literature on time experience and creativity, timelessness is viewed in a similar but also complementary way. The literature on time experience provides a more comprehensive and theoretically sound explanation of the structure of timelessness, while the creativity literature describes in greater depth its contextual conditions, experiential dimensions, and implications. In this article I integrate knowledge from both bodies of literature and suggest a model for the experience of timelessness in the context of organizational life.

A model of timelessness can be useful for organizational theory and behavior in three ways. First, it offers theoretical insight into one of the most joyful and complex experiences of work, the importance of which has been emphasized increasingly in recent years (e.g., Massimini & Delle Fave, 2000; Quinn, 2000; Sandelands & Buckner, 1989). Second, it sheds light on the subjective experience of time at work, a theme rarely explored in organizational theory (Bluedorn & Denhardt, 1988; Hassard, 1991; Lee & Liebenau, 1999). Finally, the study of timelessness puts under the magnifying glass some task-related affective processes that increase the likelihood that an individual will be creative at work. Such an analysis can complement the existing creativity literature, in which the focus has been more on personal and work environment factors (e.g., Amabile, Conti, Coon, Lazenby, & Herron, 1996; Oldham & Cummings, 1996; Scott & Bruce, 1994; Shalley, Gilson, & Blum, 2000) and less on one's immediate engagement with organizational work (Drazin, Glynn, & Kazanjian, 1999; Sosik et al., 1999; Woodman, Sawyer, & Griffin, 1993).

I begin the article by building a theoretical foundation about time experience, and I then discuss timelessness in the context of work. Following that, I introduce the model of timelessness and develop theoretical propositions. I conclude the article with a discussion of the theoretical, research, and practical implications of the suggested model.

TIME AND CONSCIOUSNESS

Prior to discussing timelessness in the workplace, it is necessary to create a theoretical framework about the nature and structure of subjective time experience. Social scientists have recently concluded that time, as a dimension that is external and independent of us, does not exist. Time is now seen as an abstract notion that varies significantly between eras and cultures (Bluedorn & Denhardt, 1988; Halpern & Christie, 1996; Hassard, 1991) and between and within individuals (Carstensen, Isaacowitz, & Charles, 1999; Ornstein, 1970; Zimbardo & Boyd, 1999). Multidisciplinary perspectives on time suggest that our experience of time's passage is the by-product of the ability of consciousness to separate stability from change and to use this distinction in the control of behavior (Fraser, 1986, 1996; Maturana, 1995; Ornstein, 1970).

To explain this thesis we should draw a distinction between direct—or immediate—and ordinary experience. *Direct experience* is the experience of the immediate present moment and consists of fleeting apprehended instants, which in and of themselves are atemporal: they are instantaneous impressions of an external reality characterized by heterogeneity and nonlinear patterns of change. According to physicist Julian Barbour (2000), the universe is timeless and consists of momentary patterned interrelationships that are unique and cannot be repeated. External reality is, at any moment, a spatial multiplicity of instantaneous structures, in the same sense that our bodies are momentary configurations of heterogeneous material—neural connections, electrons and protons that travel through space, and cells that are continuously dying and being regenerated. Our direct experience at any instant consists of apprehended impressions of the momentary patterned interrelationships in the external world (Kolb, 1984; Pinker, 1997).

Human consciousness has evolved over millions of years to overcome the adaptive disadvantages of direct experience so as to detach us from the heterogeneity and constant change of the external world and allow us to draw causal inferences (Ornstein, 1991; Pinker, 1997). The French philosopher Henri Bergson (1960) writes that as the instants of direct experience are processed by consciousness, they are linked to one another and experienced as an inner *duration*

(*durée*)—as states of consciousness lasting for a moment and then fading away, but which are also infinite because they permeate each other, living and disappearing within each other as a continuous and holistic flow of events. As inner duration is generated by instants that contain one another, the self is made up by states that generate each other: "inner states that envelop each other like onion rings or Russian dolls" (Hartocollis, 1983: 17).

When inner duration is projected to external space, it cannot not be experienced as states that permeate each other, because space consists of momentary patterned structures that are heterogeneous and do not envelop each another. Instead, duration is now experienced as states that are arranged side by side, as in space, each "now" state being surrounded by a state "just passed" and a state expected "to come," on a continuum that is conceptualized as *time* (Bergson, 1911, 1960; Hartocollis, 1983; Moore, 1996). Bergson saw this process as a kind of *cinematographic* operation: consciousness takes several snapshots of reality; it keeps a record of them by means of inner duration; it arranges them successively side by side to form a reel; and it projects the reel back to space "in high speed," creating the illusion of a uniform linear movement that progresses *through* an invisible homogeneous medium of "time." Each frame on the reel is a distinct picture of reality, and each projected series of frames can lead to valid predictions about reality, with human experience acting as a reference system. Time, however, exists only in the apparatus (Bergson, 1911; see also Barbour, 2000: 28–30).

Without inner duration there would be no *becoming*—only instantaneous experience. Without the notion of time, the self would be a heterogeneous multiplicity of impressions varying infinitely across different moments in terms of qualities, evolution, and acts (Bergson, 1911). By inventing time, consciousness is, in fact, creating an *abstract homogeneous medium*, in which the self can change, age, and evolve while paradoxically *always enduring*. In other words, by projecting inner duration to the external world, consciousness *temporalizes* external change into "before and after"—into past, present, and future states—and ascribes to the self and other objects a lasting ontological quality that endures through change and goes beyond the ex-

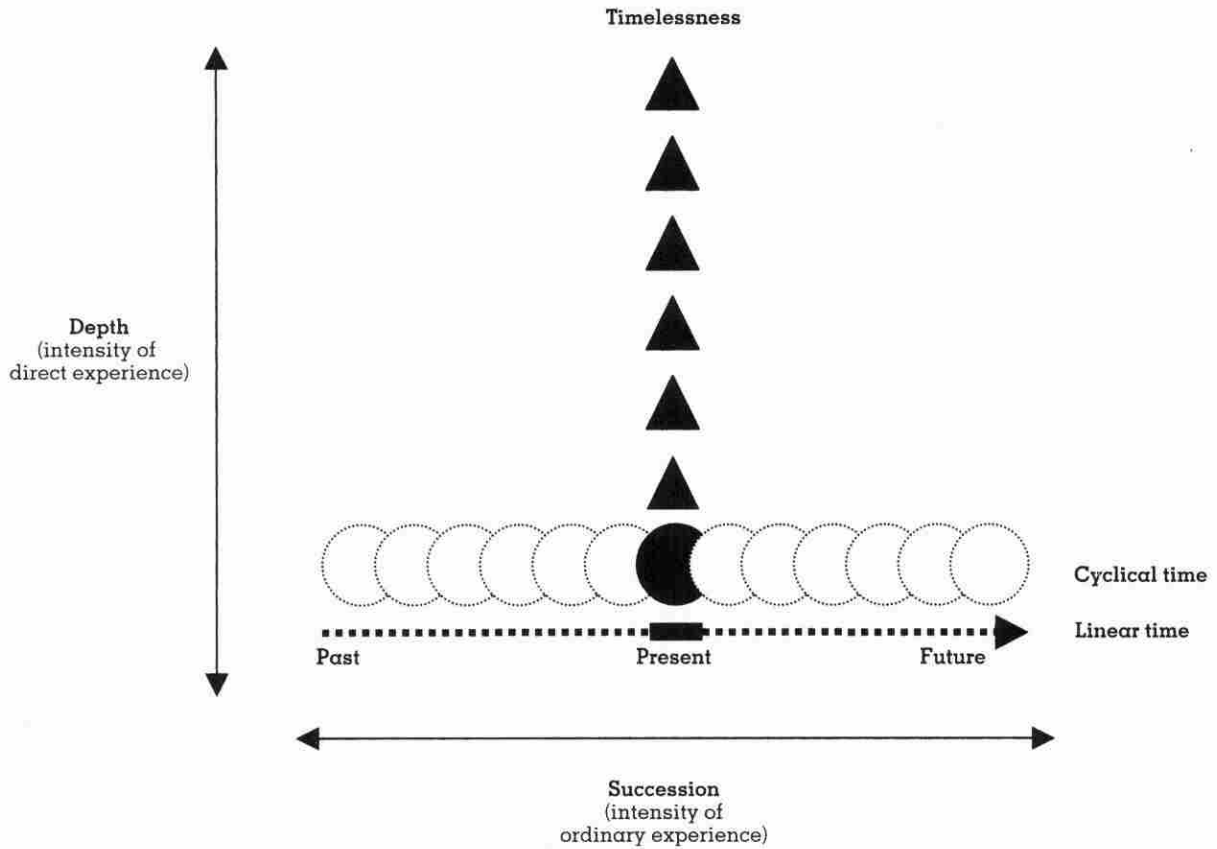
periential moment of recognition (Bergson, 1911, 1946; Hartocollis, 1983; Lacey, 1989).

Ordinary experience, then, is the experience of the present moment as *integrated* in a sequence of other moments and events—as a tiny link attached to an infinite chain of experiences and instants. Ordinary experience presupposes the notion of time, but direct experience is timeless.

Several authors have agreed on this particular point. Nietzsche writes that while time is experienced as a succession of instants, each instant has a timeless depth—an "immortal" intensity that fuels aesthetic rapture and creativity (1982; Wood, 1991). Dewey (1934), too, makes a distinction between ordinary experience, which occurs sequentially in space and time, and direct experience, which is "aesthetic" and "artistic" because it is a holistic and timeless event (see also Wong, Packard, Girod, & Pugh, 2000). From a neuroscience perspective, Goleman (1997) proposes that the concepts of time and self are generated in the neocortex, and direct experience precedes them because it originates, in part, in the older parts of the brain. Neurobiologists have observed that direct experience is a nonlinear mode of being in the world, which "does not postulate duration, a future or past, a cause or effect, but a patterned 'timeless' whole" (Ornstein, 1986: 129). Experiential learning theorists suggest that direct experience "exists only in a continuously unfolding present moment of apparently limitless depth wherein events are related via synchronicity . . . a patterned interrelationship in the moment. . . . It is thus timeless—at once instantaneous and eternal" (Kolb, 1984: 102). Similarly, cognitive biologist Humberto Maturana writes that direct experience emerges out of chaos and "is a dynamic that disappears as it takes place. Living takes place in no time, without past or future. Past, present, and future are notions that we human beings, we observers, invent as we explain our coherences in the now" (1995: 1).

It can be suggested, therefore, that each unfolding moment has two dimensions—depth and succession (Wood, 1991)—as shown in Figure 1. The depth dimension reflects the intensity of direct experience, whereas the succession dimension reflects the intensity of ordinary experience—that is, the integration of the present moment in the thread of experiences that makes up one's self and one's world in general. Be-

FIGURE 1
A Graphical Anatomy of the Unfolding Present-Moment Experience



cause of limited attention resources, the more one's consciousness focuses on succession, the less attention it invests in the depth of the here-and-now direct experience, and vice versa (Hartocollis, 1983; Kolb, 1984).

Because the self consists of emotional states that presuppose the existence of time (e.g., anxiety, desire), the unfolding present moment is experienced as a "now" point that dichotomizes a line of events running from the past to the future (*linear time*). It is also possible to experience the present moment as a periodic stage in a recurring process, in which case time is thought of as a series of successive cycles (*cyclical time*). Cyclical and linear time coexist in daily life as two overlapping temporal modes (Halpern & Christie, 1996; Mainemelis, in press). For example, organizational members experience daily recurring work routines that are attached, however, to irreversible events that unfold from the past to the future. In either case, the notions of past, present, future, and recur-

rence are entirely contained in the unfolding present moment (Maturana & Bunnell, 1999; Varela, 1999). But when the depth of direct experience in the unfolding moment is high, attention is withdrawn from the self, and time as an experience ceases to exist. This state is experienced as *timelessness*—a transcendence of both time and one's self (Hartocollis, 1983).

Ackerman describes the experience of timelessness in the context of intense and playful engagement with an activity:

... only the present moment matters, one's history and future vanish. One does not remember one's past, needs, expectations, worries, real or imaginary sins. The deep-play world is fresh, wholly absorbing, and full of its own unique wisdom and demands. Being able to temporarily step outside of normal life—while keeping one's senses alert—is indeed like being reborn. To erase all memories and yearnings—to be vigorously alive without self-awareness—can provide a brief return to innocence (1999: 31).

Bergson's contentions about the subjectivity and plasticity of time bear an obvious merit: as the notion of external time is determined by inner duration, time seems to slow down, run, or stop, depending on one's emotional states and attention dynamics. Empirical research today supports the subjective experience of time's passage varying because of such factors as stimulus complexity and observer characteristics (Mitchon, 1990; Ornstein, 1970). If an activity is perceived as meaningless, one's attention is directed toward the self, boredom arises, and time seems to slow down. If the activity is perceived as threatening, one's attention is directed toward the self again, anxiety arises, and time seems to slow down or pass rapidly. But when the activity optimally matches one's expectations, attention moves from the self to the activity and from time to the timeless depth of immediate experience (Ornstein, 1986; Pöppel, 1988). As physicist Richard Feynman and time theorist Ernst Pöppel put it, "Time is what happens when nothing else happens. . . . When we experience a great deal we do not think of time" (in Pöppel, 1988: 85-86).

TIMELESSNESS AND CREATIVITY AT WORK

Although timelessness may be induced in different ways, including epiphanies, random events, or intense love (cf. Halpern & Christie, 1996; Hartocollis, 1983; Ornstein, 1986), the type of timelessness I analyze here is the one most likely to occur in an organizational setting: intense engagement and absorption in one's work. The link between timelessness and work has been of interest to creativity scholars ever since Plato spoke of one's "muse" and has been studied in recent years by psychologists Rollo May and Mihaly Csikszentmihalyi.

According to May, creativity cannot be understood only as a function of talent nor as an instrumental phenomenon where a final product or goal completely guides one's actions. Rather, creativity depends on the intensity of the *direct encounter* of people with their work: their experience of unity with and complete absorption in their work, which makes them "become oblivious to things around them as well as to the passage of time" (1994: 44). In such a state one does not experience fear or gratification but, rather, what May calls "joy"—a feeling of total

participation and heightened consciousness. May describes this state with the term *ecstasy*:

"Ex-stasis"—that is, literally to "stand out from," to be freed from the usual split between subject and object which is a perceptual dichotomy in most human activity. *Ecstasy* is the accurate term for the intensity of consciousness that occurs in the creative act. But it is not to be thought of as a Bacchic "letting go"; it involves the total person. . . . It is not, thus, *irrational*; it is, rather, *suprarational*. It brings intellectual, volitional, and emotional functions into play all together (1994: 48-49).

The same themes appear in Csikszentmihalyi's description of the state as "flow":

"Flow" denotes the wholistic sensation present when we act with total involvement. It is the kind of feeling after which one nostalgically says: "that was fun," or "that was enjoyable." It is the state in which action follows upon action according to an internal logic which seems to need no conscious intervention on our part. We experience it as a unified flowing from one moment to the next, in which we feel in control of our actions, and in which there is little distinction between self and environment; between stimulus and response; and between past, present, and future" (1975: 43).

Empirical studies have shown that when people describe their experience of the flow state in retrospect, they report, depending on the intensity of the state, one or more of the following experiences: a clear goal about the activity; a balance between challenges and skills; immediate feedback from the task; a merging of action and awareness; intense concentration on the task; a sense of heightened control; a forgetting of one's self; a forgetting of time; and an activity that becomes autotelic—that is, an end in and of itself (Csikszentmihalyi, 1990, 1997; Csikszentmihalyi & Csikszentmihalyi, 1988).

LeFevre (1988) and Csikszentmihalyi and LeFevre (1989) measured flow, in organizational settings, as the context wherein both challenges and skills are higher than the employee's average, and they found that flow occurs more than three times as often in work as in leisure and that it correlates significantly with creativity, concentration, and potency. These findings were supported for all three types of jobs involved in their study—that is, managerial, clerical, and blue collar. Further, the results show that employees experience flow in a variety of daily activities, such as writing reports, fixing equipment, doing assembly work, talking on the

phone, and so forth. More recently, Sosik et al. (1999) defined flow as a higher-order construct with lower-order dimensions of intrinsic motivation, feedback, and concentration, and they found, in a laboratory setting, that it mediates the effects of transformational leadership on rated creativity.

Each of the bodies of literature discussed so far presents some limitations. Flow is a very broad construct that can be identified in different ways and at different levels of complexity, depending on "how strict a definition of flow one wishes to use" (Csikszentmihalyi & LeFevre, 1989: 818). As a result, timelessness may or may not be part of flow, depending on how the flow state is defined in the first place. As Csikszentmihalyi notes, individuals forget time and self in the more complex levels of flow, "when distractions are out of the way and when the other dimensions of flow are in place" (1997: 121). In flow theory, however, not clearly defined and studied, to date, is how one moves from the less complex to the more complex levels of flow, and since flow theory has not been informed by the time experience literature, there is also no explanation of why and how people lose their sense of time in the more complex levels of flow (cf. Csikszentmihalyi, 1990: 67). This is also the case with May's concept of ecstasy, which is a purely phenomenological approach that does not address the issue of time and subjective time experience, nor the context in which timelessness is induced. Another limitation these theories share is that the terms *flow* and *ecstasy* are used to describe both the actual state and one's retrospective experience of the state, inviting some conceptual and empirical ambiguity. Unlike the theories of flow and ecstasy, the time experience literature provides a clear answer as to why people lose the sense of time in such intense states, but there has been no exploration, to date, of the contextual conditions that enable one to enter such a state in the first place. Finally, in all three bodies of work, researchers have not addressed the work environment conditions that facilitate or hinder timelessness in the workplace.

In order to develop a more complete perspective on timelessness, I connect these three bodies of literature, which, to date, have not been informed by one another. The model proposed in the next section is rooted in them, but it is also distinct from them, integrating their perspec-

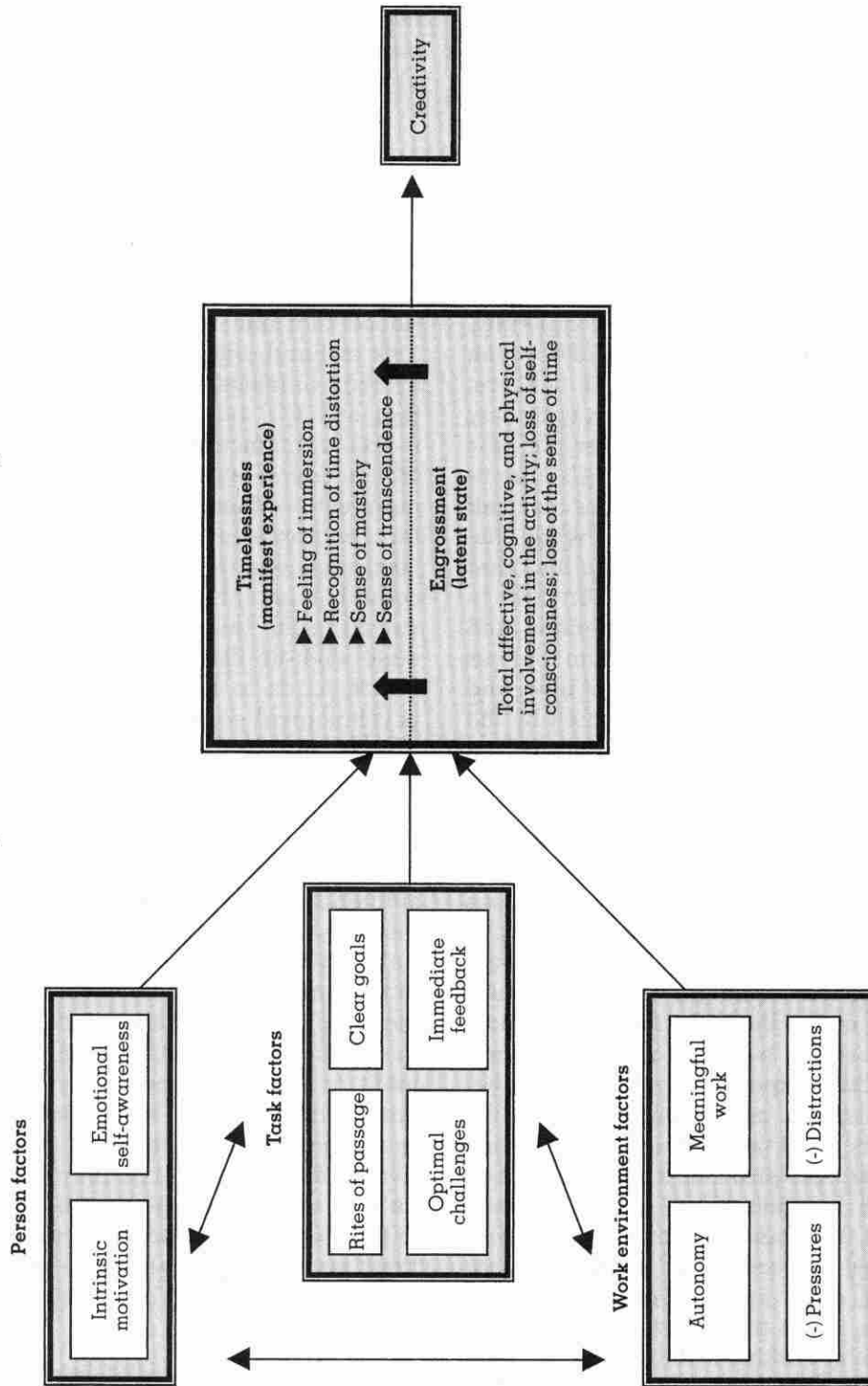
tives in order to explain how timelessness is particularly experienced within an organizational setting.

A MODEL FOR THE EXPERIENCE OF TIMELESSNESS IN ORGANIZATIONS

The proposed model of timelessness, shown in Figure 2, suggests (1) that certain task, person, and work environment factors increase the likelihood that one will become engrossed in the task at hand and experience timelessness and (2) that timelessness increases the likelihood that one will be creative at work. The model makes a distinction between the latent state in which one loses the sense of time and one's manifest-level experience of that state. I use the term *engrossment* to denote the intense state of consciousness in which one's entire affective, cognitive, and physical resources are totally invested in the task at hand. Engrossment is the state wherein the high intensity of direct experience leads to the suspension of the normal psychological context delineated by the notion of time and the consciousness of the self. I use the term *timelessness* to denote the way individuals experience that state. The distinction between the two terms is important, because whereas the state of engrossment is entirely contained in the immediate experience, timelessness goes beyond the state—that is, individuals can describe, in retrospect, their experience of the state after they have emerged from it. The methodologies currently available do not allow us to study directly either the state of engrossment or the experience of timelessness while one is in the state. As a result, the focus of investigation is on how individuals retrospectively describe their experience in such a state as soon as they emerge from it.¹ The implication is that several personal and cultural interpretations may interfere when one reflects upon the state of engrossment in retrospect.

¹ The state cannot be studied directly in the sense that, during it, one is not self-conscious to describe the experience (see Csikszentmihalyi & Csikszentmihalyi, 1988; Hartocollis, 1993; Kolb, 1984; Ornstein, 1986; Sandelands & Buckner, 1989). Neuroscientists, however, have directly examined the patterns of brain activation during such states and have observed a *lessening of cortical arousal*, which suggests the presence of focused attention and lack of pressure, boredom, anxiety, fatigue, nervousness, and distractions (see Goleman, 1997: 92–93).

FIGURE 2
A Model for the Experience of Timelessness in Organizations



Task Factors: Creating a Space for Timelessness

Timelessness requires the creation of a psychological, and sometimes physical, space in which one can become totally involved in the task—away from worries, problems, or distractions. One factor that contributes to the creation of such a space is a personal rite of passage, which is a brief, habitual activity or ritual that facilitates the psychological and physical engagement in the task (Ashforth, Kreiner, & Fugate, 2000). Rites of passage facilitate the transition to the state of engrossment because they attract one's attention away from the surrounding organizational temporality and increase emotional arousal (Ashforth et al., 2000; Isen, 1999). Rites of passage often take simple forms, such as sharpening pencils, cleaning a desk, or playing a computer game. What determines whether an activity is a rite of passage is not its content but its symbolic transitional function—the fact that one performs it habitually prior to engaging in the task so as to focus attention, reduce anxiety, create a playful atmosphere, and so forth (Ashforth et al., 2000; Halpern & Christie, 1996).

Proposition 1: Performing a rite of passage prior to engaging in the task increases the likelihood that one will become engrossed in the task and experience timelessness.

Another factor that has a positive effect on timelessness is having a clear goal about the activity. The goal itself is not important and sometimes is invented on the spot (Csikszentmihalyi, 1990). What is critical is that the goal describe an end within the task, since having a goal about an end separate from the task will distract one's attention away from the immediate experience. Clear goals facilitate engrossment in the task but only insofar as they contribute to the creation of a psychological space in which one can become immersed in the present-moment activity without worrying about future consequences. Goals, in that sense, are not a means for achieving an end that is separate from the activity but, rather, are means for achieving desirable outcomes within the activity. As long as clear goals concern the activity itself, they facilitate the engrossment in the activity because, first, they provide a clear target

toward which an individual can direct his or her full attention (Shalley, 1991, 1995) and, second, they prevent a variety of potential distractions from entering one's consciousness and distracting one's attention away from the task (e.g., frustration that is due to confusing or lack of information about the task; Carson & Carson, 1993; Csikszentmihalyi, 1990; Shalley, 1991).

Proposition 2: As long as goals describe ends within the task, rather than separate from it, the more clear one's goals are about the task, the more likely one will become engrossed in the task and experience timelessness.

A third task factor that is conducive to timelessness is the balance between the challenges of the task and one's skill level (Csikszentmihalyi, 1975; Deci & Ryan, 1985). When one's skills are much greater than the level of skill required by the activity, boredom and lack of motivation will arise, and when the goal is too difficult, anxiety, frustration, and lack of motivation will arise (Massimini & Carli, 1988; Shalley & Oldham, 1985). Activities that balance challenges and skills, however, excite one's interest in a way that allows one's attention to remain focused on the activity. Such activities are called "optimally challenging," and they fall on a continuum ranging from low (low challenge/low skill) to high (high challenge/high skill; Csikszentmihalyi, 1990). Although any position on that continuum is likely to facilitate the transition to the state of engrossment, the likelihood increases as the level of optimal challenge becomes higher (i.e., it moves toward the high end of the continuum), because people are more likely to invest affect and full attention in those tasks at which they are more skilled and more likely to perform better (Csikszentmihalyi & LeFevre, 1989).

Proposition 3a: The more balance there is between the challenges of the task and one's skills, the more likely one will become engrossed in the task and experience timelessness.

Proposition 3b: The higher the level of optimal challenge in the task (i.e., moving toward higher challenge/higher skill), the more likely one will

become engrossed in the task and experience timelessness.

Boredom and anxiety can also arise if one does not receive immediate feedback about how well one is doing on an activity, especially when investing the activity with one's affect and effort (Csikszentmihalyi, 1990). Immediate feedback prevents the arousal of boredom and anxiety and helps the individual remain engrossed in the tasks for longer periods of time. Immediate feedback should be provided from within the task, since feedback from a source external to the task will interrupt the task and distract the individual's attention. Immediate feedback may be an integral part of task structure, or the individual may cultivate the ability to receive immediate feedback from the task. For example, such activities as conducting an orchestra, piloting an airplane, or performing surgery are structured so that they provide immediate feedback, whereas other activities, such as conducting long-term scientific experiments or writing research reports, require much longer periods before one gets a sense of the results. In those latter cases the individual can structure and/or engage in the task in such a way that he or she receives immediate feedback. For instance, research scientists and creative writers often report that once they have internalized a set of criteria for evaluating their work as it progresses, each step in an experiment, or each sentence in a manuscript, provides them with the necessary signals of how well they are doing (Csikszentmihalyi, 1990, 1997).

Proposition 4: As long as the source of feedback is within the task, rather than external to it, the more immediate the feedback, the more likely one will become engrossed in the task and experience timelessness.

State of Engrossment and Timelessness

Rites of passage and optimally challenging tasks with clear goals and immediate feedback contribute to the creation of a psychological space in which one can become deeply engrossed in an activity. Because the task structure provides a clear target for attention and prevents distractions from entering consciousness, one becomes both actively involved in and intensely concentrated on the activity. In simple

words, this means "putting one's mind" where one's immediate actions are—what Dewey (1934) calls "an aesthetic experience of unity," and what flow theorists call a "merging of action and awareness" (Csikszentmihalyi, 1990).

As more of one's limited attention resources are gradually invested in the unfolding task of the present moment, more attention resources are gradually withdrawn from the self, with the result that one loses self-consciousness (i.e., the concept of the self, one's desires and fears) and the sense of time (Csikszentmihalyi, 1990; Wong et al., 2000). This interaction is not linear but cyclical: the more one pays attention to the direct experience, the less one focuses on one's self, which leads to paying less attention to time, which, in turn, reinforces the involvement in the direct experience, and so forth and so on. This circular, reinforcing interaction results in the state of engrossment—an intense state of consciousness in which one's entire affective, cognitive, and physical resources are totally invested in the present-moment activity.

A normal state of consciousness is characterized by disharmony, because a myriad of different stimuli compete for limited attention resources (Csikszentmihalyi, 1988). One does not, for example, become fully engrossed in the task at hand while thinking about next week's deadlines, leisure, health, or another task. The state of engrossment, however, mobilizes one's entire attention resources and physical energy toward only one stimulus, which is the present-moment activity (Goleman, 1997). In this "harmonious" state of consciousness, the activity becomes autotelic (i.e., an end in and of itself)—that is, one performs it for the wholeness one finds in it in the present moment. In terms of the time experience framework described earlier in the paper (Figure 1), because, during the state of engrossment, one is entirely absorbed in the direct experience, attention is withdrawn from the self and the sociotemporal reality, and time as an experience ceases to exist.

Individuals experience the state of engrossment as timelessness—an experience beyond time and self. But since this experience is fully enveloped in each unfolding instant, it is not articulated as such a state until one emerges from it (Kolb, 1984; Ornstein, 1986; Sandelands & Buckner, 1989). The immediacy of the state of engrossment is such that, during it, one does not make a distinction between self and activity

(Hartocollis, 1983). This is the reason timelessness cannot be studied directly while an individual is in that state, for that would require interrupting the state and making a distinction between self and activity. But when people emerge from the state of engrossment, they have very vivid memories of their experience during the state. As Gardner notes, people engrossed in such states "are not conscious of the experience at the moment; on reflection, however, such people feel they have been fully alive, totally realized, and involved" (1993a: 25). Pöppel, too, writes that timelessness can be described only in retrospect after one has emerged from this intense state of consciousness:

We evaluate duration according to the retrospective contents of consciousness. If we process no information, our attention is diverted onto time. . . . If, on the contrary, a great deal of information is processed, we are unconscious of time, which seems therefore to fly by. But the multifarious experience is stored in memory, so that a great deal of memorable information is there in retrospect (1988: 88).

Timelessness is the "memorable" and "multifarious" experience people have during the state of engrossment—an experience they can articulate as soon as they emerge from it. As Pöppel and other authors have noted, timelessness is not a unidimensional but a complex experience, because it reflects a quite complex state of consciousness characterized by the simultaneous loss of self-consciousness and the sense of time. The following is a description of an experience of timelessness in the context of intense engagement with a task:

Well, you are right in the work, you lose the sense of time, you are completely enraptured, you are completely caught up in what you are doing, and you are sort of swayed by the possibilities you see in this work. . . . The idea is to be so saturated with it that there is no future or past, it is just an extended present in which you are making meaning. . . . It is a meaning carried to a high order. It is not just essential communication, daily communication; it is a *total* communication. When you are working on something and you are working well, you have the feeling that there is no other way of saying what you are saying (Strand, quoted in Csikszentmihalyi, 1997: 120).

In order to identify the components of timelessness, I reviewed the relevant literature and found four consistent themes that people report when they retrospectively describe their experi-

ence during the state: immersion, time distortion, sense of mastery, and sense of transcendence. These four experiences are not causes, effects, symptomatic outcroppings, or by-products of timelessness; rather, they are its manifestations. In other words, timelessness is a constellation of these four retrospectively reported experiences.

Immersion is the feeling of being fully absorbed, surrendered to, or consumed by the activity, to the point of forgetting one's self and one's surroundings (Dewey, 1934; May, 1994; Pöppel, 1988). Immersion is an accurate representation of the fact that, during the state of engrossment, one is not self-conscious since one's attention resources are totally captivated by the task.

Time distortion is the recognition that, during the state of engrossment, one has been operating according to the rhythms of the activity, without being aware of time (Csikszentmihalyi, 1990, 1997; Ornstein, 1986; Pöppel, 1988). One recognizes time distortion in retrospect by realizing that one has been unconscious of time, out of time, has forgotten or lost track of time, or that time has passed in a different way than usual, and so forth.

Mastery is a sense of peak performance, heightened competence, and total control over the task during the activity; it is often experienced as optimal performance accomplished with effortless action (Hartocollis, 1983; May, 1994). The sense of mastery is related to the intensity and focus of consciousness during the state of engrossment and to the fact that, during it, one is developing one's skill through performing an optimally challenging task (Csikszentmihalyi, 1990).

The fourth dimension, a *sense of transcendence*, is a feeling of crossing the limits of consciousness and stepping temporarily outside of normal life. This is an accurate interpretation of the fact that, during the state of engrossment, one operates beyond the normal psychological context delineated by self-consciousness and time (Csikszentmihalyi, 1990; Hartocollis, 1983; May, 1994). The content of the sense of transcendence may differ across individuals because of cultural interpretations that might intervene in retrospect. For example, one may experience having been part of a specific larger reality, or one may feel that one's work is a vehicle for a

larger cause, part of a higher context, and so forth.

Proposition 5: Timelessness is a constellation of four experiences: a feeling of immersion, a recognition of time distortion, a sense of mastery, and a sense of transcendence.

Person Factors

An important condition for timelessness is that one is highly intrinsically motivated vis-à-vis the task. With little or no intrinsic motivation, it is unlikely that an individual will invest the affect and effort required to become engrossed in the task at hand. One's attention, more likely, will be diverted to another activity, other thoughts, or the future rewards associated with doing the task. People who are intrinsically motivated, however, engage in the activity for the inherent satisfaction they find in it, rather than in order to attain some outcome separate from the activity (Amabile, 1996; Ryan & Deci, 2000). This increases the likelihood that their attention will become and remain invested in the immediate experience, and as a result, they will be fully engrossed in the task at hand. Further, as Koller writes, for intrinsically motivated individuals, timelessness itself is often the purpose of work:

To find out what work I wanted to do, I let my thinking play only on what it would be like to be doing the work. Whether I'd become famous doing it, whether I'd earn a lot of money, wouldn't be considerations. The only matter that would count would be whether I was totally absorbed by it while I was doing it, not noticing the passing of time. Doing it only for its own sake. Did the doing of it use and nurture the best of the talents I cherished? . . . Did I know when I had done it well, done it just as I wanted to do it, just as I wanted it done, regardless of what anyone else said of it? Did I know myself to be a master in it? (1990: 148).

Proposition 6: The more intrinsically motivated one is in doing the task, the more likely one will become engrossed in the task and experience timelessness.

The creation of a psychological space in which one can become engrossed in the task at hand requires emotional preparation and will (Gardner, 1993b; May, 1994). The transition to the state of engrossment is facilitated by emotional

self-awareness, which is the ability to accurately assess one's own internal states, resources, and limits (Boyatzis, Goleman, & Rhee, 2000; Goleman, 1998). This *ability* should not be confused with the *state* of being self-aware. During the state of engrossment, one is not self-aware because one loses self-consciousness. But in order to enter the state of engrossment, one should first be able to accurately assess one's moods, anxieties, and optimal levels of operation so as to prepare oneself psychologically for becoming affectively engaged in and fully concentrated on the task (Gardner, 1993b). The ability to be emotionally self-aware enables one to create the conditions in which one can experience timelessness and forget one's self. In other words, one is not likely to "let go" of oneself, forget worries, and become absorbed in the immediate experience unless able to first recognize the emotional aids and barriers that facilitate or hinder that process (Goleman, 1998).

Proposition 7: The higher one's ability to be emotionally self-aware, the more likely one will become engrossed in the task and experience timelessness.

Work Environment Factors

Employees' perceptions of the work environment play an important role in how they engage in daily work (Amabile et al., 1996; Shalley et al., 2000). Two work environment characteristics that are particularly conducive to timelessness are autonomy and meaningful work.

Autonomy to select what work to do and how to perform it allows organizational members to be intrinsically motivated vis-à-vis their work, to select optimally challenging goals, and to pursue these goals according to their personal idiosyncratic work rhythms (Amabile et al., 1996; Deci & Ryan, 1987). The boundary condition here is that one perceives that the work environment provides some opportunities for interesting and stimulating work; otherwise, the perception of autonomy alone is not likely to lead one to become engrossed in the task. As long as that condition is met, the more autonomy one has, the more likely one will create or select an activity that captures one's imagination and attention. Autonomy also facilitates structuring even daily tasks in such a way that they become optimally challenging and rewarding (Russ, 1993).

Furthermore, work perceived as meaningful has a positive effect on entering the state of engrossment. Work is perceived as meaningful when there is fit between the requirements of a work role and the values, beliefs, and behaviors of the individual (Spreitzer, 1995). Work perceived as meaningful increases the excitement, curiosity, and attention of the individual vis-à-vis the task. Work that is perceived as meaningless, however, leads to boredom and apathy (Conger & Kanungo, 1988; Nicholson, 2000) and significantly decreases the likelihood that one will become engrossed in the task.

Proposition 8: As long as one perceives that the work environment provides opportunities for interesting and stimulating work, the more autonomy one has to select what work to do and how to do it, the more likely one will become engrossed in the task and experience timelessness.

Proposition 9: The more meaningful one perceives one's work to be, the more likely one will become engrossed in the task and experience timelessness.

Work environment factors that hinder timelessness are those that distract one's attention from the depth of the here-and-now direct experience. Extreme workload pressures in particular, in the form of extreme time pressures and unrealistic expectations for productivity (Amabile et al., 1996), make it virtually impossible for individuals to become engrossed in the task at hand and to experience timelessness. Although a sense of urgency may help one focus attention on the activity, extremely high time pressures evoke feelings of anxiety (Nicholson, 2000) and call the individual's attention away from the immediate experience to a tough deadline located somewhere in the future. Another factor that hinders timelessness is various distractions that interrupt the flow of the work activity and distract one's attention from the task. Such distractions may include physical events, interruptions by coworkers (Perlow, 1999), and boundary control activities by managers, such as imposed work times and deadlines, physical monitoring, or influence to work according to managers' work rhythms and styles (Perlow, 1998).

Proposition 10: Extremely high workload pressures decrease the likelihood

that one will become engrossed in the task and experience timelessness.

Proposition 11: The more distractions there are in the work environment, the less likely one will become engrossed in the task and experience timelessness.

Effects on Creativity

The state of engrossment facilitates creativity because it is a context of highly focused, imaginative, and quality work. As soon as one forgets the fears and other demands of the self, one also suspends two factors that have detrimental effects on the generation of novel and useful ideas: fear of failure and negative judgment (Deci & Ryan, 1985; Nicherson, 1999; Nicholson, 2000). What usually kills or blocks one's creativity is lack of courage to explore novel or countercultural ideas, paralyzing anxiety about one's performance, and premature rejection of one's insights as inadequate or not worthy of further elaboration. The loss of self-consciousness during the state of engrossment prevents the arousal of such fears and judgments and facilitates the playful and imaginative engagement in the task (Kolb, 2000).

The state of engrossment is also the ultimate supportive context for three important conditions of creativity: attachment, detachment, and flexibility. The condition of attachment suggests that creativity requires devotion, total involvement, and absorption in one's work (Amabile, 1996; Grudin, 1990; May, 1994; Russ, 1993). The condition of detachment suggests that, in order to discover something novel and original, one has to distance oneself from what is obvious and known—from conventional social and organizational interpretations (Bruner, 1962; Gardner, 1993a). The condition of flexibility suggests that creativity requires one to be highly adaptable to the immediate experience so as to avoid reaching premature closure (based on previous knowledge) in interpreting the bits of incoming information (Feist, 1999; Kolb, 2000; Nicholson, 2000). All three conditions are fully facilitated in the state of engrossment. Attachment is facilitated because no other state of consciousness achieves such a calibration of mind, body, spirit, and activity; detachment is supported because the loss of self-consciousness and the loss of the

sense of time allow one to operate beyond the context of sociotemporal reality; and flexibility is fully present because engrossment is itself a state of intense direct experience wherein one's attention is totally invested in what is unfolding in the moment.

Engrossment facilitates creativity also because it is the space within a workday that probably accounts for the greatest proportion of quality work. Because one is performing an optimally challenging task, one is also developing one's skill toward higher levels of mastery (Gardner, 1993a). Therefore, the longer one stays in the state of engrossment while working on an activity over a period of time, the more one operates in this fearless, focused, optimally challenging state of attachment, detachment, and flexibility, which is conducive to creativity. Further, the frequency with which one becomes engrossed in a task over a period of time is important too, because higher frequency prevents devaluation of skill (associated with entering such states in big time intervals) and gives momentum to new ideas and insights to continue developing rather than being put on hold. Clearly, one cannot stay forever in the state of engrossment, for such states are not incessant but, rather, are recurrent and intermittent. Especially in modern, fast-paced, and multitask work environments, such states tend to be relatively brief, as they are bounded by the temporal limits of a workday, physical fatigue, multiple transitions between different microroles and tasks (Ashforth et al., 2000), and a variety of other physical and interpersonal events that interrupt them (Perlow, 1998, 1999).

The relationship between the experience of timelessness and creativity is twofold. First, as the frequency and length of engrossment in an activity over a period of time are known to us by means of the experience of timelessness, we can study timelessness in order to explore the effects of the state of engrossment on creativity. But timelessness also has a direct and perhaps more important effect on creativity: it motivates people to persevere and persist over long periods of time in generating and elaborating upon creative ideas. Creativity, especially within an organizational setting, requires passion, persistence, and perseverance (Nicholson, 2000). Timelessness is the nearest and most intense point of contact between an individual and his or her work (May, 1994)—an experience of "unity" be-

tween self and work that makes people shape, and be shaped by, their work to a profound degree. Timelessness facilitates creativity because it creates a strong emotional bond between an individual and his or her work and fuels the passion and courage required to deal with various difficulties and disappointments associated with the less immediate aspects of the work. Timelessness also involves a sense of mastery, a feeling that one is continuously growing through doing the activity, which enables the individual to feel that he or she is already being rewarded by doing the activity itself while waiting for external recognition or results that may or may not come (Mainemelis, in press).

Last but not least, timelessness is an experience that re-creates itself (Massimini & Delle Fave, 2000; Seligman & Csikszentmihalyi, 2000). The more one experiences timelessness, the more one learns how to create and protect a space within a workday or week for experiencing timelessness again. This will lead the individual to create more opportunities for becoming engrossed in work—a fact that will reinforce the cycle of working in a context that is conducive to creativity and that will stimulate, in turn, more passion, persistence, and perseverance in developing and applying creative ideas.

Such an analysis helps explain why creative individuals continue to engage in the area of their expertise despite its frustrations, and why so many of them continue to raise the ante, posing even greater challenges for themselves, even at the risk of sacrificing the customary rewards (Gardner, 1993a: 26).

Proposition 12: Given that in the modern fast-paced and multitask work environments the states of engrossment in which one experiences timelessness are recurrent, intermittent, and relatively brief, (a) the more frequently one experiences timelessness while working on a given activity over a period of time, the more likely one will be creative in relation to that activity, and (b) the longer one experiences timelessness while working on an activity over a period of time, the more likely one will be creative in relation to that activity.

DISCUSSION

In this article I have integrated multidisciplinary perspectives to develop a model of timelessness in the context of work, focusing on its theoretical framework, dimensions, precedent conditions, and effects on creativity. Researchers should now empirically test and extend the model. Conventional methodologies, such as second-order confirmatory factor analysis, can be employed to assess timelessness, and a variety of psychometric, experimental, and ethnographic methods are readily available for measuring the other variables in the model. Interview-based methodologies, in particular, can offer rich descriptions of experiences of timelessness in organizations. Researchers should stay close to the phenomena of interest and should assess timelessness in relation to a specific activity or activities, preferably by asking individuals to report on their experience immediately after they have completed a task.

Future researchers can enhance the proposed model by addressing some of its limitations. The topic provides opportunities for undertaking field research to explore timelessness across various activities and tasks. For instance, in an academic context one could investigate whether, how frequently, and for how long people experience timelessness while analyzing data, writing manuscripts, teaching, attending meetings, and so forth. Such research can provide us with rich information about the occurrence of timelessness across various daily activities in different work environments. Further, Goffee and Jones (1996, 1998) have pointed out that organizational culture has profound effects on the way work environments are arranged in terms of spatial and time models. One could investigate here whether, for instance, timelessness is facilitated more in the traditional nine-to-five versus the more flexible virtual work environments, open-space versus cubicle spatial layouts, and so forth.

Sandelands and Buckner (1989) have observed that whereas in many studies researchers have looked at how employees feel about their work (i.e., global feelings about the job), in very few have they looked at how employees feel of their work (i.e., immediate feelings on the job). During the last decade, organizational researchers have focused on the perception of the general work environment and suggested that creativity

is more strongly related to employees' perceptions of the proximal work environment (e.g., autonomy, meaningful work) than to their perceptions of the distal work environment (e.g., organizational policies; Amabile et al., 1996; Shalley et al., 2000). An important implication of the proposed model of timelessness is that it moves beyond the perception of the distal and proximal work environment to the immediate experience of working on a specific activity. This allows us to draw a clear distinction between immediate and global feelings and to make a more fine-grained analysis of the task-related affective processes that increase the likelihood of creativity in organizations. To that end, in future studies researchers could examine more closely the role of immediate affect in timelessness (e.g., Isen, 1999; Russ, 1993, 1999).

Finally, future researchers could study timelessness at a higher level of analysis. This may include asking how a group of people can experience timelessness while they are engaged in an activity. Our current knowledge suggests that what is important in timelessness is not the presence of others but whether the presence of others is part of the task. For example, a professor can experience timelessness while writing a research paper in the office or while teaching students in the class, but it is highly unlikely that the professor writing a paper will continue experiencing timelessness when a student enters the office. Nevertheless, little is known, to date, about the processes that enable a group of people to experience timelessness when they are engaged in the same activity. Given that team work and cooperation are emphasized today, it would be useful to study timelessness at a group level.

For several decades, organizational theorists have assumed that time is absolute and objective (Bluedorn & Denhardt, 1988; Hassard, 1991). I began this article with a different assumption—namely, that time is elastic and subjective. As it is possible for consciousness to construct the succession of time, so too is it possible for us to temporarily forget time and to create within the workday a spacious context of intense and playful engagement with our work. Organizational theorists and practitioners should try to better understand and nourish those spaces within one's workday that account for the greatest proportion of creative, quality work. Otherwise, individuals will continue to take work home so

that "some creative work can be done." The studies of Perlow (1998, 1999) testify to the fact that even in the so-called knowledge-intensive organizations, where creativity is very important, individuals have a hard time fully engaging in their work without being frustrated, interrupted, or distracted. Perhaps the most important implication of this article is the question "How can we design work environments in such a way that the work gets done, is done well, and in which there is also a 'space' for people to experience timelessness in their workday?" This is a challenging, multilevel question, which could be explored in the future by integrating perspectives from the model proposed herein with other relevant insights from the literature on entrainment (e.g., Ancona & Chong, 1996), time and organizational culture (e.g., Goffee & Jones, 1996, 1998), and the social-structural dimensions of work time (e.g., Perlow, 1998, 1999).

A long time ago Thomas Edison observed that creativity consists of 1 percent inspiration and 99 percent perspiration. In the case of Alexander Fleming, the 1 percent was the famous accidental discovery in his lab, and the 99 percent was the ten years of hard work that followed that discovery in order to produce the first penicillin compound. Recent perspectives from the field of creativity research suggest that creativity is almost never the result of *deus ex machina* insights, flashing lightbulbs, or accidental discoveries but, rather, comes after long periods of hard work (Csikszentmihalyi, 1997; Gardner, 1993a; Gruber & Davis, 1995; Gruber & Wallace, 1999). The long periods invested in bringing something new into being are not always smooth and enjoyable: one has to deal with the frustrations involved in struggling with the unknown; the disappointments that naturally come with failures and unsatisfactory results; the difficulty inherent in articulating something that is new and different; and, since creative ideas often challenge the established culture and status quo, perhaps fierce organizational resistance and hostile politics (Nicholson, 1990, 2000; Pinchot, 1985; Ray & Myers, 1989; Sternberg, O'Hara, & Lubart, 1997). During the last five decades, scholars have looked at such tensions and sometimes wondered why someone would wish to be creative at all.

The widely accepted answer to that question today comes from the works of Deci and Ryan

(1985), Amabile (1996), and Csikszentmihalyi (1997), who suggest that the catalytic determinant of creativity is loving what you do and loving doing it. This view does not exclude the possibility that individuals are motivated by a distant vision or have a high drive for achievement. On the contrary, it suggests that the joy that one finds in doing the work is exactly what keeps one's vision alive and reinforces one's achievement drive in the face of difficulties and disappointments.

Several studies have shown that creativity is related to becoming totally involved in an activity that is an end in and of itself (Amabile, 1996; Csikszentmihalyi, 1997; Ryan & Deci, 2000). The model discussed in this paper offers a "high-resolution" illustration of why, how, and under what conditions individuals become engrossed in an activity that is an end in and of itself and how this process positively affects their creativity. In fact, timelessness is one of the very few workplace experiences that can simultaneously support total involvement in one's work, quality of work, and quality of experience while doing the work. Whyte comments on the dynamics of time and timelessness in the workplace:

How do we keep this work alive for you? This is a great question to ask everyday about yourself and your co-workers. How do we keep this interesting for everyone? I do not want anyone in this team just putting in the time, just having their shoulder to the wheel. . . . Because people, when they get incredibly busy, they tend to get very cynical at the same time. . . . I think it is very hard to actually approach your own creativity or anyone else's without creating a sense of timelessness or spaciousness within your workday. And there are many ways to do that. You can do it through artful conversation, you can do it through humor, or you can do it through a celebrative atmosphere. You can do it through real creative contact in which ordinary linear time simply disappears—we have all had this experience at our desks, where you have been so engrossed in what you are about that you cannot tell whether an hour has passed or a half hour or three hours. . . . Otherwise you are saying that I will only be involved in the essence of what I am about, in the periphery of my existence, in the weekends, all the little time that I have left to myself. This is why it is very important to be able to bring intimations of eternity, which I think is not an endless amount of time but an experience out of time, into your workplace (Whyte, quoted in Essex & Mainemelis, in press: 21–34).

The basic idea behind this article is simple: every moment can be a moment *in time*—a mo-

ment attached to the succession of what has been, what might have been, what might come, and what has to be done. Fortunately, some moments can be moments *out of time*—moments in which one surrenders to the depth and intensity of immediate experience. The current state of our knowledge suggests that these moments out of time are an important context of quality work and stimulate imagination, passion, and creativity.

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