Between 2: Tango as interactive design

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A R T I C L E   I N F O

Article history:
Received 7 April 2008
Received in revised form 21 October 2008
Accepted 22 November 2008
Available online 10 December 2008

Keywords:
Interactivity
Tango
Dance
Culture
Engagement

A B S T R A C T

Drawing from interactive design theories and the authors’ personal tango experiences in the Twin Cities and Buenos Aires, this paper critically examines tango dancing as a complex social world capable of revealing rich metadata about its physicality, spatiality, constituents, and underlying interactive processes that can be used to inform and invigorate designers’ approach to digital interactivity. By exploring tango’s physical and conceptual elements, parallels and connections with interactive design are identified, demonstrating how such explorations can inspire new perspectives on enhancing digital interactivity, while simultaneously refocusing our understanding of the dynamic, reciprocal relationship between digital worlds and the physical world we inhabit.

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1. Introduction

“I’m tired of everyone saying that what I do isn’t tango.”

Astor Piazzolla

Working from IDEO co-founder and CEO Bill Moggridge’s (2007) loose definition of interaction design as “everything that is both digital and interactive” (p. 670), drawing immediate comparisons to something as physically grounded and non-digital as tango dancing may be problematic, as contrasts appear more evident than similarities. Principal among these, the digital environment is excessively mediated and remote while the tango interface is excessively personal and direct. However, as we will show, tango is particular in the way it corresponds to interactivity and interactive design, with that relationship connecting on points that reveal the reciprocity between the virtual (metaphysical or digital) and the real (human or physical). Between these tango connections lies a rich territory that can be explored and analyzed to inform our understanding of interactivity as well as how to design for it in a digital context.

It is important to our discussion to draw the distinction between interactivity and interactive design (or interaction design) early on; interactivity being a complex concept in and of itself, interactive design referring to the processes that designers take up in developing computer-based interactivity involving humans. Helping us to arrive at a conceptual definition by which we can understand interactivity, and therefore interactive design, are theories set forth by design scholars like Stephen Littlejohn (1989). As he offers, “Part and parcel of a system is the notion of ‘relationship’ … interactional systems shall be two or more communicants in the process of … defining the nature of their relationship” (p. 175). Furthering his argument that interactivity relies on a minimum of two entities co-relating is a definition that references reciprocity, stating “… something is interactive when there is a reciprocal relationship of some kind between two elements in a system. Conversations, databases, games, and social relationships are all interactive in this sense. Furthermore, relationships between elements in a system are defined through interaction” (Salen and Zimmerman, 2006, p. 58).

Linking such discussions on the nature of interactivity with practical implications for designers in her book “Computers as Theatre”, Brenda Laurel proposed a new paradigm for human–computer interactions that was ahead of its time, using the metaphor of theatre to describe the relationships and processes therein (Laurel, 1993). She also advanced the idea that agency, or the ability to initiate action and participate within a representational context, was a key, defining characteristic of interactivity (p. 112). In the same book, Laurel called for interactive design practitioners to participate in the quest for new paradigms for understanding interactivity, and encouraged looking to our “deepest playful instincts” and “cultural conventions of theatre, film, and narrative … [our] … most profound and intimate sources of knowledge about interactive representations” to do so (Laurel, 1993, p. 21).

Such an understanding of interactivity and the role of interactive design provides a basis for exploring tango as an analog/physical counterpart to digital interactive design, and highlights the opportunities for innovation that emerge when physical social
worlds are referenced to inform designers’ approach to digital interactions. As the physical embodiment of design, tango, when danced, constitutes an ongoing re-composing of elements and a manipulation of connections; the goal being to create a heightened state of communication, understanding, aesthetic, and being; even if—as is also true in digital interactivity—that state exists only in the virtual realm. Like the dynamic bits, pixels, and RGB light beams that express digital interaction, we will see how the ultimate richness of the tango world lies beyond its physical dimensions, in the space of the memory, subconscious mind/thought articulations, and the invisible network of connections linking ability and objectives with experience and outcomes.

Acknowledging that interactivity goes beyond digital involvement with or through computers, and that verbal communication is often studied as a means to improve digital interactivity, so too should our physical conversations lead us to opportunities for enhancing interactivity in digital contexts. At the basis of this conceptual relationship is a working definition of design as a “reflective conversation” with the material of the situation, relying on judgments, intention, and pattern recognition, and domain knowledge to construct and compose “new wholes” (Rowland, 2004, p. 40).

Building on that idea and defining interactivity as “mutual and simultaneous activity on the part of both participants, usually working toward some goal, but not necessarily” (Lippmann, 1987 in Brand, 1987. 46), we arrive at a model of interactivity as a “conversation versus a lecture” (Lippmann, 1987 in Brand, 1987. 46). Another metaphor-based model that has been set forth is that of interactivity as a generative “dance” (Heller, 2005), owing to the complex pattern synthesis and narrative/representational contexts that the concept of dancing entails. Looking to such models and seeking to define new ones becomes increasingly critical to our understanding of interactivity and the reciprocal relationship between digital and physical socio-cultural worlds as these continue to shift beneath the weight of emerging technology (Mitchell, 2001)—shaping and being shaped by new expressions of connectedness through virtual social networks like Facebook, MySpace, SecondLife, and Twitter. In these examples of digital interactivity, as in the physical interactivity of tango, we are conversing (dancing) with digital partners.

Looking to a “real world” physical and social context like the world of tango to represent, critique, and transform social worlds in a virtual/digital context is one way we can navigate emerging technologies and their design applications, while as designers we seek to better understand the interface (and interactive design as a whole) as “the art form of the digital era” (Johnson, 1997). Most importantly, such an approach brings into account an “evolutionary consciousness”, recognizing and embracing the role of the human in shaping and creating our future, in art as in life (Rowland, 2004). In this way, one may argue that all areas of design research can benefit from a physical, socio-cultural focus, acknowledging the reciprocal relationship of the physical world informing the digital, even as new technologies allow us (humans) to be shaped by them.

Re-affirming and prioritizing human perspective by acknowledging the reciprocity between physical social worlds and their digital counterparts, as well as the potential for creative development therein, this paper critically examines the world of tango through a design lens, demonstrating how its geographies, constituents, and underlying processes reveal information that can teach us about interactivity in a way that “humanizes the digital” (van Weelden, 2006, p. 27). Such approaches can bring greater cultural awareness of how physical social worlds function, and demonstrate how that understanding can be applied to enhance digital interactivity and emerging digital social cultures. When we talk about culture, we are referring to the constructed meanings of symbols and processes, the engaged actions of humans, and the historical context from which these emerge. Cultural awareness, therefore, is achieved through extensive experience within a culture and expressed as a deep and authentic understanding of standards and practices, and relying on case studies and narratives—in this case, the authors’ own—to do so (Rowland, 2004). Understanding tango as a cultural phenomenon and tango dancers as constituents of a socio-cultural world, this paper applies an ethnographic framework and tools to build a cultural awareness of tango, and calls upon the lead/follow reciprocity of digital and physical worlds to do so. From this exploration we gain a new understanding of interactivity from which implications for interactive designers’ methods for enabling and enhancing digital interactions may be drawn.

2. Sidebar

In March 2005, I traveled to Buenos Aires as part of a University sponsored design class. Prior to this visit, my preconceptions of tango amounted to little more than a stereotypical image of a man and woman marching forward with blank stares, passing a red rose between their teeth at turns. When I was invited to attend a group tango class during this trip, I accepted much in the way one accepts a taste of exotic food—another traveler’s memory to log in the journal. But somewhere during that one-hour class in a sweltering room full of female tourists, I was hooked. I signed up for another class, I bought tango shoes, and I found my way one night to a milonga (social tango dance gathering) at the famed Confiteria Ideal where I sat in awe of the spectacle before me. Even a casual observer like myself could see—tango was far more than a dance; it was a complex, dynamic organism; steeped in history, ritualistic in performance, visually stunning in display, and held in place by firmly established codes.

I returned to Minnesota, but continued dancing, attending both classes and various social milongas. A second 11-day trip to Buenos Aires in August 2006—this time alone—brought immersion, intense practice, and three more pairs of dance shoes. My ability developed and I graduated to three-inch heels. I collected tango music and put the melodies to memory. I read books, watched tango films, and engaged local dancers in conversations about their passion and motivation for the tango. During this time of exploration, themes began to emerge—some preconceived, like passion, romance, seduction, and drama—and some more unexpected, like communication, commitment, and submission. Later, I would recall a line from Sally Potter’s 1998 film, The Tango Lesson. In the scene, Sally, the main character, asks her dance teacher, Pablo Verón, why he chose the tango. His response? “I did not choose the tango. The tango chose me.”

Author 1

3. Background

The dance that Martha Graham called “the most beautiful” (Thompson, 2005, p. 3), tango boasts musical and choreographic roots that reach as far as Andalucía, Cuba, and the Congo. Converging at the mouth of the Río de la Plata in the later half of 19th century, it was a cultural mix of ex-slaves, sailors, poor immigrants and creoles that gave birth to the beginnings of tango (Thompson, 2005; Hoss de le Comte, 2000; Bayard, 2002). Over time, these early dance steps and musical compositions continued to develop along the physical and metaphorical margins of Buenos Aires society, ultimately emerging from the suburban landscape, the arrabal, as the synthesis of movement as sound we recognize today as tango (Thompson, 2005; Bayard, 2002).
Tango’s morally dubious origins precluded its adoption by Argentine high society in the early years, and it wasn’t till the 1910s and 20s that tango became more widely accepted and embraced by the middle and upper classes (Hoss de le Comte, 2000). By the time tango reached the peak of its popularity in Argentina in the 1930s, it had already achieved wide acclaim overseas, and particularly in Paris. Tango passion in the United States 2000). By the time tango reached the peak of its popularity in Argentina in the early years, and it wasn’t till the 1910s and 20s that tango became more widely accepted and embraced by the middle and upper classes (Hoss de le Comte, 2000). By the time tango reached the peak of its popularity in Argentina in the early years, and it wasn’t till the 1910s and 20s that tango became more widely accepted and embraced by the middle and upper classes (Hoss de le Comte, 2000). By the time tango reached the peak of its popularity in Argentina in the 1930s, it had already achieved wide acclaim overseas, and particularly in Paris. Tango passion in the United States.

By the 1950s, as new musical and dance styles emerged and competed for favor, tango’s popularity declined significantly, but still persevered throughout the latter half of the 20th century, firmly establishing itself as a standard of social (and ballroom) dance and a globally recognized symbol of Argentine culture. Current indicators point to resurgence in tango interest in the United States, likely thanks in part to recent media endorsements. As was the case in Valentino’s time, today’s Hollywood-imported tango is sold to American audiences based largely on its stereotypes—the truer cultural and historical aspects, as well as nuances of technique, by and large disregarded in favor of intense, emotional drama and unbridled sexual passion (Thompson, 2005). Contemporary popular movies like Shall We Dance? (2004), starring Richard Gere and Jennifer Lopez, and Take the Lead (2006), featuring Antonio Banderas, rely on this mainstream-appealing formula. Even pop culture princess Lindsay Lohan is on the tango bandwagon, due for release in 2008. Virtual social networks also play a role in promoting tango’s popularity, as well as in countering stereotypes by underwriting the authenticity of the tango taught and performed outside of Buenos Aires. The proliferation of email and website communication simplifies coordination of tango travel both for Argentine instructors headed out of Buenos Aires and non-Argentine dancers headed in, fostering more undiluted exchange of knowledge. Additionally, web-based media sharing networks like Flickr and YouTube offer global venues for exhibiting photos and video clips of workshops, demos, and performances, encouraging communication and knowledge sharing between practitioners worldwide (Popat, 2006).

4. Discussion: toward a cultural awareness of tango

4.1. The milonga

True to the cliché, it takes two to tango. Typically these two are one man and one woman in the roles of leader and follower respectively, though examples of breaking with this traditional gender arrangement are found. Nonetheless, as a rule, the milonga belongs to the male leader and female follower, its codes, spatiality, and hierarchies built on this basic premise. Predictably, local Argentine men—porteños—occupy the topmost ranks in the milonga hierarchy—what preeminent tango scholar Marta Savigliano calls the “tango food chain” (Savigliano, 1998, p. 106); old masters first, young professionals second. Their dominance in the dance as leaders and inviters (men always ask the women to dance, and never vice versa), give them power over the milonga as orchestrators of each dance step and each coupling-up. Additionally, it is on their shoulders to pass the milonga tradition on to the next generation of male dancers (Savigliano, 1998; Thompson, 2005).

Also reflected in the social hierarchy of the tango world are notions of worth and deservedness. Because tango is a dance that cannot be performed without preparation, the right to dance with the choicest partners comes at great cost in terms of practice and investment. At each milonga, skill assessments are made and judgments are passed. Discerning men will wait and watch before inviting an unknown female to dance, just as women will avoid partnering with men they deem unqualified. Such decisions carry importance beyond the bounds of a single dance. If an individual, through ill-conceived partner choices, delivers too many poor showings on the dance floor, that person’s own stock can fall quickly in the perceptions of other dancers, affecting placement in the hierarchy and hindering future partner prospects (Savigliano, 1998).

Spatial arrangements of the Buenos Aires milonga support hierarchical rankings by reinforcing power status and rewarding those who improve and excel in their dancing, while dividing the sexes across an open dance floor creates clearer vantage points for conducting ritual precursors to a dance like the mirada (gaze) and cabecito (nod) (Savigliano, 1998; Trocero, 2006). Upon arriving at a milonga, one is ushered to a seat by a host, placement being determined by one’s status. Tourists, newcomers, and other “unknowns” are usually relegated to the back rows and crannies according to gender. Couples who arrive together are also seated to the back of the room, as their relationship status precludes the possibility of seduction (Savigliano, 1998; see Fig. 2).

Fig. 1. Street tango demonstration, San Telmo, Buenos Aires.

Fig. 2. Milonga at Confiteria Ideal, Buenos Aires. Photograph from the men’s side of the dance floor.
With the various players divided, the ritual inviting, as much a part of tango as any dance step, may begin. Starting with the mirada, the men sweep their eyes across the lineup of available women, assessing each option silently. The women do the same, systematically avoiding and aiming their miraduras toward particular men according to their interest. If two gazes should meet across the dance floor, each partner must choose to pursue the suggestion, or abandon it quickly by averting the eyes, avoiding the emotional injury of outright verbal rejection. When a mirada is held for a moment, the man may nod, called a cabeceo, toward the woman, signalling the formal invitation (Thompson, 2005; Hoss de le Comte, 2000). The woman returns the nod in acceptance, and from two sides of the room, they rise, walk toward each other, exchange a word of greeting, and assume the tango embrace. Through the connected positioning of their bodies, they abandon the physical space between themselves and create a shared virtual, psychological space (interface) for their subsequent communication. A common expression shared by space (interface) for their subsequent communication. A common expression shared by

Because of the rigorous demands of that back-and-forth exchange, as a rule, talking is avoided, as it is disruptive to the concentration and focus of both the partners and other couples sharing the floor. Such constraints are in line with Brenda Laurel’s (1993) assertion that “generally the more modes that are present in the interface (verbal, visual, auditory, etc.), the more complex the system must be in order to handle the reception and interpretation of a wide variety of inputs and to formulate and orchestrate the responses” (p. 112), so verbal speech is sacrificed for the sake of the non-verbal connection. Such system limits also explain why it took one of the authors nearly nine months to actually “hear” the music while dancing, so redirected was her mental focus up to that point.

During a milonga, the dancing is divided up into tandas, or sets of 3–4 songs with very short pauses in between. Longer breaks marked by distinct musical cues called cortinas signal the end of one tanda and the start of a new one. The majority of leader-follower partnerships are established during the cortina, the musical space between sets (Thompson, 2005). When a man invites a woman to dance at the beginning of a tanda, he is in fact asking her for 3–4 individual dances. Disengaging the embrace and saying “thank you” is the typical exit from a tango partnership, a sign that the dancing is over. When a woman or man exits a tanda early, however, such as after only one song, it suggests displeasure and rejection of the partner. While dancing, partners move counter-clockwise together around the floor in traditional line of dance. In general, they keep a forward-moving pace while navigating the perimeter of the dance floor, respecting the center and the far corners as areas where traffic slows and more complex, intricate figures are performed. Collective adherence to such basic guidelines helps leaders focus less on driving an obstacle course (though in crowded milongas, accidental bumping is quite unavoidable), instead directing their attention toward their partner and the music.

Despite the dominant role of men as inviters, it would be inaccurate to claim that women do not play active roles in soliciting dance invitations. Indeed, because women often outnumber men at milongas, non-verbal cues and signals become indispensable tools for attracting male partners. Some of their visual readiness and willingness cues depend on the specific venue. In milonga spaces where food and drinks are also consumed, such cues may include making a conscious display of strapping on or wearing one’s dancing shoes to indicate participation and availability, and not eating a meal or engaging in deep conversation with others, thus keeping one’s attention focused toward the dancing. Other cues include sitting in close proximity to the dance floor, maintaining a pleasant, non-threatening expression, indicating one’s intentions for dancing through appropriate dress, and actively engaging the eye contact game by trying to catch a man’s gaze as it wanders across the space.

Oftentimes men and women have been frequenting a particular milonga for years, so they know more or less who their partners will be. But even between long-standing attendees, nothing is a given in tango. There is no loyalty, and an unknown female tourist could steal an established Argentine female’s dances all night long. These women, the authentic porteros who have been dancing for years, are at the very bottom of the tango food chain. Despite their experience and dedication to the milonga, and often despite great skill, their position falls even below that of the foreign female novice (Savigliano, 1998). According to Savigliano, the reasons for this seeming injustice are often fueled by men’s economic and/or sexual motivations. Upper-ranking male milongueros often work as tango instructors, so combining the milongas for new students is common practice. Other times the men are, quite frankly, looking for the tango passion to be ignited on the dance floor and carry on into the night.

4.2. The tango allure

While sex and money clearly play a role in the milonga scene and tango culture in general, there is a subtler but undeniably more powerful force at work—the desire for altered consciousness. What is often called a “tango moment”, this heightened state is what dancers are often truly seeking when they enter the milonga and engage a dance. When a dance is good, an assessment conditioned by various factors, the couple may experience the tango moment or “high” that they have been looking for. Marta Savigliano writes,

“The tango ‘high’...comes, takes hold of the tango dancers somewhat like a trance, a state of possession that is achieved with much effort and usually not all. The tango ‘trance’ is, thus, a promise, nurtured by the milongueros/as’ memory of past experiences or by the memories passed down to them by other, more experienced tango dancers” (Savigliano, 1998, p. 103).

As Savigliano alludes to in this statement, tango is not an intoxicant and the tangoed ecstasy is not a “high” like that produced by chemical drugs. Unlike wine or spirits, merely consuming—merely dancing—tango will not deliver a tango moment. Tango is, instead, a process, starting from the moment when tango fascination captivates a viewer’s heart, hard earned through years of practice, preparation, and willing submission to the dance. The tango moment is, for its part, a sense of serenity, awareness, effortless control, and deep, fluid calm—a release of tension and worry brought about by complete submission and unwavering focus on the dance connections (Savigliano, 1998). There, in the space of the tango moment, all preceding effort is rewarded, distractions cease, and for a moment, however fleeting, there is only harmonious, perfect, effortless being.

When Marta Savigliano asked Buenos Aires milongueros (milonga participants) what drew them to the milongas, they told her “passion”—the word they perceived to best describe the feelings encompassed in a tango moment. To them, it entailed it all—the sum of their tango experiences starting from the very first; the passion required of them to commit to learning and developing their
dance, the passion to embrace all of tango, both good and bad, and the passion to fully submit to its relentless pursuit. Like addicts (for tango is commonly referred to as a drug), they cultivate their addictions (Savigliano, 1998, p. 103), purposefully and passionately.

5. Sidebar: leading tango

They say it takes two years to be a good follower in tango and that it takes six years to learn to lead well. The role of the leader is substantially more complex than that of the follower. The leader in tango is responsible for having a repertoire of figures, for choreography, for selecting the steps and moves of each dance, for navigation on crowded dance floors, and for reacting to the capabilities and moves of his partner.

The leader needs to have a confidence, an intent, almost an arrogance in dancing, for the indecisive lead will never be clear or successful. You are moving forward, pushing into another’s space; they are pressing back while physically listening not for sound but for movement; you begin a conversation, with diverse movements, they answer, you react to their response. Some ideas are simple, some are complex, some are misunderstood, and others are expanded upon beyond your imagination. It is without words, personal, interactive, invasive, engaging, it is “the perpetual mutual trespass of real conversation” (Brand, 46).

One begins to dance a tango by coordinating your feet by subtly shifting weight side to side, from foot to foot. From there, the intentions and direction of the leader is communicated physically through the torso, and through the shoulders, eyes, and arms. The interface is complex involving posture, attitude, and will, subjective qualities all. Intention and direction must be first communicated by the torso, not leaning but moving. This is reinforced by the shoulders, twisted or straight above hips held straight.

Years after learning multiple steps and figures, one realizes that dancing tango well is not a matter of steps. It is a complete use of the entire body, not just the feet. Furthermore, the interactive experience of tango involves all the senses; perhaps most engages is the sense of feeling—the size and weight of your partner, their skill level, their ability to lead or understand, their clothes, skin, and temperature. I expect my lead to elicit a response, one which is appropriate to the lead. One looks for qualities in a follower: resistance and responsiveness, doing the right thing, sometimes more. Resistance is the presence of engagement.

For a non-tango dancer, the physical contact between tango dancers is often surprisingly close; the dancers are joined at the torso, with the leader’s arm reaching across the shoulders of the follower to the opposite armpit; thighs often in contact during coordinated steps, concentrating on the moment at hand with each other.

At once, this interaction is extremely personal and physical, and at the same time, the interaction is limited to the framework of a three-song tanda. It is a “three minute affair”, a brief involvement and interaction with another soul. While this closeness and depth of involvement are limited to the physical, it is one that offers insight into deeper and intense interactions.

Author 2

6. Sidebar: following in tango

Despite the term’s widespread usage, referring to the role typically assumed by the woman as “follower” is a bit of an over-simplification, if not a complete misnomer. “To follow” or be a follower suggests a notion of docile shadowing or artless mirroring. If only it were that simple! In fact, to be a good follower in tango is a complex undertaking that demands the utmost of one’s physical, mental, and emotional faculties. In spite of these challenges, and more likely because of them, the role of tango follower is a coveted spot that merits the time, effort, and competitive investment required of a woman hoping to be invited onto the dance floor.

When I was first learning to dance, nearly all my efforts and energy were squarely focused on the physical rigors of tango—the proper positioning of the body to create a suspended axis, the awareness of weight shifts, the correct leg extension for the tango “walk”, and how to maintain a disassociation between torso and hips—all while balancing in high-heeled shoes. As my body struggled to meet the demands of tango’s unfamiliar contortions, postures, and pivots—an intense workout in and of itself—my mind was racing to keep up with those movements, interpreting and applying the instructions and feedback I was receiving.

As I spent a significant amount of time at this beginner’s stage of intense physical effort, it was truly an amazing thing when one evening while dancing, I suddenly became aware of the music. While it may seem surprising, up until that point, I had been acting truly as a “follower”—directing all my mental and physical responses toward the actions of the leader and responding only in the most rudimentary and voiceless of ways. Truly, up to that point, I was deaf to everything else in my environment while dancing—the other couples, the audience, and even the music. Now, as a result of my increasing comfort and familiarity with the physical aspects of the dance, my bodily interactions lessened their grip on my mental reserves, allowing my focus to expand, and ultimately, break the sound barrier.

This defining moment in my dance development points to a critical threshold in any tango follower’s evolutionary process. In moving beyond pure tango physicality and its corresponding limitations, I was suddenly free to respond more sensitively to the leader’s movements, seeing them as invitations as opposed to orders, but also now to structure my responses in relation to the music as I heard it myself. This breakthrough signaled a departure from mere “following”. I was now a true partner and equal participant in the tango “conversation”—free to respond, express, and create within the space of that physical, mental, and emotional interaction.

Author 1

6.1. The spaces between 2

It is important to emphasize the uniqueness of tango among other dances in its correlations to digital interactivity. Like other dances, tango is guided by foundations and principles, but it also differs in that it is heavily fueled by creativity and made even more dynamic by its partner interactions and signature lack of repeating pattern (Rowland, 2004). The glossary of available, definable tango steps and embellishments remains the same, but the arrangement of those elements within the space of a dance song, the parameters of the embrace, and the limitations of the established “rules” of engagement is infinitely free. In this sense, tango is a lot like game play; the structures and formats are set, but the individual activities are left to the participants. Within the realm of possibilities, a good dance will be expressive and responsive to the cues delivered by the music, attentive to the abilities and personalities of the dancers, and contextualized within the milonga space, including the physical environs and the other people sharing it.

Author 2
This manner by which tango responds and reacts to variable factors in lieu of any established choreography is a defining characteristic of the dance and what leads devotees to describe it, like interactivity, as “a conversation” (Thompson, 2005)—emphasizing tango’s complex, non-verbal exchange and the moving representations of personal ideologies, histories and social conceptualizations that are expressed therein (Hamer, 2007; Rowland, 2004). Examining these concepts through three progressive levels of exploration and engagement (interaction) in relation to one’s skill development (cultural awareness of tango), and modeled after the three-part tanda structure, the following discussion details the qualities and connections particular to each.

6.1.1. Interface/engage

The first level of exploration the tango world is inevitably superficial, but exceedingly important as a creative experience, since the initial overall impression that is made of the dance “provides the core concept, limited as it may be, from which further refinements and developments emerge” (Hawkins, 1988, p. 119–120). You enter in largely unknowing, with only haphazard cultural stereotypes as references and spend a great deal of time observing, taking notes, familiarizing yourself with the physical environment, the faces around you, the sound of the music. You become, on some level, enthralled with the world and motivated discover it, participate in it, and become a part of it. The connection and interaction at this level may be described as interfacing, referring to a bringing together of elements that connect or mesh, to meet and communicate directly, to synchronize and to harmonize at a common boundary between two bodies, spaces, or phases. The individual response at this stage is to “engage”, by giving over one’s attention or efforts, to become involved or entangled in the situation and grounding oneself in a particular context.

6.1.2. Interact/enact

At the second level of exploration, actions and interactions become more deliberate, more voluntary, and more informed. As the verb “interact” literally refers to two or more entities acting upon one another, this level of tango focuses on finding the connection with the music, the partner, and the audience (Littlejohn, 1989; Lippmann, 1987). For the individual, to “enact” expresses one’s desire and increasing ability to play the role of tango dancer through acquired and demonstrated skill, but also through observance of etiquette and social norms. On this second level, one begins to truly represent tango—as a recognized face among a community of dancers, through the choice of appropriate dress and adornment, and through performance of rituals and movements that are mutually understood by the larger group. You are still learning, still exploring, but also contributing, building and joining in as a representative of the tango world, having established agency to contribute to its beauty, reposition its elements, and reinterpret its meanings—the very essence of interactivity (Laurel, 1993). With each “bit of action” or interaction in the context of this world, you help shape it, both physically and socially (Cook and Brown, 1999, p. 388), and as your worldview expands, “each new idea and skill should be seen in a meaningful relationship to the existing whole concept of dance” (Hawkins, 1988, p. 120).

Incorporating new skills and ideas happens most explicitly on the dance floor itself, as its territories are constantly re/negotiated. Furthermore, as basic dance steps and musical patterns become more familiar, requiring less direct concentration, a dancer’s focus may shift closer to the partner, as well as to the audience. Reactions and responses may come to be not only anticipated, but also specifically elicited. This may seem obvious for the leader, who indicates each step intended for the follower to take, but it also pertains to the woman, who does have, to a certain degree, the ability to express her free will upon the floor. As such, both leader and follower have the space and opportunity to connect more deeply with each other at this level, but also with their audience through stylistic devices, and carefully timed flourishes designed to catch attention.

6.1.3. Invoke/evoke

The third level describes the collective voice of the partnered pair summoning the tango moment together, invoking its activation through the deep coordination of their mind–body actions. For the individual, this level begins to evoke by means of the mind, memory, and imagination, all of the latent emotions, feelings, and responses that are made explicit through the artistry of the dance—intangible artifacts and souvenirs from the journey that are called forth and expressed as impressions of reality. In the space of this third level, whether one is conscious of it or not, the dance is defined by these elements, as personal preferences, desires, expectations, knowledge, skill, enthusiasm, feelings, and mood are displayed on the dance floor (Rowland, 2004). As an Argentine instructor once said, in tango, “you dance who you are—you can hide nothing”.

At the highest height of the third level and approaching the virtual space of a “tango moment” the physical world recedes nearly completely, and except for the floor supporting your weight, it is unnecessary. The journey to this place began at level one, and now it ends somewhere in peaceful, mutual tango oblivion. Arriving here takes effort—months if not years of practice to achieve the necessary technical skill—and is dependent on finding the right partner, the right music, and the right mix of atmosphere, mood, energy, and focus (see also, Savigliano, 1998). Here, in the tango moment, the connection between partners ceases to exist, for to connect requires two, and there is now only one. Fluid, possessive, and effortless in the wake of so much effort, the moment takes hold. Then, in a single instant, it cross-dissolves back into the physical world, pushing you back down into it, back to the place from which you came.

Like the ecstasy of the tango moment and the complex rigors of arriving there, duality is the essence of tango. In the dance, the motion of steps happens between musical beats as partners seek a constant yet fluid connection of twisting torsos and rotating limbs, diminishing the physical space between them and metaphysically amplifying the space of their connection. Individually, too, there is interaction through internal connections, as the tango dancer connects her mind with her body, willing her physical self into motion and her mental self into submission, to the music, to her partner, to the floor, and to the moment where physical realms give way to intangible territories. She exists always between two points on a spectrum—between her first tango class and technical mastery, wild abandon and willful resistance, public performance and private intimacy, her self and her partner. At every level of the dance there are always two entities to connect; the leader to the follower, the foot to the floor, the step to the beat, cheek to cheek or palm to palm, from wherever one is to Buenos Aires, and all the spaces in between. Indeed, tango is interaction defined by the boundaries of two, emerging from the spaces that these create. Always it is between two points that tango exists from moment to moment, and it is the quality defined by these boundaries and the intersecting connections between two that describe the interactive tango experience.

7. Conclusion

In the short history of the field of interactive design, few metaphors for interactivity have been suggested. A “conversation” has been one of them, and dance in general has been another (Schön, 1995; Cook and Brown, 1999; Rowland, 2004; Heller, 2005). But for all the reasons that these two metaphors lend themselves to interactivity, and for all the reasons that tango sets itself apart
from other dances in terms of its complex interactions, what talking or dancing can do, tango can do that much better. Tango is a conversation, and it is a generative dance. It empowers participants with agency to shape the actions and responses of communication, imbued with narrative and grounded in a rich, representational context. It is mediated by a set of rules and procedures, but also seemingly limitless in its expressions. It is at once rigorously physical and intimately metaphysical, both real and virtual, human and digital. With tango, however, the interface is more essential than with the computer. In most situations, the interactivity of the computer is a conduit to the work itself, albeit abstracted, whether finding information on the web or developing a financial understanding through a spreadsheet. In some cases, notably games and the newer immersive environments, it comes closer to forms of sense, tango represents the depth of interaction and engagement (i.e., the Wii system). In this respect, tango represents the depth of interaction and engagement possible, and a goal for interactive designers to strive for.

Corresponding to the three levels of exploration and engagement discussed in the previous section, Brenda Laurel (1993) highlighted first-person engagement as the principal point of interactivity; it is about our selves being involved in manipulating the computer, having agency. In tango one can watch from the side and imagine the deep involvement (level one), but on the dance floor (levels 2 and 3) tango’s engagement is much stronger and much more personal. Perhaps what tango mostly richly conveys about interactivity, however, are the reciprocal and dynamic relationships between two parties. Littlejohn (1989) defined interactivity as being based on a communication between two or more entities, such as a person and a computer and out to a network. Tango fits within definition of interactivity advanced by MIT’s Media Lab and Alan Lippmann (1987), a “mutual and simultaneous activity on the part of both participants”. Tango often involves broader interactions with multiple participants; the social dance venue of the milonga is analogous to a networked community.

In the dance, and in pursuit of the tango moment, tango strikes a delicate balance between foundations (codes, structure, limitations, roles, and outcomes) and freedom of expression (voice, nuance, creative spark, and desires). In this respect, one could argue that tango is interactive design; creative solutions achieved through reflective conversation with materials (Schön, 1995), operating in a context of purpose and objective, and a process rooted in inspiration, problem solving, critical thinking, and reflection on practice. Furthermore, like a design process, tango begins with intent, an objective in mind, a problem to solve, a dialogue to engage, parallel to Norman’s Seven Stages of Action (1990). In addressing that intent it is possible to improve upon an existing situation or condition, synthesizing patterns and elements to compose a state of greater order, beauty, harmony, and engagement (Rowland, 2004). Indeed the relationship between the design process and tango that these observations point to is an interesting one, and one that perhaps further enhances the relevance of tango as a metaphor for interactivity in terms of the interactive design process. While this paper has focused on the richness of tango interactions to inform our understanding of digital interactivity, noting how a procedural analysis of tango could also be applied to design and creative processes points to further opportunities to advance interactive design practice as well.

As this paper has demonstrated, explorations of interactivity through cultural explorations of human/physical social worlds, such as our discussion of Argentine tango, have significance to designers for a number of reasons. First, by linking the interactive design process to a human/physical social process, the designer reaffirms the authority of the human subject and perspective over technology, an important consideration as we seek to design interactive systems that are grounded in human representational contexts. Second, acknowledging and building upon the reciprocal relationship between the physical world and the digital world by drawing from “real world” social interactions and culture, designers are afforded greater opportunities for creating meaningful and relevant work that supports and enhances human experience in a digital context. This can include opportunities for deeper levels of engagement (approaching the digital equivalent of a tango moment in HCI), and interactive design solutions that more closely approximate the complex, performative and multi-sensory experiences described by tango. Third, because of the infinite richness and complexity of human social worlds—of which tango is but one example—the possibilities for creative design research and application that such worlds inspire are literally endless. Designers can be assured of a continuous supply of human-centric material to inform their work, even as digital technologies transform and expand the ways in which we work with that material.

As with the original metaphorical desktop, we can learn from other interactions in the physical world to better understand and better design digital interactions. Indeed, whenever knowledge gained in a particular context is placed into a new context, conversations ensue that can “evolve novel associations, connections, and hunches … [generating] new insights and new meaning” (Cook and Brown, 1999, p. 393). We, however, venture to say that tango is unique in its ability to convey parallels to interactive design—particularly in the “generative dance” (Cook and Brown, 1999) that it brings about with our understanding of interactivity, both physical and beyond. The variables, discipline, and creativity of tango within the social context of the milonga afford it a unique richness as a site of evolving knowledge and meaning-making, as well as opportunities to re-present that knowledge in digital interactive contexts, or to inform the creative design process itself. Most importantly, the close, physical interactivity of tango is engaging, and even addictive thanks to its accompanying mental and emotional requirements, including its demand for long-term commitment in order to succeed and achieve a “tango moment”. That kind of full engagement may be what we eventually seek in a digital interface and digital interactive experience.

References
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