

This essay examines the intersection of the body, technology, and dance aesthetics. More specifically, it advances two interrelated arguments, one concerning the relationship between a formative period in dance history and a particular philosophy of technology and another that concerns viewing dance technique as a particular form of corporeal technology. Following McCarren, it will be argued that modern dance was influenced by a general social concern about the advance of technology and the instrumental reasoning that lies behind it. This concern influenced dance aesthetics as some early proponents of modern dance viewed classical dance forms as being aesthetically poor since they viewed classical techniques and methods as being overtly “mechanical” in nature. Mechanical dancing is viewed as antithetical to authentic dance movement in that it suppresses the expressive abilities of the dancer and stifles innovation.

This essay goes beyond historical analysis in that it examines the grounds for dismissing mechanical dancing and more generally considers what bearing the philosophy of technology has on dance aesthetics. Indeed, the question that must be addressed in order to advance our understanding of dance aesthetics concerns the notion of mechanism that lies behind the criticism of mechanical dancing. Mechanical dancing is often quickly dismissed outright however, if one holds a different philosophy of technology in mind, then the body will be seen as a technological medium that can be developed through the assimilation of dance technique. This in turn leads us to reconsider what is distasteful about mechanical dancing since, if my approach is correct, all dancing is mechanical.

## I. Dance History and Technology

In this section I would like to consider a key movement in dance history discussed by Felicia McCarren in *Dancing Machines: Choreographies of the Age of Mechanical Reproduction*, that is, modern dance.<sup>1</sup> Of course, artistic movements can be difficult to pin down but one can focus

on key figures in order to get a sense of the movement in question. Indeed, McCarren takes this approach in her discussion of technology and modern dance in that she focuses on the life and autobiography of Isadora Duncan. McCarren un-controversially sees Duncan as casting herself as dancing against modernity and as reawakening the ancient spirit of dance first expressed by the Greeks.<sup>2</sup> That is, Duncan represents a shift from a stuffy classicalism (as well as a stuffy Victorian morality) to a freer and more exuberant dancing that is rooted in the advocacy of authentic personal expression.<sup>3</sup>

McCarren goes on to suggest that the transformation of dance values heralded by modern dance was contextualized by a broader social reaction to the pervasiveness of technological devices and the instrumental reasoning.<sup>4</sup> In this context, classical dance forms such as ballet were maligned since they were viewed as emphasizing the mechanical execution of standardized techniques and consequently as suppressing the dancer's expressive and creative abilities.<sup>5</sup> More specifically, the concepts that connect the techniques and methods of classical ballet and with the machine and concern advocates of modern dance are *automation* and *efficiency*.

The machine is designed to perform a particular function (to efficiently produce a certain product) and to do so automatically, that is, with minimal human intervention. Early advocates of modern dance tended to criticize classical dance forms as practices that tend to transform dancers into machines that execute technique without a personal or human element coming into play. The ability to execute technique is automatic in the sense that an overriding emphasis is placed on the precise execution of established technique and this is seen as entailing the suppression of the expressivism necessary for authentic dance movement.

Further, the technique executed by the machine and the technique executed by the classical dancer are akin in that, in either case, emphasis is placed on the *product* that the

technique procures. The technique is a means to a desired end whether a material object such as a plastic lawn chair or an aesthetic property perceived that is to be perceived by an audience. What attention is given to the *process* that produces the product is most often framed in terms of efficiency.<sup>6</sup> For economic reasons, the machine must produce the product without wasting resources, time, and space. For practical reasons, the dancer must produce movement that manifests aesthetic properties by utilizing a certain economy of movement. That is, since energy is not unlimited and since standards demand that performances be a certain duration, the performer must master the ability to execute technique all the while maintaining a standing reserve of energy. Dance technique rests on a foundation of an economy of movement that allows the performer to efficiently produce grist for aesthetic experience.<sup>7</sup>

I have gone beyond McCarren's analysis by considering the concepts that ground the association of dance and technology and one can go further by considering the broader philosophy of technology that worked within the background of modern dance's reaction to technology and mechanical dancing. Doing so will set up a consideration of an alternative approach that I believe better captures the essence of dance practice and appreciation.

As early as the 1930's, a question arose concerning the nature of technology, one that asked whether or not technology is inherently good or bad. Philosophers of technology such as Lewis Mumford and Jacques Ellul expressed concern about technology in light of their observations concerning the short and long-term effects of technological advance and increasing human dependence on technological devices.<sup>8</sup> Such observations lead Mumford and Ellul to the conclusion that technology, as a cultural phenomena, is an inherently troublesome force because it threatens human freedom.

To take an example that meshes with the topic at hand, Ellul expresses concern about

Taylorism, that is, the thought of F.W. Taylor whose *Principles of Scientific Management* outlines how the factory manager can integrate the body of the factory worker into the efficient logic of the machine and the factory floor that it inhabits.<sup>9</sup> More specifically, Taylor emphasized that maximum productivity could be achieved if the worker's physical motions were calculated in order to achieve the best speed and in order to integrate the movements of individual workers with those of others. McCarren writes "At the intersection of work-science and workers' raw energy, the essential gesture is determined by time and motion studies, and once adopted by the worker, it allow him to move to the capacity of his 'natural ability.'"<sup>10</sup>

Ellul is disturbed by Taylorism since it outlines how the movements of the worker's body can be organized and rendered machine-like. Indeed, the movements of the worker come to be dictated by the machine and the factory floor and Ellul sees this as a direct threat to the worker's humanity. More generally, Ellul is concerned about the manner in which the machine and the rational and efficient technique that lies behind it produces products that human beings value but also has the capacity to gradually undermine their very freedom.

Modern dance takes a similar anti-technology stance since it has similar concerns about the efficient bodily economy that traditional dance espouses. The concern is that traditional corporeal technology, that is, traditional dance technique, begins to dominate the dancer's expressive abilities when the technique becomes an end in itself.<sup>11</sup> Further, and as happens in other art forms, the efficient technique that began as an innovation becomes entrenched and in time begins to stifle further development of the art form. It begins to be practiced dogmatically without due attention being paid to alternative ways of understanding the process that procures the desired product.

When such realizations are made a discomfort arises that resonates with a broader

dissatisfaction with the growing dominance of instrumental reasoning. As in responses to Taylorism, individuals begin to consider whether something essential has been left out of the technological economy. Those who believe that technology is something of a negative social force suggest that it begins to undermine our very humanity and those who question traditional dance methods and techniques suggest that they undermine the human element of dance movement. This point can be made clearer by returning to the notion of automation discussed a moment ago.

Again, Ellul is concerned that relying on automation entails giving something important away to the machine. The consumer does not control automated technology and yet depends upon its computations and processes. Further, he is concerned about the fact that automation often entails a lack of awareness of the workings of the efficient machine for, in many instances, the consumer is manifestly unaware of her very dependence.<sup>12</sup>

Admittedly, since the dancer is not a machine, the analogy is not perfect, however I believe that there are similar concerns about dancing that is performed automatically. First, when habitually executing dance technique, the dancer lacks rich first-hand experience of movement quality. That is, since technique is rooted in habit and since the execution of habit is often an unconscious affair, technique can often be executed with minimal conscious awareness. However, authentically expressing oneself is often thought to be a conscious affair in which one is absorbed in the present moment. Automation is troubling in this context in that it appears to undermine an important human ability, namely, the power to authentically express oneself through movement.

Second, a similar worry arises here concerning consciousness of automation. That is, the analog of the consumer of technological output who is unaware of the pervasive automation that

makes his consumption possible believes that the current state of affairs is the status quo.

Likewise, the dancer who is taught to automatically execute technique can mistakenly believe that that is the essence of dance. The possibility of authentically expressing one's bodily being does not and perhaps cannot cross one's horizon when one believes that dance expression is limited to the precise execution of standardized techniques.

Hence, in dance values and in culture more generally we find dissatisfaction and concern about the manner in which technology simultaneously creates and closes off arenas of action. Automation and an overarching emphasis on efficiency produce desirable social goods but simultaneously constricts experience. Ellul sees this occurring as society becomes ever more dependent upon an increasingly intertwined network of automated machines that perform valuable functions but are designed according to and manifest the principle of efficient ordering. In dance, early modern dancers view this as having the capacity to produce aesthetic experience for an audience but as constricting the dancer's experience and the art form more generally.

## II. The Body as a Device

The reader may have come to the conclusion that modern dance's reaction to mechanical dancing is extreme and perhaps wrong-headed. That is, the worry about instrumental reasoning and the restrictiveness of classical dance technique is extreme in that it seems to entail that much of dance history has gone down the wrong methodological track. To approach the issue from another perspective, one may question whether technological devices and instrumental techniques constitute the negative force that essentialists such as Ellul takes them to be. Indeed, one may question whether technology and instrumental technique is positive or negative or whether it has an essence at all. In order to ground suspicions about the extreme nature of the modernist position I would like to draw on important concept advanced by a key philosopher of

technology, Albert Borgman.

In “Technology and the Character of Contemporary Life” Borgman advances the notion of the device paradigm. This paradigm has several components. First, modern technological devices deliver a product in a predictable fashion.<sup>13</sup> An mp3 player, for example, delivers music to the consumer whenever he or she wants it. It functions as an efficient means to a desired end.

Second, Borgman observes that modern technological devices (such as computers, mp3 players, and cell phones) are distinct from earlier forms of technology in that modern devices increasingly withdraw from experience.<sup>14</sup> To make this point clear, consider the sheer amount of work that went into music production before such devices existed. That is, if I wanted to hear music, someone had to stage an event which entailed getting musicians, finding a venue, procuring equipment, selling tickets, and so on. Further, I would then have to travel to the event location. Of course, now all I need to do is find my mp3 player and tap a few buttons in order to hear the music that I like. The mp3 player, as a token of modern technology, readily renders its product but conceals the device that allows it to do so. The device is something of a mystery as the consumer is more than likely completely unaware of the manner in which the product is attained. When I attend a music concert I am aware that the stage had to be prepared, instruments brought in, lighting adjusted, curtains raised, in short that it is production. Not so with the music device as the science of sound recording and reproduction, the manufacturing processes, and the distribution system that brought the device to me are nowhere to be found. The device itself (in this case, the mp3 player) does not reveal them.

It strikes me that the human body follows the device paradigm, that dance technique capitalizes on this and, in doing so, has the capacity to bring awareness of the device into consciousness. Indeed, I believe that it is at the root of certain aesthetic properties that

characterizes quality dancing. Let me explain.

The body is a medium that efficiently delivers desired ends but does so in a device-like fashion. When it is functioning correctly, my body moves me in space and allows me to procure the goods that I desire. However, speaking phenomenologically, the physiological mechanisms that make this possible are never available to consciousness. I rely on an expert such as a physician or anatomist to explain my corporeal mechanisms just as I rely on an engineer to explain the mechanisms of the mp3 player to me. Such expertise is needed as the device in question does not reveal its mechanisms. Only the device's product is revealed.<sup>15</sup>

Of course, it must be pointed out that one can become aware of the device when it does not procure the end that it is designed to. As Martin Heidegger succinctly describes, in such instances, the device becomes a dumb thing, that is, an object that hinders one's desire to realize a specific end.<sup>16</sup> A broken mp3 player and a broken hand are akin in that they cannot perform the functions that they normally do and because this disruption brings its "thingness" to the fore. In performing its function the device recedes into the background (and the product is in the foreground) but when they do not perform their functions they dominate the foreground. These observations strengthen my point about the affinities between the human body and the modern technological device. Indeed, both the body and the technological device stand out in experience when they malfunction because they both normally recede into the background when they function correctly.<sup>17</sup>

Elsewhere, I have discussed the manner in which performers master the body and render it an aesthetically expressive instrument.<sup>18</sup> This entails developing a bodily economy that allows the performer to increase the significance of movement. This is contingent upon the body's capacity to form and maintain motor schemata that are absorbed into the overall body schema. I

would like to continue that line of thought here by considering what bearing this and the device paradigm have on an aesthetic property commonly associated with dance, namely, grace.

In *The Aesthetics of Movement*, Paul Souriau discusses the aesthetic property of grace in terms of the economy of movement.<sup>19</sup> The perception of grace can be experienced by either the performer or the observer when physical and physiological ease of movement is expressed. More specifically, there are certain conditions that must be met if movement is to appear graceful. Souriau observes that movement must conform with personal habits for habit is the physiological force that makes the economy of energy possible.<sup>20</sup> As John Dewey observed, habits are active means that allow individuals to intelligently act in a simultaneously stable and precarious environment. That is, habits mediate experience by allowing the individual to appropriately and efficiently respond to certain environmental conditions.<sup>21</sup> As mentioned, the mastery of technique is rooted in the development of motor schemata and such mastery facilitates controlled movement that may be perceived as graceful.

Second, Souriau observes that graceful movement is characterized by an absence of visible effort.<sup>22</sup> Movement that demands the expenditure of a great deal of energy seems to be performed effortlessly. This is rooted in physical conditioning as effortlessness is betrayed by gasps for air, excessive sweating, or a flushed appearance. It is also rooted in the corporeal economy made possible by schemata and the body schema more generally, as movement that has been mastered and refined through practice is easier to perform.

Third, Souriau observes that graceful movement is characterized by a lack of noise.<sup>23</sup> This is intertwined with the apparent lightness that is necessary for grace (as heavy movement tends to produce thudding stomps, etc.). Interestingly, Souriau sees a connection between sound and the expenditure of energy. He observes that noise and friction are associated to the extent

that “the working of a machine which makes noise will seem painful, as if our ear perceives immediately the effort of its motion.” He continues, “Note, for example, the cracking of a knee that does not have enough sinew, or the shriek of an unoiled axle. Under such conditions, it is impossible for the movement to appear graceful.<sup>24</sup> One could continue by following the other details of graceful movement that Souriau describes (e.g. minimum resistance, freedom in rhythm, freedom in purpose, and prodigality in effort) however, I would instead like to consider what bearing this has on the foregoing analysis.

As discussed, the human body functions as a device. Further, dance technique itself is a technology that allows the body to expressively move in ways that often exceed the instrumental constraints that characterize day-to-day life. This technology builds upon the natural capacities of the body schema and makes possible the development and articulation of increasingly refined movement. Viewed this way, dance is a technology that has the capacity to transform a particular device, the human body, into an expressive instrument. Dance technique magnifies the body-as-device by adding a system of interrelated habits onto a physiological foundation. The body naturally functions in accord with the device paradigm and dance technique brings further complexity to the device thereby increasing its ability to produce a product—aesthetically significant movement.

Further, I would suggest that the experience of grace—by either the performer or the observer—is grounded in an awareness of the body-as-device that has been refined through acquisition of technique. Grace is intertwined with an economy of movement that is characteristic of a particular instantiation of the device paradigm. When observing effortless, quiet movement I am aware simultaneously aware of its physical difficulty and this seeming inconsistency leads me to an awareness of the device that is silently working in the

background.

The device will never be accessible to either the performer or the observer. It will always be something of a mystery since it lies within the body. The observer is likely aware that good dancers are necessarily hard workers, however, it is unclear how that work translates into graceful movement. Where exactly is the technique that the dancer masters? It is a collection of motor schemata that occupy a place within the body schema but, like physiological explanations of the body's instrumentality, such explanations cannot capture the first hand experience of embodiment. In the moment in which grace is perceived, the device is working below the surface, as it were.

Hence, contra the expressionists who scorn mechanical dancing and have concerns about technology writ large, the body is inherently technological in the sense that it, like modern technology, instantiates the device paradigm. Further, the aesthetic property of grace is contingent upon the mastery of technique which increases the complexity of the body-as-device and this points to the conclusion that all dancing is at the most fundamental level rooted in the device paradigm. Of course, the expressionist, can refine his position by suggesting that his concern centers on dancing that is *symbolic* of automated technology. The lock-step precision of the chorus line is disconcerting because it uses the human body to represent the precise movements of the machine. I have no qualms about this position since it draws on the fact that dance often utilizes symbolism in order to produce an aesthetic effect. However, it undercuts the worry about the body and technology as it is difficult to see how a representation of technological mechanism can have the adverse somatic and cultural effects that the expressionist is concerned about. This is not to say that symbolism carries no practical weight but it is to say that the position that draws on symbolism undercuts the position that the dancer-as-machine is a

troubling phenomenon since it suggests a conception of dancer-as-embodied symbol maker which, I believe, is quite positive in nature. Indeed, if I am right, then the “dancing machine” phenomena that troubles McCarren lies at the foundation of dance technique and dance aesthetics.

### III. A Possible Objection

The expressionist can point out that my discussion of the body-as-device was supported by the discussion of just one aesthetic property, that is, grace. That is, I have focused on an aesthetic property that has been prized and cultivated by traditional dance aesthetics and it is one that modernism does not espouse. If we reject grace and the traditional techniques that ground it, then we are left with the body in an unalloyed form and perhaps it is this body that escapes the body-as-device or “dancing machine” paradigm. Further, it may be the case that dancing avoids this paradigm is more authentic than traditional dancing in that it honors the body-as-body.

I have two responses to this criticism. If I am right, then grace is an aesthetic property that is grounded in the capacities of the human body as well as the techniques that develop those capacities. For the reason, it cannot be easily regarded as an arbitrary cultural value that can be dismissed.<sup>25</sup> This is not to say that grace is or should be the only aesthetic property characteristic of dance (for that would be a sad state of affairs) but it is to say that good dancing will utilize it at times since it discloses something important about the dance medium—the human body.

The second response concerns the move away from technique toward the body as a raw medium of expression. Dancing that shuns technique will avoid the articulation of the body-as-device paradigm however, I question just how aesthetically valuable this can be. As John Dewey argued, technique renders raw expressive energy significant by channeling it into a form.<sup>26</sup> Indeed, one is threatened with meaninglessness when either expression is not tempered by form

or when form has no expression behind it. Aesthetic significance is produced by doing something with raw energy, that is, by developing it to the extent that it takes on meaning. Dancing without technique flirts with meaninglessness as the expressive energies that produce it are not guided to consumatory ends. Once we see or experience the body as dancing as a body and once that novelty wears off we are left wondering if something significant will happen. The unalloyed movement of energy threatens to become meaningless when it goes nowhere. Since I agree with Dewey that the essence of art is intertwined with the process of forming dancing that does not go this route will be limited.<sup>27</sup> On the other hand, dance techniques ideally work with the expressive and physical capacities of the body, and produce aesthetic properties such as grace.

In conclusion, this essay has examined the intersection of dance history, the philosophy of technology, and dance aesthetics. It was argued that the shift to modernism was influenced by concerns about a technological society and, more specifically, an implicit belief that technology has negative consequences for society. However, Borgman's understanding of the device paradigm reveals that the body is a device that stands to be shaped by dance technique. Indeed, dance technique capitalizes on the body-as-device and allows for the perception of aesthetic properties such as grace. For this reason, all dancing is rooted in the device paradigm and as such the worry about dancing machines is unfounded.

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- 1 – Stanford: Stanford University Press, 2003. This book was reviewed by Francis Raven in the *Journal of Aesthetics and Art Criticism* 63:4 (Fall, 2005), 395-397.
- 2 – Ibid., 67-70.
- 3 – In *My Life* (New York: Liveright, 1995) Duncan writes “I spent long days and nights in the studio seeking that dance which might be the divine expression of the human spirit through the medium of the body’s movement. For hours I would stand quite still, my hands folded between my breasts, covering the solar plexus ... I was seeking and finally discovered the central spring of all movement, the crater of motor power, the unity from which all diversities of movement are born” (58).
- 4 – See Chapter Four: “Ballets Without Bodies” (99-128).
- 5 – McCarren suggests that the extreme form of mechanical dancing can be found in the chorus line for the line is characterized by extremely precise movement that tends to produce a sense of automation. See McCarren (2003), 142-146.
- 6 – As will be discussed in a moment, construing technique and expression as antithetical phenomena is inherently problematic. This was apparent in the early 1900’s as dancers and other artists were aware of and greatly appreciate Asian traditions that emphasize technique and say little or nothing about personal expression. McCarren discusses Yeats’ appreciation of Japanese theatre and dance and, more specifically, his appreciation of the dance Michio Ito. See McCarren (2003), 134-138.
- 7 – McCarren discusses motion economy in *ibid.*, 144-148. I discuss this in “Performative Somaesthetics: Principles and Scope”, *Journal of Aesthetic Education* 40:4 (Winter 2006), 104-117.
- 8 – See Ellul’s *The Technological Society* (John Wilkinson, trans.), (New York: Vintage, 1964). Also see Lewis Mumford, *Technics and Civilization* (New York: Harcourt, Brace, and Company, 1934).
- 9 – New York: Harper and Brothers, 1911. For Ellul’s comments see (1964), 133, 264, 350.
- 10 – McCarren (2003), 130. Also see Taylor (1911), 25.
- 11 – One could argue that I am using the term “technique” disingenuously since dance technique has little or nothing to do with the techniques performed by the machine. However, if one follows Ellul’s definition of technique (as any rational method that emphasizes absolute efficiency), then dance technique has affinities with the machine. That is, dance technique, like the technique developed by Taylor, transforms the body into a medium that can efficiently and predictably produce a certain product. Further, the methods of developing

dance technique are rational in that they entail a trial-and-error process that culminates in a desired end. For Ellul on the definition of technique see (1964), 1-60.

12 – For Ellul on technical automatism see (1964), 79-111.

13 – Chicago: University of Chicago Press, 1987, 40-67. For an excellent overview of Borgman's work see Pieter Tijmes, "Albert Borgmann: Technology and the Character of Everyday Life" in Hans Achterhuis (ed.) and Robert P. Crease (trans.), *American Philosophy of Technology: The Empirical Turn* (Bloomington: Indiana University Press, 2001).

14 – Borgmann (1987), 57-67.

15 – I have in mind here Maurice Merleau-Ponty's account of the lived body presented in *Phenomenology of Perception*, Colin Smith, trans., (New York: The Humanities Press, 1962), 226-260.

16 – *Being and Time*, John Macquarrie and Edward Robinson, trans., (New York: Harper and Row, 1962), 95-107.

17 – Of course, the body functions as a device but is ontologically distinct from the technological devices made by human beings. The broken hand stands out in experience since it cannot perform its normal functions (grasping, gesturing, etc.) but is distinct from, say, a broken computer, since it constitutes a painful injury. This does not undermine the association of the body and the device paradigm however, since experiences of pain and fatigue also demonstrate the manner in which the body, when functioning well, effortlessly brings about a desired product.

18 – See my "The Image of the Performing Body" forthcoming in the *Journal of Aesthetic Education* (Winter 2008).

19 – *The Aesthetics of Movement* (Amherst: The University of Massachusetts Press, 1983), 79-96.

20 – Ibid., 80.

21 – *Human Nature and Conduct* (New York: Dover, 2002), p. 25.

22 – Souriau (1983), 84.

23 – Ibid., 84-85.

24 – Ibid., 84.

- 25 – It should be mentioned that grace is appreciated cross-culturally. For example, see Eugenio Barba and Nicola Savarese, *A Dictionary of Theatre Anthropology* (New York: Routledge, 1991), 8-22, 74-94.
- 26 – See *Art as Experience* (New York: Perigree 1934), 58-81.
- 27 – For more on this see my “The Violent Aesthetic: A Reconsideration of Transgressive Body Art” in *Journal of Speculative Philosophy* 20:2 (2006), 85-92.