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From the fairground sensorium to the digitalization of bodily entertainment: commercializing multisensory entertainments involving the bodily senses

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ABSTRACT

Entertaining the bodily senses by means of the deliberate stimulation of the proprioceptive, kinesthetic, and/or vestibular senses/systems has long been the focus of many of the (mechanical) rides found on the fairground and at the theme park. Although the history of kinaesthetic thrills and proprioceptive pleasures stretches back to the turn of the 20th Century, and, despite the growing interest in digital stimulation (e.g. virtual reality, the Metaverse, etc.), little progress has, as yet, been made in terms of effectively stimulating the bodily senses digitally (e.g. in the home environment) as part of a commoditization of multisensory entertainments. Indeed, it may simply not be possible to digitally elicit the total immersion that one experiences in a well-designed theme-park/fairground ride. Nevertheless, approaching that goal will likely require a recognition of the fundamentally multisensory nature of the experience delivered by the unique sensorium that one finds on the working fairground. And, as we will see later, the contribution of the non-bodily senses is something that is often neglected when researchers have studied such bodily sensations in the laboratory, or else foregrounded them in an artistic, setting.

KEYWORDS

Proprioception; kinesthesia; vestibular; fairground; multisensory; sensorium; theme park

Introduction

The bodily senses have largely been neglected by multisensory researchers in recent decades (see Calvert, Spence, and Stein 2004).¹ Here, I am referring specifically to proprioception, kinesthesia, and the stimulation of the vestibular sense. Proprioception is defined as the feeling of the position of the limbs in space (Walsh et al. 2011); kinesthesia, as the feeling of the body in motion (Clark and Horch 1986), and vestibular sensations, as relating to the orientation of the body in space (Gulden and Grüsser 1998). And yet, as we will see later, the bodily entertainments that were provided on the fairground are fundamentally influenced by whatever stimulation, be it deliberate or incidental, is provided by the other senses (e.g. by sights, sounds, and even smells of the sensory overload, or phantasmagoria, that is the fairground sensorium). At the outset, it is worth stressing how those activities/entertainments that involve kinaesthetic, proprioceptive, and/or vestibular sensations normally also happen to stimulate the skin

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senses (often referred to as somatosensation or passive touch). However, discussion of the rich literature on the use of specifically tactile (or somatosensory) stimulation in an entertainment setting (which, by contrast, can, and frequently does, occur in the absence of the stimulation of any of the other bodily senses) has been thoroughly covered elsewhere (e.g. see Gallace and Spence 2014; Parisi 2018; Paterson 2007, 2021), and so will only be dealt with briefly here.

Commercial and ludic aspects of bodily stimulation

The early commercial interest in the stimulation of the bodily, as opposed to merely somatosensory, senses can be traced back to the emergence of a variety of innovative fairground rides and attractions during the 19th century. Indeed, according to Brocklehurst (2014), it was at the turn of the 19th Century that the traditional commercial function of fairs started to be replaced (or, initially at least, augmented) by a focus on fairground-based entertainments instead. Incidentally, this was apparently also the time when the circus emerged as a form of popular entertainment (cf. Jackson 2019). Meanwhile, the first of the internationally-known theme parks emerged in North America in the opening years of the 20th century (Mack 2014). Of course, in a purely ludic (i.e. noncommercial) context, children's playgrounds have likely contained slides, swings, and roundabouts (otherwise known as merry-go-rounds) etc. for much longer. That being said, it has been claimed that the playground slide was invented in the UK by Charles Wicksteed, when he installed a slide in Wicksteed Park, Kettering, Northamptonshire in 1922 (Newsround 2012). At the same time, however, earlier patents also exist for water slide designs, and slides were being constructed in North America at the start of the 1900s.² A key element of many playgrounds is a swing. Intriguingly, the Minoan culture created one of the oldest pieces of art featuring a swing somewhere between 1450 and 1300 B.C., leading some to suggest that they should be created with having developed this particular form of bodily entertainment (Cucuzza 2013). Meanwhile, the first reference to a merry-go-round comes from a Byzantine bas-relief (c. 500 CE), showing people riding in baskets around a central maypole (Ellis n.d.). As such, one might say that, in one form or another, kinaesthetic entertainments have been a key element of children's play(-grounds) for a very long time. However, the commercialization of bodily sensations in a multisensory context can, I think, be traced back to the fairground rides that emerged during the 19th Century (cf. Mohun 2001). And, as we will see later, the stimulation of the bodily senses in an entertainment setting (first on the fairground, and thereafter in the theme park) cannot really be comprehended from a purely unimodal, or better-said, body-centered, perspective.

Theme park rides and the shock of modernity

According to Sally Lynn (Lynn 2006), the advent of the mechanical rides that grew rapidly in popularity in the closing decades of the 19th century, especially in North American theme parts such as Coney Island's Luna Park (which first opened its doors in 1903; Pursell 2013; though note that the opening of the modern amusement park in the seaside resort of Coney Island actually took place in 1895; Weinstein 1992),³ can be considered as a response to, or result of, the psychic shock of modernity. According to Pursell (2013),

the era of mechanical rides on Coney Island actually began in the 1870s with a carousel and, in 1884, an early version of a roller coaster. The first Ferris Wheel opened on Coney Island in 1894.

Lynn (2006, 295) writes that “humans have always experienced the world through their senses.” She continues “What I aim to explore, however, is the ways in which Coney Island’s enclosed amusement parks capitalized on sensorial experience and escalated it to monumental proportions, transformed spectacle as total-body sensations and invited thrill seekers to experience amusement with and through their entire bodies.” Lynn argues that the link to the shock of modernity, and to the overload of sensations offered by many amusement park rides, can be considered the very essence of modern experience. Lynn’s focus is very much on the start of the 20th Century. Intriguingly, she repeatedly mentions the ‘phantasmagoria’⁴ and the sensory overload that such theme parks offered to their visitors. As Denison (1905, pp. 565–566) noted more than a century ago, the patron’s senses needed to work overtime in order to try and keep up with all of the sensations on offer in the context of the more successful theme parks. As we will see below, the stimulation of the bodily senses in the context of the fairground rarely occurs in the absence of stimulation of the other senses, and it is the total multisensory sensorium (and the associated sensory overload) that has, in some sense, been commoditized in the fairground/theme park.

Lynn (2006, pp. 302–303) notes how, in theme parks: “Pleasure seekers choose to be out of control; they choose to have their bodies catapulted through space in highly controlled though unexpected ways. In other words, they knew that something would happen, but they could not predict, nor could they replicate, their experience of the ride. Mechanical amusements produced lived, in the moment experiences and, in turn, sensuous beings, a precondition for one’s humanity.” Lynn positions the proprioceptive/kinaesthetic pleasures/thrills offered by those who rode the amusement park rides as a phenomenon of the post-industrial revolution (Lynn 2006, 303). However, it is important to note that many traveling fairgrounds were already delivering just such an abundance of sensations, not to mention the sensation of controlled physical risk (what historian Arwen Mohun 2001, once referred to as the “commodification of risk”), several decades prior to the invention of the theme park. Buck-Morss (1992; building on the earlier theorizing of those such as Walter Benjamin and Georg Simmel, e.g. see; Benjamin, 2008; Brill, 2010; Simmel, 1903) suggested that the technologically-altered environment (e.g. as offered by the fairground/theme park) exposes the human sensorium to physical shocks that have their correspondence in psychic shock (see also Nye 1981, 65). Rabinovitz (2001) also highlights the simulated danger so often provided by mechanical attractions, rides that provide a tenuous relationship between the perception of danger and the assurance of safety (see also DeAngelis 1997; Mohun 2001). This links to what DeAngelis (1997) once so memorably described as ‘orchestrated (dis)orientation’.

The shock of the modern: unusual bodily sensations

In his book, *The Railway Journey*, Schivelbusch (2014) discusses the bodily and sensory shock of the modern at length, specifically in relation to the arrival of the steam-powered public railway. The latter invention provided passengers with a host of novel sensations in the years after 1825, when the first 25-mile stretch was opened between Stockton and

Darlington in County Durham, England. Schivelbusch draws attention to the concern amongst many medics at the time of what detrimental impact these new sensations (both bodily vibrations and rapidly-changing scenes, as viewed through the window) might have on the general public. Meanwhile, the first public elevator (intriguingly described in the initial patent as a “vertical railway”; Prisco 2019) was introduced in 1857, at the Manhattan Department store E. W. Haughtwhat & Company in New York. However, it was not a success, closing some three years later (see Bernard 2014; Prisco 2019). In this case, it may well have been the confined nature of the space (possibly triggering claustrophobia), not to mention the hidden nature of the underlying elevating mechanism, that made the public nervous of this new form of vertical movement and, especially relevant here, the associated unusual kinaesthetic/vestibular sensations (e.g. Bernard 2014; cf. Schivelbusch 2014). Though little commented on nowadays, Harrods department store opened London’s first “moving staircase” (made from leather) in 1898.⁵ Staff were situated at the top offering cognac to the male customers and smelling salts to the women who “were overcome with joy” by this presumably new form of kinaesthetic sensation (Howard 2021).⁶

These various example hopefully help to highlight how the introduction of the general public to these unusual/unfamiliar forms of bodily sensation was not something that was restricted to either the fairground or thereafter to the theme park. That is, it occurred in parallel in other aspects of daily life, at least for those living in commercial centers. Nevertheless, in hindsight, it may be difficult to get a good sense of how the onslaught of novel bodily sensations were responded to by those who were around at the time. What is more, it is important to stress how there are both physiological and social/cultural elements to the shock of the modern that the arrival of these novel bodily sensations (provided by new technologies) provoked (cf. Asendorf 1993; Paterson 2021). Indeed, such novel forms of bodily experience were actually but one of the forms of shock affecting the populace (see Armstrong 2000, for the parallel notion of shell shock – another feature of the modern era that emerged in the late 19th Century). Armstrong helpfully distinguishes between one kind of shock that is related to collision, thrills, and speed. This, he contrasts with the emotional shock of trauma (e.g. in the case of shell shock).

Entertaining the bodily senses: early development and commercialization on the fairground

Lynn (2006, 306) writes of: “mechanical amusements that celebrated kineticism, speed and the machine.” Indeed, the shift to more dynamic higher-powered rides was made possible by the introduction of the steam-powered traction engine. The introduction of the steam carousel in the early years of the 20th Century saw the rise of the dynamic (and increasingly unpredictable) high-powered rides that now dominate (Brocklehurst 2014).⁷ The shift from steam-driven to electrically-powered rides took place in the opening decades of the 20th Century.⁸ Thus, one might perhaps want to suggest that the transition from the proprioceptive pleasures to the kinaesthetic thrills on offer on the fairground occurred incrementally. Indeed, look back over the 19th Century and one sees the gradual development of increasingly exciting (and eventually thrilling) fairground rides.

One of the aims of a number of such rides was to deliver a sense of vertigo; Caillois (1961) describes the latter as play “designed to distort, mislead, and stimulate confusion, anxiety, nausea, and momentary terror, quickly transformed back into order, at its conclusion.” This is what Slosson (1904, 136–137), calls “delightful dizziness.” However, as Mohun (2001, 300) notes, the danger with going too far in the design of ever-more thrilling and unpredictable rides was that “Violent, high-speed turns left patrons more terrified or nauseous than thrilled.”

The carousel (otherwise known as the Gallopers, or the Caliopy in the US) provides a widely-recognized symbol of the funfair and has a special place in the collective consciousness. Its origins can be traced back to the “Jeu de bague,” 18th century merry-go-rounds that were inspired by medieval jousting (see Anon 2017). Carousels started to appear as fairground attractions in the second half of the 19th century, powered by men or donkeys prior to the invention of steam and electric engines. In the US, the first patent for a carousel was awarded to a Brooklyn-based business in 1850 (although merry-go-rounds were probably present in the country for several years before this). Indeed, according to Pursell (2013), the first mention of a fly horse carousel in the US was in New England in 1800 (see also Fried 1977). Charles Looff is credited with carving (and thus building) his first carousel in 1876, which was to become the first carousel on Coney Island (see Thompson n.d.). As an article from the *National Fairground and Circus Archive* (Anon n.d.-a) notes: “Eventually the application of steam power to fairground rides changed the face of the fairground and the possibilities of the rides. The first evidence of a steam powered ride dates from 1861 when Thomas Bradshaw presented his merry-go-round at the old Pot Market in Bolton on New Year’s Day.” Meanwhile, in 1873, Frederick Savage of King’s Lynn started making a range of steam-powered fairground roundabouts including the Velocipede (a bicycle roundabout), Gallopers, Racing Peacocks, Jumping Cats, Flying Pigs, Sea-on-Land, Tunnel Railways and the Switchback.

One of the other popular kinaesthetic/vestibular experiences on the fairground was provided by a ride on a gondola or the steam yachts. The blurb for one particular volume suggests that: “Dating from William Cartwright and Henry Cracknell’s Patent of 1888 the Steam Yacht, as the ride was to become known, was the first ‘white knuckle’ thrill ride to be seen on travelling fairgrounds.” According to the National Fairground Archive: “Savages also began building Steam Yachts, using Cartwright’s improved patent of 1894. Their first set was built for John Collins. The Yachts were often given the names of the latest liners: Lusitania and Mauretania, Cymric and Celtic, although Olympia and Titanic proved short lived names on John Collins’ set.” (Anon n.d.-a).

In 1893, the world’s first Ferris Wheel (264 feet high) was created for the World’s Columbian Exposition held in 1893 in Chicago (Ho 2016; Searles 1893).⁹ The scale of the wheel in this case designed to compete with the recently-built Eiffel Tower in Paris (completed in 1889). Moving forward a decade, the first recorded mention of the Helter Skelter¹⁰ appears in relation to the Hull Fair of 1905 in the Hull Daily Mail (Anon 1905). Interestingly, though, the newspaper article mentions that the all-new attraction came from Coney Island (where one of the attractions was indeed a slide). Nevertheless, in its iconic lighthouse form, this type of kinaesthetic entertainment was first recorded as being offered to the United Kingdom at Hull Fair in October 1905.¹¹

According to the National Fairground Archive: “The old serene pace set by Gallopers and Switchbacks was taken over by the new trend for speed which became the essence of new rides. The perfect example of this new fast thrill ride of the 1930s was the Moonrocket ... The illusion of speed was increased by having the whole centre dome, including a figure of Popeye astride a small rocket, rotate the opposite way to the cars.” (Anon n.d.-a).¹² This just one example of the way in which bodily sensations were cleverly augmented by the non-bodily senses on the fairground. Mohun (2001, 301) also notes how the arrival of the motor car led to an increased desire for speed on the rides/roller coasters during the 1920s. Notice here the use of visual cues to help enhance the “multi-sensory” bodily experience. Indeed, sensory incongruity was an important component of the success of a number of fairground rides, including the “haunted swing” illusion/ride mentioned by Wood (1895) at the Midwinter Fair in San Francisco (see Figure 1).

Entertaining the bodily senses

When thinking about the development of the commercialization of bodily sensations/entertainment, it is worth considering the fact that the range of kinds of stimulation available to those operating in this area (i.e. wanting to stimulate/entertain the bodily senses) was essentially fairly limited. By-and-large, the options were restricted to rotation (delivering centrifugal forces), acceleration, and the sensation of speed. That being said, and as we have seen already, as the years went by, there was a shift from predictable human/animal-powered rotation (as in the carousel/merry-go-round type rides) to more steam-powered, and thereafter to electrically-driven rides (see Pursell 2013). This transition offered the opportunity for faster rides.¹³ Over time, there would also seem to have been a shift from more to less predictable patterns of movement, and for different axes of rotation as well as for the combination of different axes of rotation and of elevation in rides such as, for example, the Waltzer. With predictable movement that increased in speed there was, therefore, a gradual shift from the commercialization of those sensations from those that might be classed as “pleasant” to those that were more naturally described as “thrilling.” The experience of shock mentioned by both Rabinovitz (2001) and Lynn (2006) is presumably linked more to unpredictable patterns of movement and the associated elements of surprise.¹⁴

Multisensory stimulation/overload at the fairground/theme park

While many of the rides on the fairground undoubtedly provided an effective means of stimulating the patrons’ bodily senses,¹⁵ the visitor’s experience was typically also influenced by the stimulation of their other senses, including those related to the rides themselves, such as the sound of their operation (or creaking, Mohun 2001), or the petrified screams of other patrons. The entertainment that became increasingly commodified was very much multisensory in nature, stretching well beyond the “mere” stimulation of the bodily senses to incorporate sight, sound, and even smell. Nye (1981, 72) draws attention to the importance of the sonic element to the total multisensory experience of theme park rides. At one point, Nye writes that: “though engineers are quite capable of designing relatively noiseless cars, they know that the sound of the ride is an integral part of it, and that the rattles, squeaks, and thunderous roar of the wheels

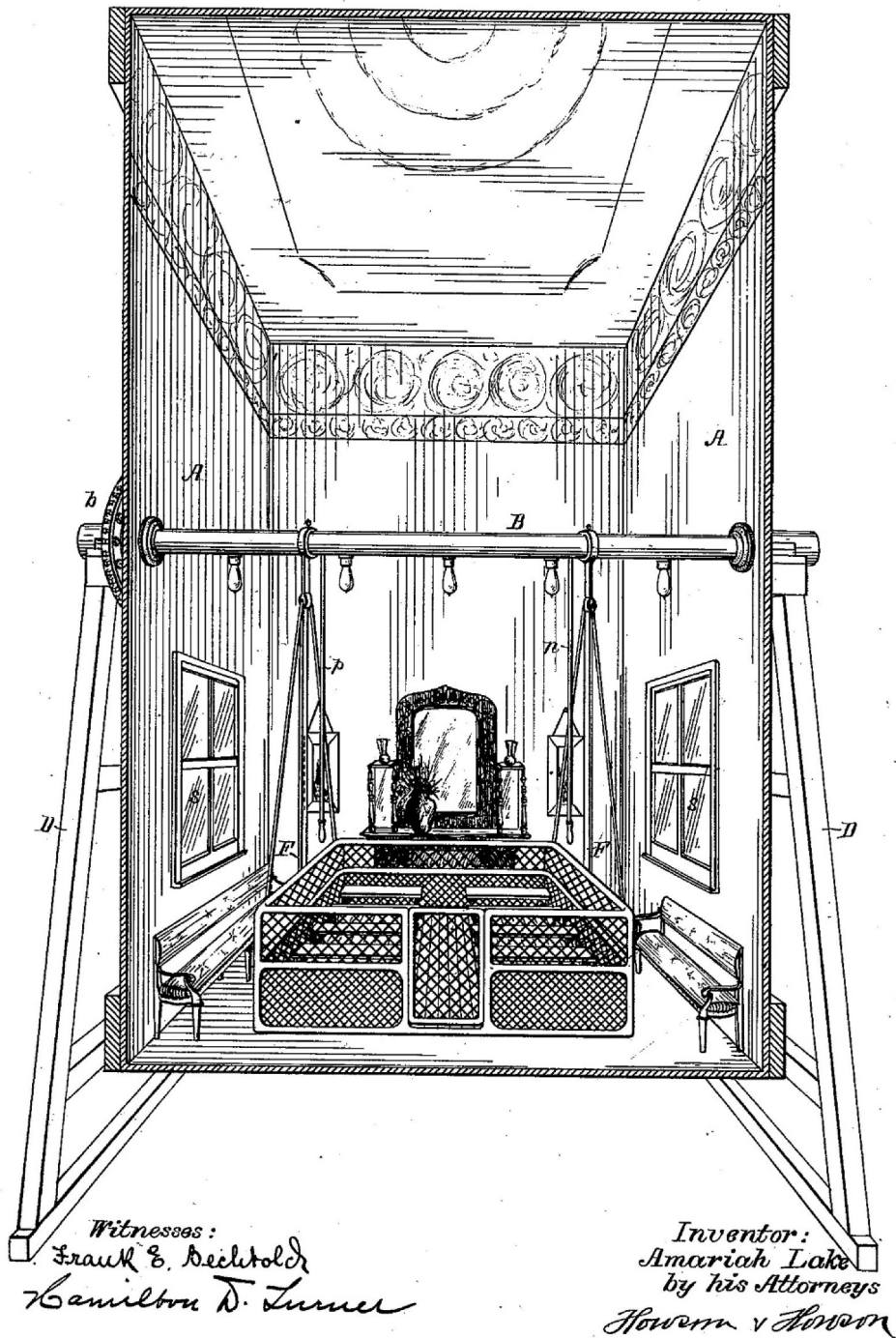


Figure 1. Illustration of the “haunted swing” illusion, a popular fairground ride at the end of the 19th Century (Wood 1895). Notice how the stimulation of the bodily senses (on the swing) are augmented by the rotation of the room in which the swing is located. Thus, in this multisensory illusion, stimulation of the vestibular and kinaesthetic (bodily) senses are but one element in a total multi-sensory experience that also fundamentally depends for its effectiveness on the stimulation of the visual sense as well.

impart a sense of speed and danger that adds immeasurably to the total effect" (Nye 1981, 72).¹⁶ Meanwhile, when describing the early roller coaster rides, Mohun (2001, 299) suggests that the "slow, rhythmic 'clunk, clunk, clunk' of the car moving over the teeth of the dog added to the psychological suspense of waiting for the fast part of the ride to begin."¹⁷

One should not forget how loud music was also an integral part of many rides. So, for instance, the steam yachts that were mentioned earlier typically came in pairs, with an organ playing sheet music in the middle (see Scrivens and Smith 2006). Similarly, other rides such as the dodgems¹⁸ and waltzer-type rides would typically have been experienced to the backdrop of loud music. The Victorian fairground ride, known as the Cake Walk, which involved walking up and down two gangways while the floor tiles moved unpredictably underfoot, was also accompanied by loud music and first appeared in 1895 (named after a dance that was popular at the time; Anon (2007); <http://www.carouselroundabouts.co.uk/cakewalk.html>). In this case, note the bodily movement of the patron was sometimes intimately linked to the speed of the music. According to Anon (2007): "The mechanism consisted of undulating bridges and gangways driven by cranks. The driving belt was often connected to the organ which meant that a speed up of the music meant a speed up of the ride and a speed up of the riders jerking on the bridges."

Even during the 1700s, when carousels first took on an entertainment function, live bands would often play music while the merry-go-rounds were spinning (Thompson n.d.; cf. Anon 2017).¹⁹ Pursell (2013, 80) also mentions how the rotation of carousels would often be accompanied by the sound of band organ music in the second half of the 20th Century. Hence, it can be argued that music, not to mention the screams of those on the big rides (and the sounds associated with the very operation of the machinery) would have provided a particularly effective means of modulating the patron's mood (McGuire n.d.). That being said, and despite its undoubted importance to the total experience, the auditory component of the multisensory bodily experience has typically been neglected by the psychologists who have studied such unusual bodily sensations/illusions in the confines of the laboratory setting.²⁰

However, beyond the sensations provided by the rides themselves, it is noticeable how many commentators also mention the cornucopia of food-related sensations, not to mention other smells, that impinged on the visitor's consciousness (see also Register 2001). As Kasson (1978, 49) acknowledges: "photographs give some indication of this [environmental phantasmagoria], but they alone cannot do it justice." "Instead he invites the reader to envision the total-body experience of pleasure seekers at Coney Island: We must try to imagine the smells of circus animals, the taste of hot dogs, beer and seafood, the jostle of surrounding revelers, the speed and jolts of amusement rides, and, what especially impressed observers, the din of barkers, brass bands, roller coasters, merry-go-rounds, shooting galleries . . . above all, the shouts and laughter of the crowd itself." (Lynn 2006, 304).

While sensory history is undoubtedly becoming increasingly popular (e.g. see Smith 2007a, 2007b), it is worth noting that people's memories/speculation concerning the particularities of the multisensory environment offered by the fairground/theme park would appear to differ between visitors and travelers or traveling showmen themselves (Stephenson 2008), and also as a function of whether one is talking about a North

American theme park or State Fair (according to Nye 1981, the first agricultural fair in North America was probably held at Georgetown, D.C., in 1809), a British fairground, or a circus that is being described. The sensorium of the fairground should not, in other words, be considered as a unitary construct. Furthermore, it is noticeable how the sensory memories of those who lived and worked on the fairground does not necessary always coincide with those of the patrons who were there simply to enjoy the rides and all the fun of the fair. So, for instance, according to a report that appeared on the BBC News website, one individual who formerly traveled with the shows in the UK is described as follows: “Miller says that his memories of the sights and smells of the fair are not of burnt sugar candy floss, flashing lights and loud music. Instead it is the smell of diesel, the rumble of a generator and the warm light in the window of a wagon ‘that guides you in after closing time.’”²¹ Indeed, your author’s father’s abiding memory of growing-up on the traveling fairground on the North of England circuit was the incessant loud music while the fair was open to the public. It is also worth remembering that people would quite possibly have perceived/responded to a given pattern of (multi-)sensory stimulation, including novel bodily sensations, quite differently then than they do now (e.g. Howard 2021; Lynn 2006; Schivelbusch 2014).

The frequent reference to the various extraneous sensations (Anon n.d.-a; Lynn 2006; McGuire n.d.) seems particular to the experience of the fairground/theme park, suggesting, that they made something of a lasting impression on the patrons who visited them. This perhaps hints at the total nature of the (multisensory) experience, no matter whether those other non-bodily sensations were, in any meaningful way, associated with the ride, or attraction, or not. One of the points that emerges from this review of the literature, therefore, is the importance of the total multisensory milieu, or sensorium (sometimes described as a phantasmagoria; Kasson 1978; Lynn 2006), to the patrons’ experience of the fairground/amusement park. While some describe the sensorium of the fairground when open to the public as a “phantasmagoria,” others have referred to it as an “industrial saturnalia” instead (Pursell, 2013). However, whatever the terminology used, what the various commentators would all seem to agree on is the sensory overload/overstimulation (Lynn 2006) that left such a lasting impression on so many patrons (King 1981). Speculatively, one might perhaps be tempted to think of this as the “total entertainment experience,” as in some sense paralleling Wagner and others’ interest in the “total work of art” or *gesamtkunstwerk* (e.g. Joe and Gilman 2010; Nye 1981; Smith 2007).²²

It is, though, unclear as to whether there is a meaningful relationship between the seemingly overlapping striving for multisensoriality in both high and low (or popular) culture. While it might merely be coincidental, there is perhaps a sense that as the stimulation of the visual and/or audiovisual senses reach their limit, in terms of novelty or entertainment opportunity (or as the paying public become bored with the same old thing), that the natural response is to strive for a more engaging/more multisensory possibilities, be it in the world of high culture, or in the world of low/popular culture, as focused on here (see also Heilig 1955/1992; Hutmacher 2019; Spence 2020a). Specifically in the context of the fairground, one might wonder whether it is mere coincidence that the decline in popularity of Dr. Pepper’s Ghost, and other primarily visual forms of entertainment (such as the diorama or panorama; see Mair 2012) in the latter decades

of the 19th Century occurred at more or less the same time as fairground rides (and the moving picture) started to become more common/popular (see Spence [submitted-b](#), on this theme).

On the digitization of immersive bodily experiences

One element of the “best” theme-park/fairground rides is the total immersion that such attractions so often elicit (cf. McGuire [n.d.](#)). Just take the following description of a ride experienced by Conniff (1989, 84–85): “A sharp, wincing intake of breath ... and the feeling of innards popping up like a parachute in one’s rib cage. My hair flew back, and my eyes peeled wide and filled with tears, a product of the 60-mph wind and also of self-pity. My teeth clenched and my knuckles locked bone-white around the lap bar. The train plunged into a short, hell-rattling tunnel, whipped around a sharp turn in the dark and roared up another hill. Scenery stuttered by like a film getting snagged in the gate of the projector. Everything veered out of control and it was clear that I was about to die.”²³ It is interesting to consider, in passing, how difficult it is to deliver/imitate the artistic/entertainment component of bodily sensations in the present era using digital technology/VR (Gallace et al. 2012; Gallace and Spence 2014). The closest may be the motion simulators, but they clearly only provide a subset of the range (of kinds) of experiences that one might expect to have at the fairground or theme park, and are, furthermore, generally too bulky/costly for individual/home use (though see Crouch and Damjanov 2021).

The pleasures of bodily sensation: Contemporary interest in kinaesthetic/proprioceptive art

While once the preserve of the fairground/theme park rides and attractions, including everything from the helter skelter to the dodgems (e.g. Lukas 2008; Lynn 2006), the notion that “proprioceptive pleasures” and ‘kinesthetic thrills’²⁴ may also have artistic merit has recently been brought to the fore by artists such as Carsten Höller (with his Test Site; at the Tate Modern’s Turbine Hall; see Carsten Höller: Interview [n.d.](#)), as well as by works by the Brazilian conceptual artist Cildo Meireles (see <https://www.tate.org.uk/art/artists/cildo-meireles-6633/who-is-cildo-meireles>). Carsten Höller has been working with slides since 1988, and was quoted in one interview as saying that: “A slide is a sculpture that you can travel inside. However, it would be a mistake to think that you have to use the slide to make sense of it. Looking at the work from the outside is a different but equally valid experience, just as one might contemplate *The Endless Column* 1938 by Constantin Brancusi. From an architectural and practical perspective, the slides are one of the building’s means of transporting people, equivalent to the escalators, elevators or stairs. Slides deliver people quickly, safely and elegantly to their destinations, they’re inexpensive to construct and energy-efficient. They’re also a device for experiencing an emotional state that is a unique condition somewhere between delight and madness.”²⁵ The interviewer, Vincent Honoré, notes that the slides play on the double meaning of the word “transported,” both physical and emotional. Intriguingly, Carsten Höller often invites the public to interact physically with his work (thus engaging their bodily senses), as in his *Flying Machine* 1996, and when encouraging people to ride on his *Mirror Carousel* 2005 (as it so happens, another adapted fairground ride).

Based on the suggestion that the commoditization of experience on the fairground has, over the last century or so, become increasingly (multi-)sensory, then it is worth drawing attention to the fact that the kinaesthetic art exhibits just mentioned (what some have been minded to call proprioceptive art) would singularly seem to neglect, intentionally or otherwise the other non-bodily senses (see Spence [submitted-a](#), on this point). That is, the screams, smells, and jostling of bodies are noticeable by the absence in such artistic installations.

Foregrounding the bodily senses in contemporary architectural practice

There has also been a growing interest in the foregrounding of the proprioceptive/vestibular-experience of the body in contemporary architectural practice. Just consider the recent craze for glass walkways and bridges (e.g. see Spence [2020b](#), for a review). Slides have also become an increasingly popular feature of innovative workplace design, apparently helping to relax stressed office workers by offering them the opportunity to have an unusual playful sensory experience (e.g. Bridge [2017](#); Erickson, [2012](#); Spence [2021](#); see also Todd [n.d.](#)).²⁶ While proprioceptive awareness typically co-occurs with tactile, kinaesthetic, and vestibular awareness/sensations, it is nevertheless intriguing to see the foregrounding of what have often been described by the scientists as essentially “silent senses” in an artistic/architectural context. Indeed, the growing interest in bodily sensations can perhaps be seen as fitting within broader trends in cognitive science around the theme of embodied cognition (Lopez, Halje, and Blanke [2008](#); Wilson [2002](#); see also Bermudez, Marcel, and Eilan [1995](#); Spence [submitted-a](#)). At the same time, however, it can also be framed in relation to the shift away from the visually dominant approach to architecture that was, until recently, so common (e.g. Pallasmaa [1994](#), [1996](#); Spence [2020c](#)).

Conclusions

In conclusion, the growing public interest in kinaesthetic/proprioceptive pleasures/thrills outlined here can be dated back, at least in part, to the emergence of mechanized fairground rides during the 19th Century. A relatively large number of the rides on the fairground during the 19th century (i.e. after the fair’s function had shifted away from its traditional commercial role to much more of a liminal form of public entertainment; Brocklehurst [2014](#); cf. Nye [1981](#)), involved the commercialization of the controlled, if often unpredictable, delivery of bodily sensations. While these were initially limited by the human/horse-drawn control of movement, steam-driven rides first started to appear on fairgrounds from the middle decades of the 19th Century (in 1861 in the UK to be precise), with electric rides starting to appear just after 1900 (Pursell [2013](#)).

While the historic development of such mechanical/electrical rides transitioned from the relatively mild/innocuous proprioceptive/kinaesthetic pleasures of the (man- or horse-powered) merry-go-round to the vestibular/kinaesthetic (“white knuckle”) thrills of the steam yachts (of the 1880s) and the roller coasters that emerged over the following decades (Pursell [2013](#)) this feels more like a quantitative, rather than necessarily a qualitative, change in bodily stimulation (see also Cartmell [1977](#); Conniff [1989](#); Neil

1981).²⁷ By this, I mean simply that the speeding-up, and increasingly unpredictable nature of, the patterns of movement that such rides provided occurred gradually, as the relevant technologies developed.

Ultimately, it is important to note that the commercialization of the bodily entertainments that was so effectively developed on the fairground during the 19th and 20th Centuries relies for its full “phantasmagorical” effect on sensory overload. That is, it involves not just the stimulation of the bodily senses (something that contemporary digital home entertainments singularly fail to achieve) but relies on a total multisensory engagement that is profoundly influenced by the simultaneous stimulation of sight, sound, and even the sense of smell.

Notes

1. Given that the bodily senses were such an active area of scientific study the end of the 19th and into the early 20th Centuries (Parisi 2018; Paterson 2021), it is an interesting question as to what this contemporary neglect should be put down to. One possibility here relates to the difficulty of controlling stimulation (see Gallace and Spence 2014, on this point), relative to the ease of delivering auditory and visual stimulation, say.
2. The first patent for a slide used as a fire escape was granted to James Kirker of Kentucky in 1893 (see Kirker 1893).
3. In the UK, Blackpool pleasure beach first opened its doors to the public in 1896, though initially it only included a few roundabouts. The first amusement park ride in Europe opened there in August 1904 with a ride going by the name of Sir Hiram Maxim’s Captive Flying Machine, a rotary swing ride (see <https://www.ctie.monash.edu/hargrave/maxim.html>), followed shortly thereafter by a Mill Chute water ride and a wooden rollercoaster. According to Nye (1981): The first modern roller coaster in North America opened at Coney Island in 1884. It has been suggested that the roller coaster may have developed from the public ice slides of early Russia (17th Century; Pursell 2013), which were apparently adapted by a Frenchman in 1804 to small wagons rolling downhill (see Nye 1981).
4. Note that the phantasmagoria was a popular fairground attraction in the UK in the late-19th century (cf. Barber 1989). In fact, your author’s great-great-grandfather regularly presented this particular visual illusion/entertainment around the Northern England fairground circuit during the 1880s (Anon., n.d.-b; Heard 2002; “Professor Randall Williams’ Great Ghost Show”, 1881).
5. A reviewer writing in the weekly magazine *The Sketch* suggested when that the conveyor belt was first unveiled, that it had a “delightful movement which is both exhilarating and fascinating”, and was devoid of “unpleasant thrills”.
6. In his 1910 science fiction novel, *The Sleeper Awakes*, H. G. Wells predicts a future London where a “moving pathway”, like the travellers seen in airports, allows pedestrians to navigate London at speed, a circular route with concentric rings allowing passengers to move out in steps of increasing speed (see Wells, 1910).
7. Unpredictable motion a key concept in Stoehrer and Stoehrer’s (1921) early patent for the dodgems.
8. According to Weinstein (1992, 133): “In the latter half of the 19th century, European pleasure gardens, most notably The Prater in Vienna, became more fast-paced and boisterous and began offering a wide array of mechanical rides.”
9. Though something similar, if presumably much smaller in scale, was reported by Peter Mundy on his travels in Turkey in the 1620s (Mundy 1907, 59).
10. The ride takes its name from the much older adverb meaning “in confused, disorderly haste”.
11. Note that other recorded names for the slide include: Canadian slide, alpine glide, lighthouse slip, slipping the slip, and glacier slip (see also Radice 2005).
12. Note that such rides, offering various axes of movement/rotation went by several different names including Swirls, Waltzers, Mont Blancs, and Loch Ness Monsters (Anon n.d.-a).

13. The fascination with speed and mechanization during the decades before the outbreak of WWII was also shared by the Italian Futurists (Marinetti 1932/2014).
14. Perhaps also worth mentioning here is the commodification of shock in those games in which people would, for example, experience tactile, or even electric shocks for “pleasure” (see Parisi 2018, for a review).
15. Part of the appeal of many of the rides was actually linked to the close physical contact with other people that the thrill of many such rides facilitated (see Pursell 2013).
16. In this, one might consider the designers of the fairground rides to have been ahead of the curve as far as the importance of sonic cues to the total multisensory experience is concerned (see Spence and Zampini 2006; Wolkomir 1996, for reviews).
17. The dog in this case referring to the “chain dog”, or safety ratchet patented in 1910 to stop the cars from rolling backwards.
18. The first patent to describe a dodgems-type ride was awarded in 1890 to James Adair (Adair 1890), but was apparently never built (Pursell 2013, 86). The first electric dodgems, or bumper cars, appeared at the start of the 1920s (Stoehr and Stoehr 1921).
19. “Have you ever heard calliope (*say ‘cal-eye-oh-pee’*) music? A calliope is a special type of steam whistle organ. Its music is usually associated with a merry-go-round or carousel.” (quote from <https://www.cbc.ca/kidscbc2/the-feed/where-did-merry-go-rounds-come-from>).
20. At the end of the 19th Century, a few scientists became interested in illusions such as The “Haunted Swing” illusion that was experienced by the researcher at the Midwinter Fair in San Francisco that also involved a proprioceptive/kinaesthetic element (Wood 1895; see also Ross 1974). In this case, a large rocking swing was placed in a room that was rocked while the room itself rotated fully (hence sensory incongruity was used).
21. In the postwar years, DERV (standing for Diesel Engine Road Vehicle fuel), and also known as white diesel, was used rather than regular diesel, giving rise to a somewhat different odor.
22. Nye (1981, 67) talks of the American theme park as providing a “total visual and aural experience” and of “total theatre” (Nye 1981, 63).
23. Indeed, one intriguing aside from the interview with the artist Carsten Höller that was mentioned earlier concerns the particular facial expression that many people have on exiting one of his slide installations. As Höller notes “People coming down the slides have a particular expression on their faces, they’re affected and to some degree ‘changed’.” (Carsten Höller: Interview n.d.).
24. As the historian Kasson (1978, 49) put it “Coney Island plunged visitors into a powerful kinesthetic experience that ... over turned conventional restraints, washed away everyday concerns, buoyed and buffeted participants as they submitted to its sway.”
25. Indeed, the slide was described in the fifties by the French writer Roger Caillois (1961) as “a kind of voluptuous panic upon an otherwise lucid mind” (see Carsten Höller: Interview n.d.).
26. Indeed, a few years ago, *Business Insider* even went so far as to rank the slides found in Google’s offices around the world (see Lynley 2012).
27. Intriguingly, in 1954, John Allen was once famously quoted as saying that “You don’t need a degree in engineering to design roller coasters, you need a degree in psychology ... A roller coaster is as theatrically contrived as a Broadway show.” (Pursell 2013, 85; see also Mohun 2001, 301).

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