

Extracts (on toys, and on the materialities and imaginaries of play) from Seth Giddings (2014) *Gameworlds: virtual media and children's everyday play*.  
New York: Bloomsbury.

### Mr Happy and the *Age of Mythology*

A sunny afternoon some five years after the *Lego Racers 2* game, the boys were playing around a paddling pool in our backyard. Rather than paddling in the water, they crouched beside it and played with toy boats and a large collection of Gogo's Crazy Bones, small collectable figures that were a craze at the time.<sup>3</sup> My impetus for documenting their play this time was primarily aesthetic – the bright sunshine reflecting from the rippling water over the bright blue plastic of the pool, the vivid toys and soft skin of the children. The gameworld seemed as fluid as its watery medium. Much of it appeared to be delirious nonsense, a more or less inchoate succession of dramatic exclamations, snatches of improvised song, but some themes drifted through with the flotsam: pirates and vikings,



an ambiguous character called ‘Mr Happy’ and numerous micro-dramas of drownings, hostage-taking and treachery. I left a digital voice recorder running to capture an hour or so of the sounds of play (see Giddings 2011). Studied later, the compiled audio track and photographic sequence identified some significant lines of imagery and action, including clear connections with the boys’ recent video game play. A Playmobil pirate ship with its striped sail seems to have been the conduit for a summoning of *Age of Mythology* – a favourite PC game of Alex’s at the time – connecting with both the Norse and the Greek worlds of the game and its software mechanics (game levels, mini-games, ‘god powers’). As I edited the images and overlaid them with footage from the game itself, other visual and thematic resonances became obvious, from the intense blue of both the paddling pool and the digital sea to a striking realization that the crayfish, deployed as a giant monster to capsize the toy boats, looked – with its extensive antennae – and behaved – gigantic in its relative scale – remarkably like the krakens that Alex would gleefully unleash to wreck his virtual Greek ships (see Figure 1.2).

J: No, it’s not like a computer game

J: Everybody’s back to normal, everybody’s back in their boats

A: Apart from the little boats have been totally destroyed

J: Those were mini-games, just mini-people...

J: They’re just fun to kill

A: You and me don’t try to kill each other, we just kill the little boats

J: Yep, with people on

A: Don’t let them aboard you because they’re really good at fighting

J: But some people survived, they’re the shipwrecked guys ... it’s a new ... like ... level, level-like thing...

A: Look at my ship! Raah! Raah!

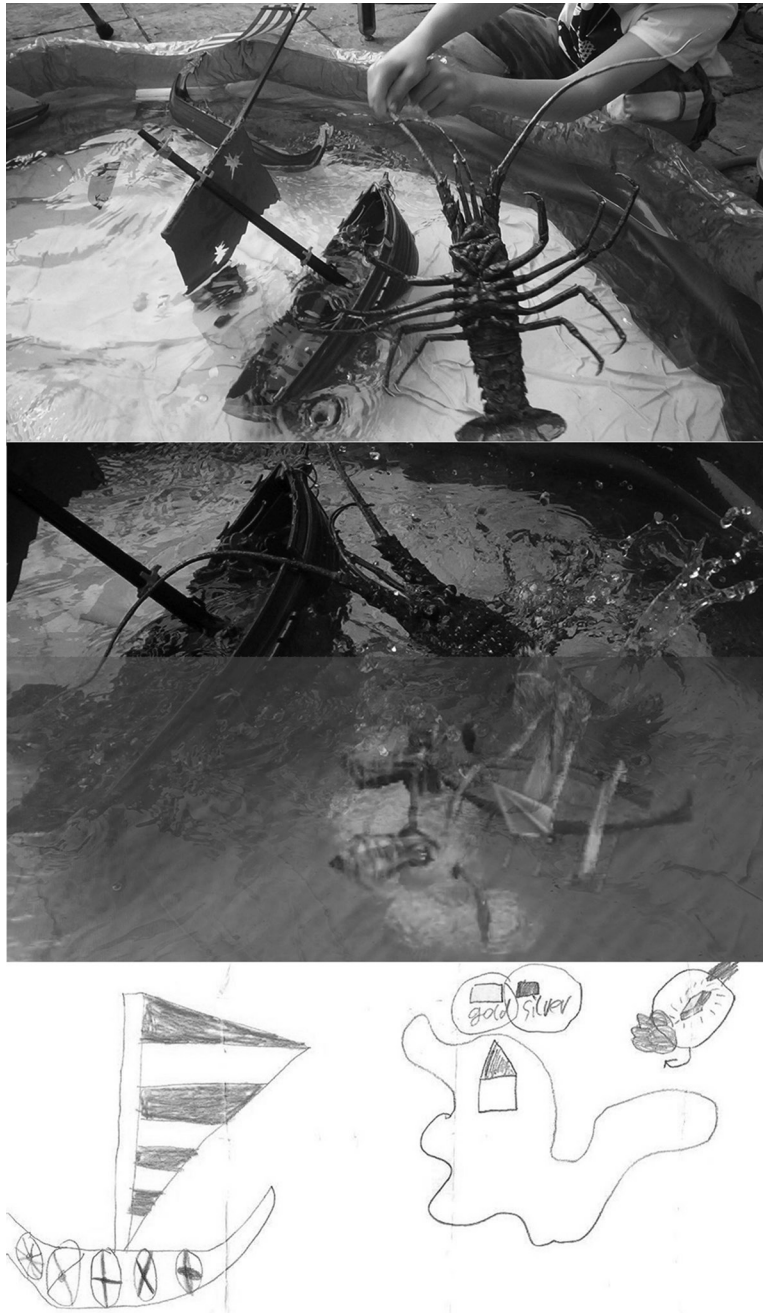
J: Look, they’re all dead

The play continues for ten minutes or so, with plenty of drownings and lifeboat rescues. Mr Happy makes his first appearance: he seems to be a multiple entity formed from two or three of the submerged Crazy Bones figures (each with an exaggerated grimace printed onto his plastic head) and a sing-song refrain:

A: Mr Happy...

A: Happy, so happy

A: Even when he dies...



**Figure 1.2** Virtual and actual krakens

Later:

A: Look at Mr Happy! One of your guys survives so it's not Game Over. We've gone to the next level – everybody's on lifeboats!

Jo indicates a submerged Lego mini-figure, a black skeleton missing its skull:

J: We have sunk the traitor – apart from his head

J (traitor): 'I'll get you for this!'

J (traitor): 'Sorry, I didn't mean to be a traitor'

Jo grabs a large bucket, fills it with water and flings the water across the pool and the boats (Figure 1.3):

J: Tidal wave!

And again

J: Tidal wave!

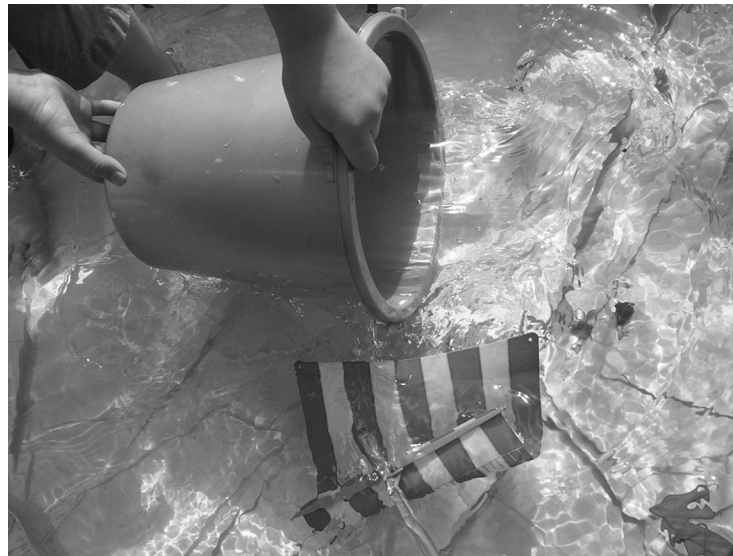
J: This is the tidal wave

A: No, no, that's on bonus level

A: But guess what we do, we use god powers

A: Woo-argh Woo woo, we live! We live!

J: They just used a god power



**Figure 1.3** Tidal wave

It isn't possible to transcribe the action and noise of the crayfish-kraken attack, but Figure 1.2 gives a sense of its momentary collision of virtual and actual worlds. There are varying homologies through which these virtual/ actual translations are inspired: water for water (both virtual and actual water a synthetically vivid blue), toy Viking longboat for virtual longboat and Greek galley, crayfish for kraken, bucket for divine power, to a plethora of characters and events that were spun into existence in these material-semiotic vortices, perfectly at home in this delirium of myth and disaster, but which seem to have no origin.

The peculiarly phantasmagorical character of much imaginative play will be described throughout this book, and addressed in detail in Chapter 7 ('Real Worlds').

## Play Grounds: The Material and Immaterial in Play

*Playground games and computer games are structurally similar, then. They both feature rule-governed structures, quantified assets, obstacles and challenges, dynamic 'engines' of play. They can vary from loose improvisation to tight rule structures. Like drama, and indeed any kind of fiction, they involve an imagined world of some kind whose governing principles are understood to be different from those of the 'real' world [...] Both kinds of game provide complex, often impenetrable forms of pleasure which range from the purely ludic – beating the rules of the game – to the representational – the pleasures of mimicry and role-play. (Burn 2013, 124)*

25 February 2007. It's the last Sunday of the school half-term holiday, and we're at the Adventure Play Ground (APG) at Windmill Hill City Farm in Bristol. The sky is overcast, and the players and playworkers are chased in and out of the APG building or under play structures by the occasional shower of rain. There are only a handful of other kids there, a few drift in and out, the other diehards are two girls of around 10 and two boys of around twelve. There are three or four playworkers.

Jo, Alex and Sam (aged between seven and nine) are playing *Star Wars*. The game is primarily conducted through light sabre battles with sticks. The sticks are broken from branches lying around the edge of the APG. At first glance the game would be familiar across generations of boys' play: boisterous free-wheeling arms and sticks, bodies leaping from play equipment and the negotiation of acceptable and unacceptable behaviour. Occasionally details of the *Star Wars* diegesis or narrative inflect the boys' dramatic pronouncements and performative gestures and actions – evident throughout the play is a flickering of point of reference from the *Star Wars* films to the *Lego Star Wars* video games.



The interpenetration of the actual and the virtual, the material and the intangible, is a central concern throughout this book. This chapter stops to address the actual and the material in play and games through a microethological study of a play event that took place without the immediate presence of any sophisticated technology. Outdoor play with sticks, climbing frames, friends and action and characters inspired by children's media is both *pre-digital*, in that – broadly – the materials and activities of the gameworld are the same as children's gameworlds long before the widespread availability of computer entertainment media, and – as we have seen throughout this book – *post-digital* in that the game itself is suffused with images and characters from computer games, and is shaped and directed at least in part by the peculiar spaces, conventions and repetitious temporalities of computer games. So, firstly, this chapter develops an ethological attention to the materiality of play and bodies in play (including natural objects, play technologies, human bodies); secondly, it extends this concern for the material to ask how we might conceptualize the very real, but *immaterial* play elements or bodies (such as mental imagery, media images, conversation and collective or intersubjective imagination) as they come together with the material; and thirdly, it will reflect on how this gameworld can be understood as actual in the era of virtual media – both in terms of its transductions of video games and in the rethinking of play in general, pre- and post-digital, in the light of virtual media. It will pick up on the suggestion at the end of the last chapter – that imagination in play might itself be transduced and distributed across the material and the immaterial.

The microethology of this event of 'free play' will explore the nature of these worlds within worlds, the kinds of spaces or timespaces they generate, their patterns and dynamics and the phantasmagorical realities they are constituted by, or bring into being. The game – or games – was populated by characters, scenarios and technologies from the media universe of *Star Wars* (and others) in a imaginative engagement with transmedial ecology of children's popular culture. They were also formed from the material environment of the playground and its buildings (play equipment, sticks, office stationery), as these artefacts both initiated play events and were transformed by them.

## Talking into being

The game began with talk, the boys standing on a play structure, a house-like wooden construction with a ramp leading up to it (Figure 6.1). Sam decided he

will be Luke Skywalker, Jo claimed Anakin as his alter ego. The talk continued for some minutes, sometimes the children seemed to be talking just to themselves, conjuring up the world they want to inhabit, sketching in the environment and agonistic motive for the action to come. The brothers Jo and Alex argued. They have had occasional arguments in the past over Alex's refusal to conform to the accuracy and continuity of the *Star Wars* transmedia universe of films, and games and television series, and the particular scenarios Jo wishes to inhabit. The controversy was not so intractable as to stop the emergence of the game, though



**Figure 6.1** Prelude: Talking *Star Wars*



over the next half an hour or so it flared up from time to time, temporarily stopping play. I – from my position as interested observer from the sidelines – was asked to arbitrate. One such interruption was caused by Alex's dissatisfaction with 'Episode 6', the starting point, and most consistently inhabited scenario in this particular game. The reference here is to *The Return of the Jedi*, the third film to be produced (in 1983), but with the subsequent 'prequels' becomes in narrative terms the last in a series of six. Interestingly, the children made little distinction in their talk or games between the film itself and its remediation in the *Lego Star Wars* games that they had also recently been playing. The ending to 'Episode 6' in particular offended Alex:

A (rhetorically):

'What happens to Luke?'

'What happens to the ghosts?'

Alex announces that he is instead going to play 'Episode 7', a storyworld of his own invention. Episode 7 is conjured into existence there and then, but its central protagonist – Starjumper – is a well-established creation of his. Starjumper first made an appearance in our house two or three years before, but had not been heard of for quite some time until this game. This did not settle the dispute over diegesis, however: Jo is very annoyed about this multiplication of playworlds, and loudly accuses Alex of 'cheating'.

Despite the momentary vehemence of this argument the game quickly sprang back to life and circulated around the playground, gathering its forces at key landmarks and particularly useful play structures. It appeared that the imaginary scaffolding of play such as this shifts or mutates according to the shifting modes of play itself: rules, settings, characters, quests must be clearly established as the gameworld is talked and negotiated into being, but once the swirling and flailing game itself is under way the details are superceded by bodily actions and performances that sweep up semiotic and gestural material from other films and games and the play is much more forgiving of continuity errors. The close agreement required in the talking prelude diverged into a kind of imaginative parallelism as the boys held in their imaginations individual iterations of the gameworld, and their dynamic role within it, with the others' actions generically appropriate enough to sustain and develop a looser but more exciting collective imaginative world.

A little later they argued about whether they are on Hoth or another planet, the name of which I didn't catch. Alex is a wampa, a yeti-like creature indigenous to

the icy planet Hoth in *The Empire Strikes Back*. This sudden attention to location was triggered, I thought on reflection, by the coincidence of two factors. Up until this point whilst the narrative positioning of the game was of great importance, its geography hadn't been significant, but when Alex took the role of the wampa the distinct climatic character of this monster came to the fore, its white fur inseparable from its snowy environment. At around this time in the game a shower of light rain started. In a simple but powerful procedure of semiotic synthesis, the fictional world and the actual environment were fused to create a novel material-semiotic environment: a new (un-named) planet analogous to Hoth but characterized by rain rather than snow. Alex soon joined in with the energetic wielding of sticks in a game of light sabre combat. These stick-wielding performances are kinaesthetically sophisticated, but their symbolic consistency less so, and wampadom was forgotten, and the new planet disappeared as if it had never existed.

The younger *Star Wars* boys paid little attention, as they were engrossed in their light sabre driven play (Figure 6.2). They broke off now and then, the talk often returning to the *Lego Star Wars* game.



**Figure 6.2** Sticks, swords and sabres

J: 'in one of them if you get a full minikit you get a ghost – an Obi Wan or Yoda ghost.'

### The environment of the playground

Game spaces are fashioned from the material characteristics and features of the environment, as well as from imaginative and cognitive operations. As described in the last chapter, video game worlds suggest ways of rethinking actual environments (and vice versa) – as space and time, as lawful or rule-bound, as affordances and constraints, as material and immaterial. There is a persistent view, evident from Romantic poetry and painting to today's dire predictions for



children's technoculture, that the child is truly at play (only truly a child) when he or she is immersed in the natural world.

Just as ethnographic work on children's play with media resources reveals much more fluid and creative events than predicted, though, close studies of play with physical objects and environments, both indoors and outdoors, trace similar complex interrelationships between resources and events. School and park playgrounds offer a wide variety of armatures for play and games. Some of these are intentional – climbing frames, painted courts or hopscotch matrices and so on, others are either improvized for moments of play or established as persistent cultural sites and technologies in their own right, often reproducing games down generations and for decades:

Every feature of the playground is used: the corners and walls of the buildings; the fences (as 'home', or for tying one end of a skipping rope); the ledge outside the largest temporary classroom (for walking along, or as a vantage point, or for a game of King of the Castle); the flat drain covers (as sanctuaries or as marble boards); the small cavities at the foot of 'the marbles fence', where the asphalt



meets the grit surface of the lane; the dust-bowl at the edge of the grass, used for flinging toy cars. (Opie 1993, 11)

June Factor describes a remarkably persistent material-semiotic culture built into and from the micro-topography of a school playground:

Its inhabitants – children – have developed, sometimes over generations, a map of the school grounds which designates functions and attributes values to every major feature: open space, treed space, benches, shelter-shed, toilets, grass, asphalt, tree roots, secluded corners, verandahs, rubbish bins. (Factor 2004, 143)

A fallen tree becomes a spaceship for generations of boys, its control panels and components shaped from ‘the intricate crevices, lumps and nodes caused by the decaying wood’ (Russell 1994, 93, in Factor 2004, 147). Whilst two girls, on a public thoroughfare with trees, leaves, log fences played ‘princesses and flying unicorns’:

The girls used the physical and natural features of their chosen play-site to represent their home and other far-away lands they travelled to ... [one girl’s] bed was a low pine fence, her shop was a pile of stones, and the kitchen a clump of bushes with a strategically located sawed-off branch which served as the controls for the oven. (Russell 1994, in Factor 2004, 147–148)

There is a two-way flow between environment and children. Through an ecological feedback loop, the former seems animated, like a video game world, attracting children to its playful affordances:

Objects often call out for the young child’s attention and exploration: the grass must be run through and rolled in, the sand and earth should be dug up, beakers need to be filled with water and then emptied again although, curiously, the toilet does not necessarily call out to be peed in. This engagement with the world is an interlocution, a dialogue – an object calls out to the child and the child answers. (Aitken and Herman 1997, 83)

An object can call out to the child, and that call can triangulate with a fantastical idea from the imagination or media source in play. For example, a skipping rope in a superheroes game discussed in the next chapter was picked up and used by one of the boys, Henry, for just ‘skipping’, a long-established and flexible play practice with its own physical demands and expertise. Yet this familiarity itself seemed to form the nucleus of new games, attracting the thematic symbolic elements floating around from other recent and potential games. It quickly became ‘really fast skipping’ for Henry, a superpower inspired by Dash from *The Incredibles* (Richards 2013, 77).

## The space-time of play

Like video games, time is a key dimension in actual play. The simple fact of duration, child psychologist Donald Winnicott argued, renders it real: 'playing is an experience, always a creative experience, and it is an experience in the space-time continuum, a basic form of living' (Winnicott 1974, 67). The stopwatch punches the intense and formalized activity of competitive sport into precise periods. Imaginative play warps time and space into polyrhythms of frenetic and languid activity, and is characterized by repetitions and circularities as much as by the linear continuities of quests and stories. These rhythms are set by immaterial factors such as degrees of agreement, resonance of imaginary framings between players and by material factors from the regulation by school bells of playtimes to the energy levels of the children themselves. Lili Peller explains that in dramatic play

there are frequent interludes in which the ideational content runs low or gets confused and hazy and only the pleasure in some kind of manipulation or repetition keeps the children going. (Peller 1971 [1952], 122)

The Adventure Play Ground is a space set aside and designed for play. The children present had their own temporal boundaries, set by parental expectations, meal times and so on. Within this encompassing space and time, though, the playing itself demonstrated a resistance to any simple mapping or schedule. In spatial terms, the games seem to coalesce around particular locations or structures rather than draw a touchline or magic circle around themselves.

There were delimited zones within the APG within which the sabreplay was manifested, areas with enough elbow room for the flailing sticks. Material





**Figure 6.3** Hammocks and bean pods

structures with particularly rich symbolic possibilities (the webbing), but which also set in train temporal and kinaesthetic rhythms of iterative games and swaying hammocks. The players' bodies themselves were zoned according to which parts (including their stick extensions) were acceptable to strike. There was a temporal dimension to this zoning in which initially tacitly (though clearly) demarcated zones are progressively approached and breached: a giddy transgression.

The games had no spatio-temporal boundaries, then, but rather a gravitational pull – either a physical structure (a wooden boat, a webbing hammock) or an intensity of imaginative or kinaesthetic activity (the talking of the game, the swirling of the sabre fights). There were no centres of gravity as such, the games shifted and overlapped too much, but there was a kind of centripetal force that gave some durational and symbolic cohesion – eccentric orbits around an idea or an action. The best analogy I can come up with is that of a skateboarder or BMX rider in a skate park. The circling up and around a bowl is formed by the interaction of momentum, skill, concrete topography and gravity. Movement is fluid and improvised but contained and tropic, always looping back towards, but not necessarily reaching, the centre of the bowl. However, when skaters – by

accident or design – achieve a trajectory or velocity that ejects them from the bowl they don't exit playspace, they take flight into the neighbouring bowl – another centre-less centre of gravity. The boys' sudden arcs out of the *Star Wars* battles and over to the webbing hammocks, and back again was for me the result of this interplay between the pull of a game (around a particularly compelling fantasy or exciting physical activity) and a centrifugal force (of a competing idea, boredom, distraction) that effects a phase transition.

Just as there are no spatial boundaries, the start and end of these loose games, then, are not signalled by a whistle or even the clear formality of the long-established counting-out techniques of playground games ('eeny meeny miney mo') or the winning state. Observers of children's play and games have noted the transitions into and between games in space-time as well as their structures, rules and rhymes. This account by Iona Opie beautifully captures the rolling individuation of a game from inchoate behaviour:

We strolled over to where a game was brewing. Six or seven children were concentrating on each other, becoming active, becoming a self-reacting entity. Their faces were animated, they communicated with quick smiles. They started running in different directions. One of them shouted, 'Who's on it?' and another replied, 'Helen's on it.' 'I'm no-ot,' shouted Helen. The confusion about who was chaser made the game more fun: muddle is in itself intoxicating, and they laughed immoderately. A boy, meeting them head-on, was brought into the game. He ran away; then realizing he had run beyond the boundaries of the game, ran back towards the others. 'Who's supposed to be on it now?' they called to each other, giggling. 'I think it's Nicky.' (Opie 1993, 84–85)<sup>1</sup>

The game swept up the boy, but his own momentum nearly ejected him from it immediately before he realized the boundary – relative to the movement and intensity and not to actual space – and looped back in.

Actual play spaces (and times) may be 'pure' as Caillois asserts, but they are not homogenous, nor topographic. Finite but without boundaries, they spread their map over the heterogeneous territories of the physical and media environments from Hoth to the Spanish Main.

## Bodies

Back in the stick-fighting arena, a playworker braved the drizzle and joined the fray. She decided to be Darth Maul, a choice that was no doubt suggested





by a strange little mini-game that will be detailed below. As has been noted, the early insistence on diegetic accuracy and concomitant close identification with specific characters that may characterize the beginning of a game will often evaporate as it shifts more into the material realm of the environment, bodies and kinaesthetic action. The main motive and activity was now the stick battles. These were conducted in the form of sword fights in films in which the alternate angled blocking of the other's sword is performed rather than any serious attempt to make body contact through thrusting or stabbing motions. My slip here from 'light sabre' to 'sword' is intentional as it follows the children's own performances (much more swashbuckling than the martial arts-influenced *Star Wars* fights) and speech (they slip into talking about sword fights too). The material characteristics and affordances of physical sticks lend themselves much more to cinematic sword-fighting than they do to the fantasy technologies and techniques of the light sabre. No doubt this is another example of playful collapsing of time and space as the momentary pirate world of the green webbing was looped into the overdetermined swordplay. And as I wrote up my notes I realized that Sam's rendition of *Robin Hood: Men in Tights* must of course have been triggered by that film's scenes of sword-fighting. So much of children's knowledge of literary, cinematic and other cultural narratives, themes and characters comes to them filtered and ludically transduced through parodies and comedy, from Halloween's festive flattening of the gothic to the voracious parodic machine of *The Simpsons*.

The patterns of play emerged from this risky coming together of bodies and weapons. A distinct rhythm was established: an initial and tentative clicking of sticks by opponents, carefully angled and alternating in a pattern familiar from action film swordfights. This careful alternation would increase in tempo as the fighters' confidence grew, faster and faster until the respectful turn-taking degenerated into flailing arms and sticks, and – inevitably – the contact of stick and body. Knuckles and faces struck accidentally, and backs and bottoms deliberately; these collisions punctuate the full-on battles as the injured player withdraws and the overexcited assailant stops briefly, 'calming down' (a little). The duration of the interlude would depend on the severity of the injury and the degree of outrage of the injured player. Then, the fight would resume, slowly, carefully ... The gradual positive feedback as the clashing sticks are wielded more and more frenziedly is sharply regulated by the event of the minor injury, before the fights begin their spiral from simulated to actual pain again. Players' bodies – as borderline accidental targets for stick



blows, and as demonstrative, media-choreographed, dramatic dimensions or vectors in the game's manifold – are more or less precisely, differentially and emergently, mapped and hierarchized. Lines are drawn in space and across bodies to be – momentarily, intentionally, tentatively, deliciously even – transgressed.

After some time, the cluster and clatter of sticks ran low on energy. It seemed that there had been little elbow room for diegetic drama and that this was needed to re-energize play. With no apparent sign, instruction or individual initiative, the pairs split apart in the central arena of the APG, one heading towards a tower supporting a zip wire, the other towards a small wooden boat in its incongruous dry dock. Immediately this generated a geodramatic structure of opposing bases to be stormed and defended. Jo mapped this new time-space onto another of his *Star Wars* video games, *Star Wars Battlefront II*, which is based on a well-established videogame motive in which play is driven by the capture and defence of an opposing team/army's command posts.



## Bad play

Perhaps the type of (gendered) imaginative play that has generated the most anxiety, argument and debate is boys' war play, play with toy guns, knives or other forms of fighting and combat. War toys and war play have been scrutinized and agonized over for decades, and toy guns, or any object or gesture intended to act as a toy gun, have been banned in many schools (see Smith 1994). Research by Burn, Willett and Richards in English playgrounds in the past few years found that even playful gestures indicating an imaginary gun or knife were forbidden. However, boys improvized their own work-around by adopting gestures from the amalgam of martial arts and magic powers that characterize many contemporary animated television programmes.

This policing of playground gestures and actions, of course, cannot be separated from ongoing debates on the effects on children of war films, violent videos and of course military/action video games. These discussions have been particularly fraught in the United States in the aftermath of a number of mass killings in schools. In all these play forms, in different ways, the anxiety or assumption is that children (or some children) cannot tell the difference between play and reality, or may be more likely to adopt violent behaviour in later life.

Critiques of these 'media effects' assumptions are well set out and argued elsewhere.<sup>2</sup> What a close descriptive attention to play can contribute, I would suggest, is a sense of the complex interplay of fantasy, imagination and fear – or excitement – about real violence in the world.

We are camping, soon after the riots that swept through English cities following a police shooting in August 2011. Jo, Alex, and Alex's friend Niko are playing with some Lego in the tent. I record their talk, and later take photographs of the aftermath of the game (Figure 7.1).

J: I only have two people, but they have sticks!

A & N: fighting/shooting/impact noises

N: Is my guy ever going to die?

A: No!

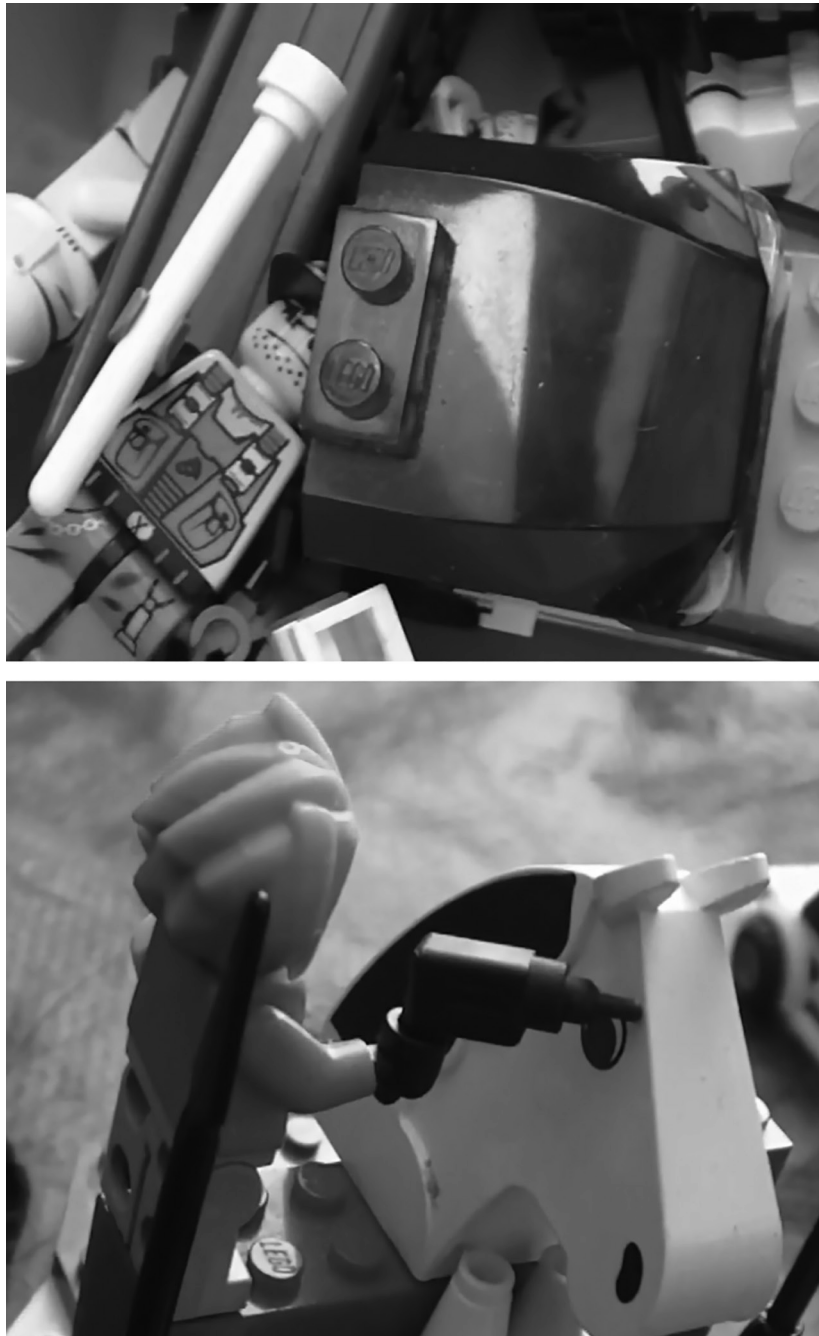
J: This guy dies.

A: This guy's my last rioter...

N: No! No! Not yet, he doesn't die yet!

N: I'll tell you when he can die.

J: There's a fake policeman ... Alex, I killed him with his own neon riot stick



**Figure 7.1** Lego riot

J: You know riot shields? This is what they do...  
 J: Alex, I'm just beating this guy to death with his own stick!  
 N: The police have got a robot!  
 A: Err! Err! Err! Err!  
 J: It's a bomb disposal.... I've beaten him so hard his legs fell off.  
 J: Grr! The last rioter alive!

Whilst it seems to be generally understood that children know the difference between playing violence and actual violence – a fight is an utterly different experience to make-believe combat – for some parents and teachers, the noise and aggression of war play appears to leave no space for boys in particular to exercise their imaginations or develop verbal and emotional relationships.<sup>3</sup> Hence teachers or playworkers may intervene to channel play into more constructive patterns (see Smith 1994 for a study of the war games and toys debates).

Imaginative, 'free' play isn't necessarily always creative, fulfilling and joyful. It can be repetitive, boring or bullying. Jo's mini-game with the Lego Racers in which he drove the little car repeatedly over a cliff, drowned and respawned shed any obvious imaginative or even pleasurable aspects along with the virtual Lego bricks and seemed to be driven by thanatological feedback between the computer game's cybernetic grip and his own encroaching sleepiness. Iona Opie documents numerous desultory moments of mild cruelty among the playground's exuberance and collusions (Opie 1993). Brian Sutton-Smith notes games between siblings that seem to be shaped by the attractive force of younger children's desire to be involved and the repulsive forces of ludic humiliation, and even harm, from their older brothers and sisters. Often, 'for the younger sibling, the price of fun is getting hurt' (Sutton-Smith 1971, 104).

Scarlett et al. draw attention to what they call 'bad play'. Acknowledging the contentiousness of the term, they are careful to point out that it is not the symbolic material in play that they consider 'bad' (in the sense of contemporary anxieties about make-believe war or sexualized toys), nor rough physical play, but rather play that

does not allow for the socialization process to take place in positive ways for all children involved. Play that excludes or ridicules other children and play that is destructive qualify as bad play. (Scarlett et al. 2005, 80)

We might note that as with all play boundaries, that between good and bad is shifting and permeable. Other playground ethnographers have observed that the techniques and gestures that signal the start of a game and the constitution of its players may also, more or less subtly, exclude children on the periphery (Richards 2013, 75–76). The younger sibling must balance pain and pleasure; ridicule is a dominant mode of friendly communication for boys well into teenage years and early adulthood; and the borderline between playful destruction and vandalism is one drawn as much by social context as by individual motivation.

Throughout Jo and Alex's childhood in video game culture, the moments of anger, tears and aggression (mainly against the game technology itself) were triggered not by violent scenarios, characters and action in the digital gameworlds, but by frustration with the game on the structural, ludic level. Losing online at FIFA has resulted in Xbox controllers and even mobile phones being broken, whereas the frenetic and ultra-violent online combat of *Call of Duty: Modern Warfare 2* seems to generate nothing but hilarity. This topsy-turvy generation of frustration in the breakdown of 'violent' play, rather than in its fantastical performance, is well-illustrated in this account of a play event:

A respected and popular boy in the group is sitting bound to a chair and is being whipped – about 30 times with relatively hard blows – by two other boys with a leather strap. The roles are assigned: He cries out accordingly, 'Ah!' 'Oh!' Two girls give the bound boy some blocks as bananas to eat. The two boys wielding the whip join in and give the bound boy something imaginary to drink. The game thus experiences a resolution through which new excitement may be generated: The whipping proceeds. Obviously, all the playmates are satisfied, the game is, for all intents and purposes, okay. When the teacher intervenes, the children become directly aggressive; chairs are thrown around, and everybody is in a bad mood. (Wegener-Spöhring 1994, 97)

The teacher's alarm at this simulation of torture is understandable but apparently misplaced, for – as the researchers note – the game was relaxed and fun for all the participants, not least the 'victim'. It is the disruption of the game system – the intervention of the everyday exercise of benign authority in this case, the cybernetic gameplay in the preceding examples – that triggers stress and actual violence (against objects at least).

## Prosthetic imagination

There are many ways that technologies and environments, whether designed for the purposes of play or not, suggest, scaffold, extend and augment imaginative play. Play in this sense is fully machinic, and imagination is extended out into, and processed by, the mechanisms of the gameworld. Imaginative play is not only the imposition or projection of a child's fantasies into the animation of dead matter or onto the environment as if it were a cinema screen. The exercise of agency in actual play is analogous to the complicated technologies of simulation and virtual worlds. Each can be understood as a set of feedback loops and the child is acted on by the machines as well as acting on them. The game event is not reducible to the actions or locations of either. The imaginative motives of play cannot be simply located in the child's mind; just as a collective game between children conjures up a real world that does not exist – not even as electrical impulses in the nervous system – so too a collective gameworld generated by a child and a machine is distributed across and between them.

To return to simulation games,<sup>9</sup> computer simulations are artificial imaginations, modelling systems too complex for the unaugmented human mind. We delegate to them the storage and processing of dynamic non-linear variables, whether these be market data in the modelling of economic predictions or the ratio between the 'Outgoing' and 'Nice' aspects of a *Sims* character. In a simulation game, these variables play out through, and feed back to the player from, the behaviour of the virtual world and its creatures. The mechanisms of transmedia systems provide a looser system, the components of which are plugged together by individuals and groups in many different ways:

this is the question of how the imagination as produced by commercial media articulates with the imagination, agency, and creativity of diverse children going about their daily lives. (Ito 2011, 492)

Simple machines such as toys or objects co-opted as toys may serve a similar function. In the paddling pool event discussed earlier, Jo at one point picked up a plastic footpump that was lying around after having been used to inflate the pool itself. He wanted to use it to mechanize the 'tidal wave' god power previously visited on the world through the bucket. By reconnecting the pump's hose, he could get it to suck instead of blow, and he aimed to suck up water and direct it at boats and toys in a powerful jet. I wasn't happy about having a pump full of water so stopped him.

J: What are we supposed to use then?

S (with a touch of sarcasm): Your imagination?

J: How are we meant to use our imagination on something that's meant to be real?...

J: We're meant to try, we're trying to do it so that it's real.

In retrospect, my irritable response clearly shows I had not grasped the multifaceted workings of the boys' imaginations or the machinic environment of their gameworld. The exercise of imagination had been effected all afternoon from the spinning into being of the heterotopian and phantasmagorical world of Mr Happy in the *Age of Mythology*. The vivid blue water and red-striped sails looped visual and embodied memories of the computer game, whilst the other more or less randomly accumulated toys were caught up, triggering new associations and possibilities. The materiality of this environment suggested playful behaviours, and enacted them – submerging and floating, exercising cataclysmic powers on the tiny figures. Similarly, the visitation of god powers on the computer game characters is triggered by the player's decision, but the visual animation and destructive effects of the process itself is delivered by the machine. Divine intervention flows through the player and the machine, so it should be no surprise that in the actual game Jo was 'trying to do it so that it's real.

