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Virtual and Actual Worlds

The video captures a blurred, frenetic scene, children swooping through a small living room, with bright vehicles made of Lego bricks clutched in their hands. The soundtrack is a cacophony of voices making car noises and exhortations to ‘come on!’ and ‘drive faster!’ The two boys and cars, followed by the camera, trace a circuit or two of the room before arriving at a tall construction of larger plastic Mega Bloks. The race apparently over, the cars now trace a more leisurely route, up and over the Mega Bloks mountains and down to the beach and sea – expanses of yellow and blue crayoned onto sheets of A4 paper laid on the floor at the foot of the mountains. The video image is sharper now, the camera steady, and it closes in on the vehicles. Each is a fantastical machine, ornamental complexity at odds with the modernist geometries and colours of Lego, but still recognizable – and playable – as a car by sets of wheels and by a Lego mini-figure (‘man’) as driver. They drive up and down over the mountains, along the coast, exploring the boundary between beach and sea (Figure 1.1).

Figure 1.1 The transduction of Lego Racers

At first glance, this home movie seems to document a familiar and unsurprising activity: small children in comfortable homes have played with commercially produced building blocks and toy cars for generations. And whilst audio-visual documentation of everyday play has only been possible with the availability of domestic video cameras, it is not hard to imagine similar dramas of engine noises, races and crashes echoing through living rooms and playgrounds for over a century. Yet there are distinctly new aspects to this playful event, aspects that prompted me to pick up the video camera and document it in the first place.

The fabrication of these plastic mountains and paper coastline was inspired by the playing of a computer game, *Lego Racers 2*. The elder child had played this game avidly for a few days on a PC in the shared family space of the living room. The game's appeal was obvious – simulated Lego cars and drivers, familiar from his experience of playing with actual Lego were constructed on-screen from a set of options, then raced around an island circuit. At age four, the competitive racing element of the game was beyond him – he did not have the hand-eye coordination required to keep pace with the computer-driven racers – but the game offered instead a set of alternative playful possibilities from the construction of virtual cars to the engineering of accidents and crashes. In particular, and unlike most racing games, it allowed players to leave the race track and explore the virtual world beyond it. The Sandy Bay track loops around a fully explorable island with a beach, a Lego town and mountains with no marked distinction in virtual friction between track and other surfaces.¹

So, whilst the computer-controlled competitor cars blithely completed their laps, the player and his car set off across 'Sandy Bay', a grassy island with steep hills surrounded by beaches, and dotted with a few Lego buildings and structures. With this realization, the game changed. It first shifted to a game of exploration. Jo adopted a free-roaming, exploratory approach, finding tunnels and tumbling down cliffs.

It was this expansive and explorable topography that captured the children's imaginations (the elder child joined by his younger brother for the Mega Bloks construction and drawing) and which was *actualized*: mountains, beach and sea, as a stage within which to perform the actions and sounds of motor racing.

My own interest, by now as much as a games researcher as a parent, was attracted by this 'translation' of the spatial dimensions of a virtual world into actual materials and experience. It hinted at a sophisticated engagement with

aspects of popular media quite new to the form of the video game. Whilst, as discussed in the introduction, the narratives of children's media culture, from books and comics to films, cartoons and television, have often unfolded through the navigation of, or quest through, a fictional space, the virtual world of a video game demands a different kind of cognitive and imaginative engagement.

Translations

The actual race was performative, dramatic, in Caillouis' terms simulational not agonistic, driven by a kinaesthetic enthusiasm for the dynamics and noise of speeding virtual cars, not by game rules or competitive structures. To best understand these translations, it is necessary to think through how virtual and actual playspaces and their players constitute each other, to describe something of the structure, operations and effects of the video game as virtual space and popular media software. The video game as hardware and software is an agent or set of agents in this event alongside the children.

Jo (whilst building Lego cars): We're going to Legoland, aren't we? And Disneyland...

The commercial strategy of cross-media licensing is well established in children's culture (Kinder 1991, Kline et al. 2003), and this game is not unique in making links between media forms and genres and toys; other successful recent examples include, of course, *Pokémon* and games based on the films of Harry Potter, *Star Wars*, and James Bond. The nesting of video game worlds, as moments of play and as media objects, within the commercial spheres of children's media culture will be addressed in Chapter 4 ('Media Worlds'). However, *Lego Racers 2* also makes direct and witty links between the gameworld and its objects, and the physicality of Lego as a *toy*. For example, the player at the start of the game is given the option of building his or her own car and driver. A menu system offers ranges of virtual bricks from which figures and vehicles can be built. In the game proper, crashes result in bricks breaking off from the cars. Whilst the cars in the game are controlled in ways familiar from other racing games, they are represented explicitly as Lego cars, built from bricks and implicitly – acknowledging the pleasures of play that constitute the flip side to Lego's promotion of its toys as for construction – destructible back into bricks.

[C]hildren's play flows easily on and off line, in and out of roles, weaving back and forth from the imaginative to the actual. It is in this blurring of boundaries between physical and cyberspaces, between the virtual and the actual that children create playspaces for themselves.... (Dixon and Weber 2011, 488–489)

Ethnographic research by Shanly Dixon and Sandra Weber suggests a number of ways that virtual and actual playworlds coexist and flow into one another. Rejecting nostalgic discourses that assume the loss of 'traditional' types of play in digital culture, they find instead strong continuities between longer-established outdoor play and the domestic, indoor and virtual activities of video game play. The latter, they argue, share with the former creative and imaginative possibilities and are not separated off from each other: the boundary between digital and analogue is thoroughly permeable. A 'game' might flow between a backyard and a video game world, drawing on all manner of material and symbolic resources at hand and from popular culture. For example, they study the play preferences of two young friends in a game of *Pikmin*. The players explain the game's premise to the researcher thus:

Tucker: There's this guy from a planet and his name is Omar. Before he left on this journey he went to his wife who made him this soup with these carrots and when he left there was this asteroid who hit his ship and lands down on this toxic planet and he finds a carrot and it's red and it's a carrot. He has oxygen for thirty days and so he has thirty days to recover all the parts of his ship so that he can return back home and so every day you finish you get time to picnic so you bring him to these onions and they have feet and there are these flowers and the Pikmin will destroy the flower so you actually have thirty days...

Rowan (Impatiently): 'So we play now?'

Then, as they play the game, they too adopt an exploratory approach to the gameworld, not initially at least, following the actions that will facilitate the optimum progression through the game. The researchers link these exploratory, spatial pleasures directly to the boys' play outside, their dens and hideout in an alleyway ('an ostensibly classic childhood playspace') that runs behind their apartment block:

Shanly: 'What do you like about the game?'

Rowan: 'It's an adventure but there is action too.'

Tucker: 'We like to search for the parts of the ship.'

(485)

The planet in the game *Pikmin* acts as a playspace for the boys when they are unable to play outside. Their interaction on the virtual planet appears to be similar to their play in their secret hideout. In fact, at times they imagine the secret place as a spaceship, perhaps inspired from their play in the videogame [...]. Our interpretation is that both spaces serve to characterize the appeal of secret childhood spaces [...]: they both feel concealed and secret; they are spaces where a child might slip off alone escaping from daily demands; and they are places in which to fantasize and dream. (Dixon and Weber 2011, 486)

Children's imaginative play has a powerful gravitational pull, dragging all manner of physical objects and symbolic material into the orbit of any particular game or event of play. As well as the interconnected playspaces of the virtual and actual, videogame characters and actions join other media images, everyday and familiar scenarios and stories and songs from the oral folklore of childhood itself. All of these are gathered together, broken up, reassembled and synthesized in sustained collective performances, or in fleeting moments of chat, song or gesture. Andrew Burn describes the semiotic maelstrom of the primary school playtime:

Both boys and girls [...] make ambiguous or general references to elements of action, imaginary worlds, objects or weapons, and character types which might be associated with computer games. For boys, these include avatars, wizards, ninjas, pistols, bazookas, war, the SAS, and zombies; while for girls they include avatars, wizards, fighting guns, princesses, witches, fairies, monsters, robots, ghosts, superheroes and fairytale characters. [...] These represent hybrid influences which might include computer games, but might also include film, fairytale and folktale. (Burn 2013, 127)

At times, moments of play will crystallize as a direct instantiation of a video game world, with its specific interactive conventions or media-technological form. Burn gives an example of the inflection of a timeless play mechanic, hiding and chasing, with a very new one, the 'stealth mode',

one of the boys mentions looking down, for example, referring to the shadowed face of the cowed player-character in *Assassin's Creed* '... if you don't want to be seen in the playground you just sort of blend in ... stealth mode. Look up, then look down – like *Assassin's Creed*'. (Burn 2013, 133)

Girls' play in this particular study, Burn notes, tends not to be so closely based on specific named games or characters as that of boys, but it was still clearly shaped by videogame forms. Whereas the boys would re-enact the action of *Call of Duty: Modern Warfare 2*, complete with named characters ('Soap' MacTavish,

for instance), girls conjured up more generic ‘ghosts’ within ‘levels’. He gives an account from another game observed as part of the same research project. A group of five-year-old girls in a London playground were stepping in and out of plastic hoops lying on the ground. Two of the girls were interviewed in brief moments between the game sessions:

Rebekah: What are the rules of the game you’re playing?

Lily: The rules are, the gaps in between, you have to go through them, and it’s a maze where you have to go through. If you go in a hoop, then you’re out for five minutes.

[...]

Sophia: But first we were allowed to step in the hoops, and now we’re not.

Lily: And in Level Two, we have to go through a sort of maze, you see (points over wall at players).

Rebekah: Oh, there are different levels of the game!

Sophia: After you have to go in the gaps, then you have to go in the hoops, then gaps, then hoops again –

Rebekah: Oh, ok.

(Burn 2013, 137)

For Burn, these girls are ‘constructing a ludic system by defining rules, and then adapting them. They are also aware of specific game structures such as the maze, a structure common to ancient forms of play and to certain genres of computer games’ (Burn 2013, 138).²

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.³ 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').

Back to Sandy Bay

The players of the virtual gameworlds of *Lego Racers 2*, *Pikmin*, *Assassin's Creed* and video games in general loop out of them and back into their pre- or non-digital culture: to other media forms (books, TV, film) and to physical play (at home, in playgrounds, with or without toys or play objects), taking with them both narrative and formal elements.

As noted in the introduction, the improvized replication or performance of settings and environments from literature and media in children's play is hardly new. Spatial elements such as topographies, maps and architectures also shape games and play – from Lego and dolls houses to board games and theme parks. However, it was apparent that the *Lego Racers* reinvention was a response to the specificity of computer-generated gameworlds as simulations of space. The boys were not merely constructing a backdrop for a performance of computer game play, they were constructing it *as* space, and as an actualization of a dynamic virtual space with its own topography and simulated physics (friction, gravity, acceleration).

Transduction

But what is the nature of this flow of objects, images and forces across media and into everyday space? So far I have been calling it a 'translation,' but this linguistic

analogy does not capture the fundamental metamorphoses that must occur as an object – a Lego car, say – appears as at once a computer simulation, a screen animation and a physical object in a child's hand. Nor does it adequately account for the actualization of virtual/ludic forms and conventions such as game levels or virtual friction in play beyond the screen.

What is the nature of this movement across domains then? In educational psychology, the movement of ideas and images from media domains (literature, television) to children's behaviour is called *transfer* (Stevens et al. 2008). My use of *translation* was influenced by Bruno Latour's tracing of chains of agency through sociotechnical assemblages, the everyday operations and effects of power or agency as it is shifted or delegated from humans to a machine, or machines to machines (Latour 1992). Latour's conceptualization of these distributions of agency will be returned to later. The *trans*- prefix speaks of this crossing of domains, but neither 'transfer' nor 'translation' seem adequate to the transformation of entities as they perform these crossings. For all its semiotic and affectual connections, the virtual Lego car is a quite different entity from an actual Lego car. And an actual Lego car built as an instantiation of the video game car is quite different again. In its passage through the virtual world of the game and out again it has become a new entity – in the playful events described in this chapter it is a material-semiotic hybrid: no longer a toy animated by a child's imagination of the dynamism of driving, now a toy and child hybrid animated together in a simulation of the video game world. Whatever changes and transmissions are taking place they are non-linear and metamorphic. I have adopted instead the notion of *transduction*. Appropriately, it is used within cybernetics to denote

A process embodied in an input-output device for converting or coding without memory one type of signal, motion, wave or sequence of characters into another. E.g. a loudspeaker produces sound waves from oscillations, the human eye converts patterns of light into nerve impulses. Such devices are called transducers and are describable by a transformation or function.⁴

This sense of the transduction of information and patterns across machine and animal bodies or systems has been picked up by technocultural theorists and geographers to capture the contemporary movements, particularly of computer code: 'the constant making anew of a domain in reiterative and transformative practices' (Dodge and Kitchin 2005, 162). Adrian Mackenzie's development and application of the term resonates with the processes and phenomena I am concerned with here. Transduction tracks processes

that come into being at the intersection of diverse realities. These diverse realities include corporeal, geographical, economic, conceptual, biopolitical, geopolitical and affective dimensions. They entail a knotting together of commodities, signs, diagrams, stories, practices, concepts, human and nonhuman bodies, images and places. They entail new capacities, relations and practices whose advent is not always easy to recognize.

A transductive approach promises a more nuanced grasp of how living and non-living processes differentiate and develop [...] To think transductively is to mediate between different orders, to place heterogeneous realities in contact, and to become something different. (Mackenzie 2002, 18)

Again we see resonances between concepts of worlds, dimensions and newness, arising from digital technologies and media on the one hand and play on the other.

I will return to these theories of the flow and transformation of agency in Chapter 3 ('Microethology'). For now, I will focus on their operation through the playful circuits of computer games – by simulated space and physical forces in particular. The vertiginous manoeuvres up and down the mountains generally had little effect on the car/avatar, beyond a few bricks shed on particularly spectacular impacts. However, it soon became apparent that the car/avatar could be destroyed if driven or dropped into the sea. Usually 'death' in a video game marks failure – temporary or terminal – and results in frustration for the player. However, given that Jo's exploration had no set goal and the fact that the game was configured to allow infinite numbers of lives, this repeated death became a simple game in itself, one in which he delighted. Jo would begin with the car/avatar at the race start, then deliberately veer it off the track to pursue the shortest route into the sea and hence into momentary death. The car/avatar would then reappear instantly, in a swirl of stars reminiscent of graphic conventions from comics and cartoons of minor head injury.

A new variation emerged. Jo found that driving the car slowly and carefully into the sea allowed a more nuanced experience of drowning than that offered by plunging off a cliff. The car could be directed into the water and gently nudged deeper, until, just before its uppermost point (usually the top of the driver's head) was submerged, it 'drowned'. The motive of this new game, then, was the identification of, and the edging around, the precise point at which the game switched between life and death. The cars lurched up the cliffs, teetered at a vertex where dwindling virtual momentum succumbs to the faint but insistent pull of virtual gravity, and fell back, slowly, bouncing down to the beach. Down

here the drowning game was re-enacted, the car and driver held over the drawn sea, hovering, descending, then emerging again. The video game world's liminal state between land/life and sea/death was, therefore, replayed out in an actual game environment, where the point of death (like the momentum/gravity vertex) was determined by an embodied articulation of video game kinaesthetics.

On watching the video footage of Jo playing (often attended and encouraged by his younger brother), it became clear that these improvised games were constituted by the complex interactions among the gameworld's physics; the affordances of software elements (notably those of the car/avatar); the transmedial suggestions and humour of this particular game (linking it to prior knowledge of the Lego franchise in its actual instantiations); and the characteristics of more traditional children's play with toys, notably the pleasures of exploration and creative destruction. For example, one of the game's funniest features is that if a car suffers a particularly powerful collision then virtual bricks will fall off it. Enough collisions and the car will eventually be stripped down to a chassis (with no apparent effect on its capabilities as a vehicle). One more crash, however, and the player is left with the 'man' on his own to steer around the gameworld running delightfully on stiff little legs. We were all disappointed to find out, after much effort and experimentation with collisions and suicidal leaps into the path of non-player cars, that the game does not allow the man, as Jo put it, to further 'break into two legs'.

This feature offers visual pleasures (the familiar form of knee-less Lego legs are now more hilarious in their frantic animation) but it also highlights the operations of vehicular affordance in the game. It is an unusual and perhaps unique device. Games such as the *Tomb Raider* and *Grand Theft Auto* series periodically encourage or require players to guide humanoid avatars into vehicles, shifting control from the manipulation of human-shaped capabilities to motor-vehicle-shaped capabilities. In these other games, there are instrumental reasons for this (shape) shifting between different kinds of control/movement, and specific affordances are granted or denied as part of the design of the gameplay.

The transduction of the video game world and its conventions into off-screen play was varied and extensive. Alex, for example, adapted characteristics from the video game world into his own well-established micro-worlds of swimming creatures and dramas in the bath and bathroom sink. In particular, he developed the dramatic possibilities of immersion: he had found another way to 'drown'

the car driver, fusing his ongoing fascination with toys and water with the video game-suggested event-horizon of life/death (Figure 1.4).

Not only were the *images* and *dramas* of the computer game being played out with real toys, but the *physical* and *kinaesthetic* ways the boys played with their actual Lego blocks were now quite different. They were not only continuing the game of racing Lego cars begun on the computer screen (its characters, scenarios and dramas), but were also playing with actual Lego *as if it were* a video game. They were, on one level, playing at playing a video game. For instance, the actual Lego cars and drivers were constructed through an enactment of the video game's menu-driven start-up processes: invited by the boys, not least because of the attention I was giving them, to join in their play (or rather, take direction from them), I was instructed to choose the cars and figures to be played with from a range they had built. Initially this choice was made as they were creating

Figure 1.4 Death games in Sandy Bay

the vehicles, but later the process was repeated more formally, with cars and drivers neatly laid out on the table. The process of selection was incorporated into well-established patterns of their off-screen play: on-screen, no qualitative or quantitative value is placed on any selection, whilst in our living room the boys offered me a choice of two menus, each comprised of vehicles they had built individually. A familiar sibling–parent politics of attention-seeking and turn-taking was brought to bear: the eldest boy was most insistent, so his car was chosen first; his younger brother was keen to keep his menu in play, though, asking, ‘later, can you choose this one?’

Initially I was able to observe these transductions of agency and software structures because of the way I was positioned by the boys in relation to their actual game: I was not offered the chance to give any input into the design or construction of the actual cars (even for the one decision I was allowed – whether one driver should wear his baseball cap forward or backward – it was made clear to me that ‘backward’ was a preferable choice). Clearly I was not the empowered agent, or so it seemed. However, from studying the video record it appears that my role in these games did prove instrumental to opening a whole complex of actions, choices and translations arising from the peculiarities of the videogame medium and its articulations or channelling of agencies. It became clear that an entirely unexpected set of shifting identifications and transformations were at play in these shifts from screen to living room and back.

As the boys careened across the floor, racing each other, crashing into and leaping over the mountains, I was instructed to ‘use the keyboard’. I was expected to play the role of the ‘player’, ‘clicking’ (with my fingers on the arm of a chair or on a book) imaginary keys to make the Lego Racers go ‘forward!’ and ‘faster and faster!’. Of course my role was in some senses redundant – my finger movements had no influence on the direction or velocity of the Lego Racers (human or plastic) – yet the passion with which I was remonstrated when I stopped my performance indicated that this participation was, in some way, significant to them.

My role, then, was an apparently contradictory passive performance of interactivity. The videogame dyad, the circuit between player and avatar, was simultaneously collapsed and expanded: the boys and their cars were the avatars ‘in the game’, the agency of the player assimilated into the new boy/car/avatar and the residue (the empty performance of key pressing and looking on) displaced to another, ‘interpassive’ body. The sheer complexity of these circuits, translations and feedback loops was brought home to me with the following

sequence of events: at the start of the actual game, once cars and drivers had been selected, Jo asked me to write my name ('D.A.D.D.Y.') on a piece of paper, a translation of the familiar entering of the player's name or nickname at the start of the video game.

This activity was consistent with my passive player role, but when I asked Jo why he wasn't writing his own name, he replied, hesitantly, 'I don't have to – I'm the one who makes the Lego Racers go'. I tried to draw him on this, excited at the implications of this for theories of identification in video games. That is, Jo might be identifying himself (through role play) directly with the computer or computer game rather than the characters, the Lego car or man. He was not the player and so he didn't 'sign in' but neither was he simply the 'avatar'. It is, then, the game itself, perhaps thought of as the game software or engine, that actually 'makes the Lego Racers go'. I asked Jo if he was the game, and he hesitantly answered 'yes'. I realized, though, that I was pushing him and that if he was 'playing as the game' in the sense I suspected, he wasn't aware of it or reflecting on it – at least not in the terms I was using. I stopped asking questions in this way.

The relationship, then, between virtual bodies and worlds and (playing) physical bodies and worlds is far from simple. Both are a kind of virtual world; both have their restrictions and affordances; both can be imaginatively inhabited by the children, animated by their actions (whether physical or console-mediated); both are capable of loose, improvisatory, paideic play or tight, rule-governed ludic play (Caillois 2001). (Burn 2013, 142)

Andrew Burn's theorization of the interpenetration of virtual and actual gameworlds supports my understanding of the Lego Racers worlds described earlier. I would suggest, though, that we are seeing also a set of more complex relationships or circuits. There are continuities in play and games here that resist claims that play with virtual media spells the end of 'traditional' forms of play, but there are also significantly new play environments and playmates emerging in virtual worlds, actual worlds and the transductive spaces between them. The challenge, therefore, is not to separate out the continuities and ruptures in the cultural history of children's play; it is to question how play can be rethought in the light of popular digital technoculture. Play manages to loop through and across these ostensibly incompatible domains. We need to look, then, at the connections, the flows, the circuits: what is transmitted, what is transformed, what is lost and what is made?

Notes

- 1 This simulation of friction is effected through the game program slowing any vehicle that leaves the track for the ground surface that borders it – usually grass. It is a common device in racing games for guiding players on the game's preferred trajectory and rewarding accurate steering and cornering.
- 2 Even the most minute everyday activity can become charged with the ludic possibilities of videogame structures. I remember trying to get Jo ready as we were running late for school – he was around five years old. Sitting on the stairs, he waved his foot around in the air as I tried to get a sock onto it: 'Look! You're doing it on hard level!'
- 3 Though in their bright colours and differentiated forms (for collecting), Crazy Bones are very much a product of contemporary children's culture, in their name, shape and game mechanic (like Pokémon cards they function as both collectable object and game element) they are actually directly related to some of the most archaic play objects: the knuckle bones used for gambling since Antiquity.
- 4 Web Dictionary of Cybernetics and Systems: <http://pespmc1.vub.ac.be/ASC/TRANSDUCTIO.html>.