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Realism, Spectacle, Sensation

Qualities such as striking imagery and sound are important sources of pleasure in videogames, as are the sensations and intensities of experience offered by engagement in many gameplay tasks. The qualities of graphical reproduction on-screen, combined with sound effects, can play a significant part in the establishment of many of the dimensions of games already examined in this book. Relatively higher-quality graphical resolution and design/reproduction of sound can increase the extent to which narrative, generic or other contextual frameworks are likely to be in play, giving a stronger sense of the location of gameplay within a particular, realized milieu. They can also increase the pleasures of exploration or the extent to which a sense of presence is created. The above effects might be the case where imagery creates an impression of greater 'realism' (a relatively more convincing impression of the surface textures of the world) or more spectacular vistas (whether these are themselves presented as broadly recognizable/'realistic', the product of fantasy, or a combination of the two). Intensities of engagement can have similarly supportive effects, sometimes increasing the impression of occupying a particular gamescape of one variety or another. Qualities such as realism, spectacle and sensation also offer pleasures in their own

right, however, which might be equally capable of working against other forms of immersion in the world on-screen.

Audio-visual qualities have been dismissed by some commentators as essentially cosmetic aspects of games. For the designer Chris Crawford, for example, graphics, animation and sound are necessary but *supporting* elements, secondary to the primary dimension of interactivity. We would agree that dimensions such as realism and spectacle are usually less important, ultimately, than compelling and absorbing gameplay – although the same might not be said of intensity of sensation, which can be closely coupled with the performance of core gameplay activities. The appeal of qualities such as realism and spectacle should not be ignored, even if they are considered to be secondary to other aspects of the gameplay experience. To be secondary is not to be of *no* consequence, as we argued in Chapter 1, and secondary factors might also contribute quite significantly to the manner in which primary gameplay activities are experienced. It is also necessary to consider different dimensions of concepts such as realism, when applied to games rather than other media. We consider realism in this chapter in two main senses. First, in the sense suggested above: realism in terms of certain qualities of graphical representation (along with sound design) on-screen; realism according to an *aesthetic* definition. Second, though, we consider realism at the level of *functionality* within games: realism in the sense of on-screen action and interaction; the extent to which the world on-screen acts and responds (rather than visually or aurally resembles) something like its real or imagined equivalent in the world outside.

Realism

The history of videogames is one that has been dominated, on one level, by investments in increasing realism, at the level of graphical representation and allied effects. Successive generations of games and game platforms have been sold on the basis of the creation of on-screen worlds that bear greater resemblance to the textures of the real world – or, in many cases, the textures of other forms of representation that stake claims to the creation of impressions of verisimilitude, a point to which we return below. Quality of graphics, resulting from increases in processing capacity, has been a major factor in the various 'console wars' that have raged since the 1980s, including the competition between console platforms and

PCs. An early breakthrough was the development of Nintendo's 8-bit Famicom (Family Computer), launched in Japan in 1984, followed by the Nintendo Entertainment System (NES), the modified version developed for the American market.¹ Each offered graphics of a quality superior to its predecessors. In a move that was to set the stage for subsequent developments, the NES was leapfrogged by the 16-bit Sega Genesis, which created 'bigger animated characters, better backgrounds, faster play, and higher-quality sound.'² The PC then entered the increasingly competitive fray, along with following generations of consoles, each sold to a large extent on their capacity for the provision of improved graphics. Other factors have also played an important part in this process, of course. Greater processing and storage capacity also creates scope for new developments in gameplay, and for innovations such as the capability for console online play introduced by the Xbox.

Advancements in technology alone have never been sufficient to guarantee success, as demonstrated in the 1990s by the failure of the then state-of-the-art consoles, the Atari Jaguar and Trip Hawkins' 3DO. The dominance gained, at various stages, by companies such as Nintendo, Sega and Sony was the product not just of innovations in technology, but also in marketing, cultural positioning and the provision of a sufficient supply of appealing games.³ That said, it remains true that the promise of improved qualities of sound and visuals – and especially the latter – has been a major component in the engine that has driven forward developments in games platforms; probably the single most important – or, at least, most prominent – factor. As far as the PC is concerned, it is widely accepted that the demands of gaming play a central role in the advance of the technology as a whole, gameplaying being one of the few activities that requires the higher-end capabilities – especially in graphics cards – of most domestic machines. Improvements in gameplay might result from the purchase of new PCs or consoles, but these are generally less immediately obvious and less easy to feature in the marketing of both games and platforms. Improved graphics lend themselves more readily to such processes, creating eye-catching impressions that can easily be translated into promotional artwork.

Much the same goes for many games themselves. A common feature of sequels to popular titles such as *Colin McRae Rally*, *Tomb Raider* and *Resident Evil* is that sound and visual qualities are improved, usually in

the direction towards a greater impression of verisimilitude, to a larger extent than basic gameplay is developed. As is often the case with new-generation consoles or PC graphics cards, increased realism tends to be emphasized in marketing. For *Tomb Raider: Angel of Darkness*, for example, a press release boasts that: 'Fans of the world's most famous cyber-babe have something to get really excited about – she can now be seen in 10 times more detail! The new Lara is made up of over 5,000 polygons as opposed to just 500 in previous games.'⁴

For many commentators, the emphasis put on graphics in the marketing process has had a damaging effect on games, distracting from the core business of providing satisfying gameplay. In the case of *Angel of Darkness*, for example, many gamers found the gameplay to be less compelling than that of earlier iterations, however much improved the graphics. As designers Andrew Rollings and Ernest Adams put it: 'A lot of nostalgic gamers have called for a return to the values of the "golden age" of gaming – the 1980s, when hardware limitations forced developers to concentrate on gameplay.'⁵ Core gameplay activities are, arguably, relatively more important in games produced with limited resources – whether in the past or today, for hand-held consoles or non-specialist platforms such as mobile phones or PDAs – where there is little to disguise or supplement any gameplay shortcomings. Given its typical prominence in the marketing process, and the proportion of the development budget for which it accounts, there can be a temptation to rely excessively on appearances. This is likely to have increased in the move, since the early 1990s, towards a highly competitive emphasis on resource-heavy 'photorealism' in games, an effort to produce images that aspire to the higher resolution qualities of still photography, film or television.⁶ A significant part of this process was the move from the blocky features of early 2D games to the closer-grained, texture-mapped, multi-polygon constituents of 3D graphics. Almost everyone who writes on this subject has examples to cite of updated 3D versions of earlier games in which gameplay suffered, directly, from the transition to a more fully realized, less abstract appearance (cases cited by Rollings and Adams, for example, include *Robotron* and *Centipede* [initial versions, both 1982], although they also point to instances in which updates have been more successful in maintaining the old game mechanic).⁷ The creation of more realistic graphical environments remains an issue of central interest to

those working at the most technical end of games production, however, even if for specific reasons of their own. Commercial considerations do much to shape the environment in which they work, but an investment in graphical realism for figures such as the game-engine designer John Carmack can be located in the intrinsic satisfaction of finding elegant solutions to technical challenges.

It is not surprising that many gamers and designers are suspicious of the emphasis often put on 'cosmetic' issues such as graphics quality, with its often concomitant emphasis on increased realism, especially given the extent to which this is seen as a marketing-led phenomenon. Such suspicions risk an overstatement of the case, however, a rejection of the importance of graphics that fails to attend to the considerable contribution they can make to the overall gaming experience. Graphics are one of the constitutive elements of the 'videogame' as a distinct entity, whatever relative importance they are accorded; the precise *qualities* of the graphics on offer, generally or in particular examples, have, therefore, to be accorded some significance if a full understanding of the form is to be achieved.⁸ Debates on this subject have a shape similar to disputes about the relative merits of gameplay and narrative considered in Chapter 1: an insistence, in some cases, on the 'purity' of core gameplay mechanics, as the essence of games, as opposed to their 'corruption', as it were, by undue emphasis on secondary qualities associated with other media forms. Some designers, such as Crawford, seem concerned primarily with creating games with lasting appeal of the kind found in long-term classics such as Go and Chess, in which case qualities such as level of graphical fidelity are likely to be of secondary importance. The business side of the game industry tends to be committed to a process of constant technological (if not other forms of) innovation, however, founded largely on appeal that is more ephemeral in nature, subject to a constant process of upgrading and reiteration in which improvements at the level of appearances tend to figure largely in the marketing equation. Our argument, as previously established, is that games and the experience of gameplay are complex and multidimensional. Dimensions such as narrative or, in this case, aspirations towards graphical photorealism, or the other qualities considered below, contribute to the total effect offered to players – even if or where they are, ultimately, considered to be secondary. They certainly shape the nature of the games that are

available to play, if only for reasons of commercial convenience, a factor that cannot be ignored, even if some commentators believe it should not be the case. They can also significantly shape the experience of the player – again, whether or not that is always regarded as 'desirable'. Our aim in this book is not to be *prescriptive* – arguing what 'should' be the case, or decrying what some might see as shortcomings – but to analyze existing games and trends and the kinds of experiences they offer.

What, then, is offered to the gameplay experience by graphical and other qualities that stake claims towards greater realism? Why should a greater impression of realism be attractive, and how importantly is it likely to figure in the overall gameplay experience? The degree to which games create such impressions certainly seems to figure as a significant factor for many gamers, as well as to industry marketers. As Mark Wolf suggests, games graphics 'were, and to a large extent still are, the main criteria by which advancing videogame technology is benchmarked by the buying public'.⁹ It is, perhaps, somewhat patronizing to dismiss this dimension of the experience of many consumers of game software and hardware.

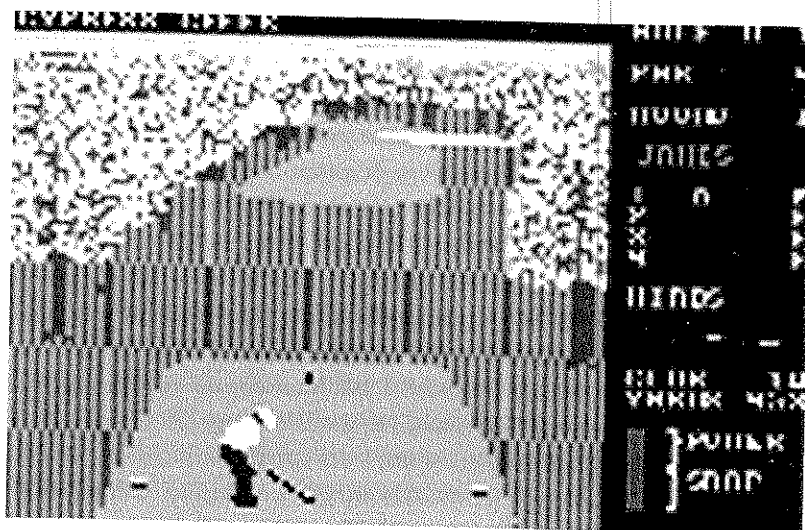
Graphics that offer more closely grained or photorealistic impressions of the world on-screen can increase – at least relatively – the resonance of the experience: the sense of acting within a more realized virtual environment, of inhabiting a 'world'. This effect is not easy to pin down, however, and is likely to be highly variable. A range of factors might be suggested that make it more or less likely that such qualities figure importantly or substantially in the overall gameplaying experience, factors broadly similar to those considered in Chapter 1 in relation to the relative importance of background contextual material such as narrative, genre or ideological resonances. The degree of photorealism achieved by graphics is more likely to figure strongly in some types of games than in others. It might be expected, all else being equal, to be more important in games that are less fast and furious, in which more time is available for detailed consideration or exploration of the on-screen world (hence the prominent place of *Myst* and its sequels in the historical record of games celebrated for the realistic and/or spectacular quality of their graphics). It is especially more likely to be a prominent dimension of the experience in the earlier stages of new games, or initial titles supplied for a new platform. Improvements in qualities such as realistic visual

textures and sounds offer a novelty effect that can be appealing in its own right, but that is also likely to wane over time. We quite quickly become accustomed to a new level of textural detail, taking it for granted and becoming habituated to what it offers – at which point it is, generally, more likely to recede relatively into the background. As in the case of narrative, genre and other contextual material, the admiration of the qualities of graphics is also less likely to figure during the most frenetic periods of gameplay, in which insufficient cognitive resources might be left for the appreciation of the aesthetic dimension. The orientation of the individual player is another important factor. So-called ‘hard-core’ gamers, extremely familiar with a particular genre, are probably less likely to be seduced by improvements in graphics and more concerned with getting to the ‘stripped-down’ basics of core gameplay mechanisms or innovations at this level. More casual players are, on balance, more likely to be impressed by new generations of graphical realism and texture fidelity. This association with the mass-market gamer, rather than the core enthusiast, is one of the factors that has contributed to the dismissal, by some, of the importance of the ‘graphics quality’ component of games, a potentially somewhat elitist approach.

The question remains, though: what, exactly, is the basis of the appeal of graphics and other effects sold and experienced as ‘more realistic’? This might be divided into two parts. First, pleasures might result from the sheer quality of graphical resolution alone, in its own right, an issue that overlaps into the subject of the second section of this chapter, where we consider the spectacular qualities offered by some games. Second, improved graphics quality can contribute directly to gameplay itself, rather than remaining an essentially secondary phenomenon, a point that is often overlooked.

A noticeable improvement in degrees of resolution – as, for example, in direct comparison between one iteration of a game and its successor – can create a sense of greater visual plenitude, of richer sensory experience, that is inherently pleasurable. Pleasure, here, lies largely in the quality of difference; a supplement measured in relative rather than absolute terms, what one iteration or addition to a genre adds to its predecessors rather than how close it comes to the qualities of an external point of reference. This pleasure includes a celebration of the capacity of the technology itself, a significant factor in games as in other media such as special-

effects oriented cinema.¹⁰ This can be the case regardless of whether the on-screen world in question is intended to be a work of fantasy or one that has an identifiable real-world referent, although an additional impact might be created in the latter. *The Getaway* is a good example. Part of the pleasure of the game results from a combination of graphical-realist detail in itself and the fact that this is used to recreate aspects of the real-world geography and landmarks of central London as an environment within which gameplay tasks are set. For the player familiar with this landscape, an extra degree of *frisson* is created, potentially, the result of a process in which photographs of real buildings, objects and surface textures are mapped onto wire-frames to create a 3D environment recognizable in real geographical terms (albeit with some game-task-specific geographical licence). The same could be said of the more spatially limited arenas used in many sports-related games: models of real, identifiable stadia or real-world golf courses, for example (for which licences usually have to be obtained). There is a significant difference between playing a game set in a relatively identifiable or convincing simulation of an actual real-world environment and one in which a more generic equivalent is used (or in which the referent is from the real world but the quality of resolution makes it less recognizable as such). The experience of driving at high speed around the simulated London of *The Getaway*, chasing enemies or seeking to escape from the police, adds an extra dimension to the equivalent experience in the generic ‘New York’ and ‘Miami’ clones (Liberty City and Vice City) found in *Grand Theft Auto III* and *Vice City*. A similar difference of experience is found in playing a fantasy golf course and a simulacrum of a widely recognizable course such as St. Andrews – provided that the graphics reach a certain quality threshold, the precise location of which remains relative rather than absolute. To play ‘St Andrews’ in *World Class Leaderboard* (1986) on the Commodore, for example, or subsequent versions on platforms such as the Sega Genesis, is to engage with a graphics simulation restricted, by today’s standards, to broad and blocky fields of colour. The resulting experience is more abstract than that offered by a recent title such as *Links 2004* (2003), in which the famous course is simulated at a much greater and more concrete level of detail. Aspirations towards greater realism at the level of image resolution alone can apply equally to real and imagined courses, however, just as it can also to the rendering of the environments of many



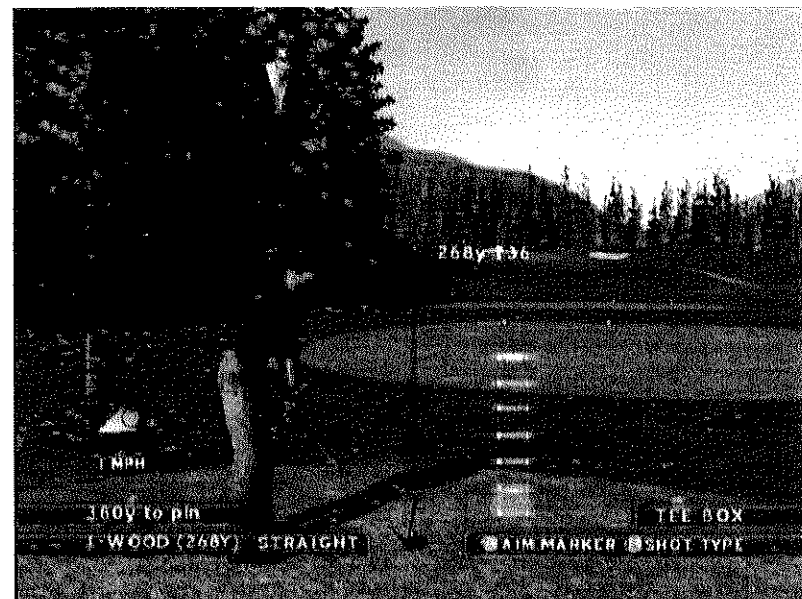
9. Golf simulation in broad and blocky fields of colour: *World Class Leaderboard* (1986) on the Commodore 64.

games set in worlds associated with science fiction and/or fantasy. Even if an environment or character bears little relation to what we might encounter in the real world – a scaly bipedal lizard wearing armour and wielding a sword, for instance – a high level of detail in appearance and movement can increase the degree to which it seems believable, in its own context, no matter how fantastical its nature.

Greater degrees of image resolution, creating more realistic textures, can also add significantly to the impression of sensory immersion in the game-world. Environments constructed with cel-shading graphics, for example, might be three dimensional, but the impression created by the use of discrete blocks of saturated colour tends to be rather flatter than that created by games that use texture mapping and other means to build surface variation. An increased impression of space that can be occupied by the player-character is created by the use of texture mapping and a variety of other techniques employed to increase the subtlety with which such images are constructed: anti-aliasing (to smooth blocky edges), bump-mapping (to create random deviations in a plane), vertex and pixel shading (dynamic lighting), depth fogging (to create a greater sense of perspective), raytracing (to create shadows and reflections), particle effects (to create clouds, mist, smoke, fire effects), keyframe interpolation

(for complex facial movement and speech) and the DirectX pipeline (to create better real-time delivery of graphics/data).¹¹ To stand the player-character on the tee of some earlier generation golf games, for example, is to be given the impression of facing what appears to be a largely two-dimensional flattened picture of a hole. Later games such as *Links 2004* create a much stronger sense of looking into a substantial three-dimensional space into which the virtual ball can be hit.

Higher standards of resolution are measured to a large extent by the degree to which they remove the more obvious reminders of the status of the game as a construct. Increased realism is largely a matter of the reduction or disappearance of obviously pixelated or flat-plane surfaces in favour of more subtle and closer-grained textures, the constituents of which are less clearly drawn to the attention of the player. The world of *Actua Golf 2* (1997), for example, on the PlayStation, is one in which the building blocks of vegetation in the landscape are clearly on view and in which trees appear to shuffle around on-screen in any sequences involving movement of the in-game camera. In *Links 2004*, detail is much more



10. The much more 'photorealistic' simulation of golf offered by *Links 2004* (2003).

textured and discriminating, down to the level of individual leaves and the stems of smaller plants. Trees, bushes and other forms of undergrowth retain their positions and a sense of solidity when the camera moves (the result of the use of more sophisticated and rapid delivery of data to the screen). A slight agitation effect is noticeable among leaves and plants, although this is motivated at least partly as an impression of wind motion, noticeable as such when the camera comes to a rest. In some cases the issue is one of consistency. *Max Payne* was widely lauded on release for the 'realistic' quality of the graphics of its gritty, urban noir landscape, although it is far from visually consistent. Certain parts of the gameplay screen are more visually detailed than others, creating a patchwork effect likely to draw attention to the issue of variable degrees of realism. Even when the game is run at recommended PC specifications, a marked visual distinction exists between some environmental objects and others. Posters appear on the walls of the Roscoe Street subway station, for example. Many are photos simply pasted into the game environment, as are a number of pictures and paintings that appear in domestic interiors. These flat two-dimensional objects have a smoothly detailed quality that contrasts quite strongly with the rest of the gamescape. When Payne stands in front of one of them, the rather harsh 'blockiness' of the character is drawn to attention. Particle effects used for representations of fire and explosions also produce a more than usually realistic effect, with a visual complexity not matched by the surfaces used for larger segments of the environment. The game benefits generally from the use of texture mapping, based on the use of photographic sources, creating greater differentiation of tone in individual surfaces; but this, too, is not applied uniformly. One of the principal advances of the sequel, *Max Payne 2: The Fall of Max Payne*, is the creation of a more seamless and consistent aesthetic. Many of the planes from which 3D objects are comprised are less distinct than in the original. Objects are generally more rounded, their planes more smoothly integrated. This is most obvious in a comparison between the shape of Payne's head in the two versions. The Max Payne of the sequel is less 'squared-headed', the planes of his face far less noticeable as distinct features when seen in profile. Complexity of detail is more evenly distributed across the whole visual field, including Max himself, rather than restricted to the more localized zones of greater photorealism characteristic of the original.

If graphical realism is, essentially, a relative quality, degrees of difference can be located between games or between versions of games, or, as in the case of *Max Payne*, within an individual title itself. One of the most obvious instances within games is the gap that often exists between pre-rendered cut-scenes and in-game graphics limited by the demands of real-time delivery. In *The Lord of the Rings: The Return of the King*, for example, cut-scenes are often comprised of material lifted directly from the film series, creating a very noticeable difference in graphical quality even though the transition into gameplay is otherwise relatively smooth. In the *Final Fantasy* series (from 1989) – among many others – cut-scenes are of higher resolution and exhibit more mobile characters and camera effects than the playable parts of the game. A similar effect in *Enter the Matrix* is given motivation by the narrative context: cut-scenes are presented as located in the 'real world' of the game while gameplay occurs after transition into the computer matrix of the title, although this is a rationalization that contradicts a key point of the film series – the fact that the world inside the matrix is realized at a level of detail that makes it indistinguishable from everyday reality. In each of these cases, the relatively low-level graphical resolution of the playable parts of the game is likely to be drawn to attention by juxtaposition with more photorealistic or cinematic cut-scenes. Other games, such as *Halo*, have sought to avoid this problem by using the same engine to generate both cut-scenes and gameplay, leaving little distinction between the two. This might mean having lower-grade cut-scenes but has the benefit of creating a more uniform aesthetic in which the relative limitations of gameplay graphics are less likely to be drawn to attention. The *Max Payne* titles demonstrate a rather different approach. Here, the role of cut-scenes is performed by comic-book style static panes that employ a painterly, almost impressionist style in which brush strokes are clearly visible and the bleeding of colour and blurring of lines creates a somewhat dream-like quality. In this case, the effect of comparison between these and playable sequences is to make the latter seem the more solidly 'realistic'. A similar phenomenon is created in *Manhunt*, although more ambiguously: low-grade CCTV-style footage used for cut-scenes increases the comparatively photorealistic impression created by higher-resolution gameplay sequences – although the low-fi CCTV effect has itself become a cultural signifier of access to the real.

To what exactly is being aspired in the search for greater realism is not a simple matter, however. It is not just a question of seeking to mimic an unmediated impression of the real, exterior world. Two points of orientation often come into play. One, looking backwards, is the standard of previous entries in the field, as suggested above. Games make claims to realism on the basis of comparison with what has gone before. But looking towards the ideal against which existing qualities are measured, the benchmark is as often set by other forms of mediation as it is by the ultimate real-world referent. In golf games, for example, and most other sports simulations, the primary point of reference is television coverage of the sport, rather than the experience of the sport itself. Perspectives provided on the action are, generally, closely correlated with those typical of such coverage: shots from behind the golfer during the swing, for example, aerial footage of the ball in flight, fly-by previews of holes, and the wry musings of commentators, often voiced by real-world broadcasters. It is in the moving-camera fly-by sequence in *Actua Golf 2*, for example, that trees appear to shift around in their most distracting and cartoonish manner; what *Links 2004* simulates so much more convincingly, in audio-visual terms, is the impression of a helicopter-mounted TV camera flying over a real hole, as much as the immediate experience of play itself. Devices such as simulated lens flare, created when shooting with a real camera towards the sun, are used in many games to signify the impression of action being witnessed in already-mediated form. Relatively few sports games, in fact, offer the player a first-person perspective, as if inside the experience. 'Replay' sequences available in many also mimic television coverage, in this case creating an objectified impression of the action completed by the player: the effect here is to create a sense of the player having participated in something akin to the 'real thing', in its mediated form, especially where the player's performance is sufficiently good to stand visual comparison with the professional equivalent or the computer-controlled competitors (*Links 2004*, for example, offers a 'highlights reel', recording the best moments of a completed round). For many action and action-adventure type games, the benchmark, as far as audio-visual qualities are concerned, is cinema or television. Games often create their impressions of realism or immediacy precisely through their use of devices familiar from other media – as, in their own realm, signifiers of verisimilitude or immediacy

– as is suggested by the use of the term 'photorealism', implying as it does a second-order realism, an impression created through reference to another form of mediation.¹²

Improvements in graphical resolution are not just a question of aesthetics separated from gameplay, however. The two often work together. Graphics establish the setting in which gameplay occurs, thus creating many of the parameters within which gameplay has to operate. Leaps in the quality of graphics can, in their own right, contribute directly to the quality of gameplay: creating the impression of a real golf or driving simulation, for example, in comparison with sketchier earlier standards, in which a sense of taking part in a version of the real-world equivalent seems more notional and abstract. According to Jason Rubin, co-founder of the Sony subsidiary Naughty Dog, improvements in graphics have driven sales to date by making games both look *and* play better. This has been the case, Rubin argues, during 30 years of technical improvements, a series of leaps forward having been experienced in each successive move from early games to eight bit, 16-bit, 32-bit, early 3D and the state of the art in the early 2000s.¹³ Particular gameplay effects can also be dependent on quite specific thresholds of visual resolution. In the stealth game *Thief* (1998), for example, as Katie Salen and Eric Zimmerman suggest, it is essential that the standard of visual representation is such that the player can distinguish between areas that are well lit and those in shadow, because the distinction is a key aspect of gameplay: the ability of the player-character to use shadows to avoid detection.¹⁴ The stealth feature of the game would not function in a graphical environment in which this distinction could not clearly be maintained. The same goes for many other titles in which stealth is an important factor. In some cases, higher-resolution graphics provide a level of detail required more locally, in examples such as the solution of visual puzzles. In *Prince of Persia: Sands of Time*, for example, the player-character is required to manipulate a series of visually complex gears in order to align particular symbols and gain access to a new area. Puzzles of this kind appeared in many previous games, but in this case a greater degree of complexity is made possible by a high level of close environmental detail.

Greater levels of graphical realism can make it much less arbitrary-seeming to locate mechanisms such as the ubiquitous switches, levers and other objects that need to be manipulated as part of the core gameplay of

many games, especially in the action/adventure formats. If such devices cannot be represented in something akin to their real textural detail, they have to be made to stand out in other ways, which makes them more arbitrary and less well-integrated in the game-world. With higher qualities of graphical realism, they can be identified in terms closer to what might be experienced in the real world. Need a stake to dispatch marauding vampires in one of the *Buffy* games, for example? Find a wooden bench or crate and break it up to create a suitable weapon. Without the use of reasonably convincing texture maps it might prove difficult to distinguish between objects supposed to be made from different materials. Have to jump across a yawning abyss, requiring close attention to where exactly the edge lies? Greater graphical realism might help the player to be more precise in determining exactly how far it is safe to go. None of these actions are impossible in games in which graphical detail is more limited; but they can be made more satisfying, as part of a relatively more immersive experience, once certain thresholds of recognizability are reached.

With greater processing power, game designers can construct more complex environments, containing wider ranges of interactive objects. This may open up the environment to support different ways of achieving central gameplay tasks. In earlier action/adventure games, the 'crumb-trail' laid down to enable players to work their way through the gamescape is often quite clearly visible as a result of anomalies in the level of graphical reproduction. In the early *Tomb Raider* games, for example, a section of wall that stands out because it is coloured slightly differently from the rest is likely to be a visual clue that it (alone) will respond to a particular action. This might be helpful to the player, on one level, as part of the exploratory infrastructure examined in the previous chapter. An entirely uniform quality of representation might, in this sense, make gameplay harder. The fact that this is still seen as a useful device is demonstrated by its continued use in later games such as *Buffy the Vampire Slayer: Chaos Bleeds*. In the Sunnydale Zoo level, the player-character is required to smash a sheet of plate glass in the reptile house to reach a wall panel that leads to the next area. That this particular pane, among others, needs to be broken is indicated by the presence of a frame outline on the rear wall of the exhibit, the area inside the frame being coloured slightly differently from the rest. Visual clues such as these are convenient devices, saving

players from what might be the more tedious task of investigating aspects of the game-world at greater length. A trade-off exists here between the demands of navigational aids and the relative seamlessness with which the game-world is presented, although it would be possible to create forms of signposting that did not rely on either hierarchical degrees of graphical realism or obvious highlighting of certain items (or to give players the option of settings in which highlighting could be turned on or off). Greater uniformity of detail can make the task of locating required objects both more realistic and more difficult. In *Max Payne 2*, for example, visual complexity can make it quite hard to distinguish useful objects, such as ammunition, from their background environments, especially when gameplay demands leave little time available. This can be seen as a handicap to the immediate demands of gameplay, but can also encourage the situation of such objects in locations that seem less arbitrary and more integrated into the game-world: power-ups in the form of pills, for example, found in appropriate locations such as bathroom cabinets.

To offer high levels of detail in some areas is to create a similar expectation in others that might not be fulfilled; the result can be to attract attention to shortcomings that might not otherwise become an issue, as in the first *Max Payne* game. The increased level of visual character detail that comes with upgrades to *EverQuest* tends to make the rest of the world look relatively sparse, for example; to improve detail throughout might be desirable, but would cause problems of processing lag, although some attempt to make the world and its inhabitants equal in terms of graphical detail is promised in the sequel, *EverQuest 2*. An example in which consistency of detail is maintained is the single-player *Unreal II*, in which higher levels of rendering are not reserved for characters or for elements that stand out as of particular importance to gameplay. An interior science fiction gamescape is created, full of video screens with moving images, 3D wire-frame terrain maps and detailed console panels with arrays of blinking lights, dials and buttons. Outdoor spaces are also heavily populated, in some regions, with organic rather than cubic-looking plant life. As with the more graphically consistent *Max Payne 2*, the effect is to create a stronger impression of the game-world as a seamless virtual place rather than a functional construct built around a few key gameplay options.

Increased levels of graphical realism can also open up other areas

of expression in games, including a greater dimension of emotional engagement, a quality often seen as lacking in many games. Characters can be made more expressive. The use of motion capture techniques and appropriate sound effects can heighten qualities of anthropomorphism and enhance the capacity of characters to be made to express emotion. This has been one effect of incremental upgrades to *EverQuest*, increasing the visual detail provided in the case of both player and non-player characters. In first-person mode, player-characters cannot see themselves, but they can observe the reactions of others, both visual and audible. In a world reliant on text-based communication between players, touches such as this – yelps synchronized to mouth movements or animated ‘social-emotes’ such as doing a dance of joy to celebrate the accomplishment of a task or doubling up in laughter – compensate for a lack of emotionally rich speech, helping to animate and vitalize the inhabitants of the game-world in a richer and more responsive manner.¹⁵

A combination of detailed graphics and expressive qualities also breathes an added sense of life into the central character of the fantasy-based action-adventure, *Prince of Persia: Sands of Time*. In this case, a third-person game, the central character is visible to the player: a highly acrobatic and mobile figure with a movement profile built from a large library of motion-captured elements. In terms of graphical representation, action and verbal reactions, the prince creates an impression of rounded, emotionally rich character rare in the world of games at the time of its appearance, with attributes designed to be relatively closer to those of figures more normal-seeming than the super-tough characters typical of most action-adventure titles. Balanced precariously on one of the game’s many vertigo-inducing ledges or tightropes, for example, he often struggles to maintain balance, flailing his arms and emitting cries that express human fragility and a recognizable reaction to environment – responses that, in contrast with the cool and silent manner of a figure such as Lara Croft, are designed to solicit the concern of the player to ensure the character does not come to harm. Graphics capable of making characters more expressive can, in the process, make a significant contribution to the narrative dimension of games, helping to communicate both story-related material and emotional resonance. As Drew Sikora puts it: ‘graphics in games today are no longer used merely for “eye candy”, but as visual effects to help tell a story that the player can internalize and enjoy.’¹⁶

Greater degrees of realism, in aesthetic terms, can also raise the stakes involved in a number of more contentious issues related to games. The whole question of violence in games, a subject of frequent moral panic, is likely to be heightened by every increase in the verisimilitude of in-game representation (an issue to which we return in Chapter 4). One of the principal defences used by the games industry, in the face of threats of more stringent regulation, has been the fact that game violence is usually comic-book style rather than realistic, and as a result more clearly marked off as essentially non-serious and unthreatening. If higher standards of resolution have the potential generally to make gameplay activity more rich and meaningful, as seems likely to be the case, the same applies to what many see as the potentially disturbing aspects of some games. A significant difference of experience might result from the blasting of a fuzzy bunch of pixels – whether representing a fantasy monster or a human figure – and the shooting in finer-grained detail of something more closely resembling a fully realized being. In gameplay terms, of course, this might have the benefit of enabling players to target enemies more precisely, where shots at heads or chests result in cleaner kills and resultant savings in ammunition.

How far increased levels of graphical realism will continue to contribute to gameplay remains subject to debate. Jason Rubin argues that graphics will keep improving, but that the return in terms of gameplay is rapidly diminishing.¹⁷ Recent leaps in graphical quality have been smaller than those of the past, he suggests, the pay-off at the level of gameplay being incommensurate with the level of technical advance and the costs incurred by developers. Beyond a certain threshold of high-resolution 3D, he suggests, mass-market gamers will cease to be attracted by increased graphical quality alone because there is no scope for a future shift that has an impact equivalent to the move from early abstraction to more realized 2D, or from 2D to early 3D or early 3D to a more fully realized 3D: ‘there is no 4D’.¹⁸ If graphical realism has been substantially more than just icing on the cake in the past, this will cease to be the case, forcing developers to look elsewhere to attract consumers. At this point, Maic Masuch and Niklas Röber argue, gameplayers might be attracted by a range of more artistic, non-photorealistic graphical styles.¹⁹

Sound can also play a strong part in the creation of impressions of realistic texture. If sound effects often serve to increase the effect of

sensory presence created by games, as suggested in the previous chapter, they can also be deployed in a manner that is more or less realistically layered or modulated. In earlier games, sounds often exist as separate and discrete events, appearing one at a time. The function of sound in some such cases is to provide aural signification of activities, such as the picking up and putting down of objects, that could not be presented graphically because of very limited resources. *Doom* marked a significant step forward, producing a range of different sounds simultaneously, closer to the manner in which sound is experienced in the real world. Sounds are often abruptly cut short in *Doom* when new events are triggered, however, resulting in a jarringly disjointed soundscape. A more seamless impression is created in subsequent titles such as *Max Payne 2*, in which sound-bridges are often used to smooth breaks between one part of the game and another (from cut-scene to gameplay sequence, for example). More generally, naturalistic sound effects often contribute to the extent to which the game-world provides a realistic sensory impression of its real-world equivalent: the sounds of objects in use, from keys turning in locks to the sound of swords clashing in battle; the sounds of the footsteps of player and non-player characters, or aural responses to changes in environmental conditions such as the use of echo effects in large underground chambers or the reverberation of engine noise when a racing car enters a tunnel.

Recordings of 'real' sounds can provide compensation for relatively lower levels of graphical fidelity, contributing to the overall impression of verisimilitude. *Max Payne 2* uses a large number of recorded sounds to construct a complex and multi-layered soundscape. Ambient sound provides a sense of increased dimensionality in interiors, examples including the opening of doors, muffled voices behind closed doors and variable footfalls. The sounds of a thunderstorm are orchestrated in one level to increase the sensory depth of the playing experience. The sound of rainfall is triggered as the player-character steps closer to an open window, the volume increasing as he moves outside. The effect is to sketch the impression of a wider outside environment within which the game is situated, the background of thunder and rain also contributing to the melancholic tenor of the piece. Enemies are often heard before they are seen, a device that provides an aid to the player – providing danger cues – but that also contributes to the realistic effect through the creation

of aural depth, texture and perspective. The effect of depth of aural dimension is reinforced by other devices, including the gap between the voice of Max – close to the player – and that of his accomplice, Mona, 'tinny' and distant, directing his movements via a telephone headset. The intimate presence of Max's voice is also a vehicle for nuances of character emotion.

Digital processing techniques, known as psycho-acoustic processing, are used to heighten the spatial and textural sound effects in *Max Payne 2*, created by the use of the proprietary sound manipulation software EAX and enhanced by the use of high-quality audio recording to provide high-frequency content that makes subtle effects more audible (helped, for the player, by the use of 5.1 speaker systems or headphones). Tiny delays between left and right sound channels are used to fool the player's perception into believing that sounds are coming from sources wider apart than the speakers. Changing the length of the delay makes a sound appear to move, creating a heightened sense of spatial location when combined with conventional sideways panning from one speaker to another. These kinds of effects are used most strikingly in the sound that accompanies the transition to 'bullet-time', the voices of distant non-player characters and the sound of rainfall. Reverberation is also employed to increase the effect of distance between sound-source and player-character. Used in combination, these effects create a more than usually realistic-seeming and dramatic three-dimensional quality to the soundscape.²⁰

'Realism' is a complex term, suggesting the extent to which representations accord not just with the real world, or imagined versions of reality, but also their relationship with other representational forms. Realism in games also needs to be considered at the level of functionality, however, of actions rather than qualities of sound and image, a dimension that very clearly impacts on the core mechanics of gameplay. A greater degree of realism can be created by aspects of gameplay that function consistently, for example, just as it can result from consistency at the level of graphical detail. Objects that fail to act consistently tend to remind the player of the arbitrary character of gameplay, as an abstracted activity, rather than contributing to the broad – however partial – impression of immersion in the world of the game. In *Primal*, for example, one player-character can scale walls, but only some walls, not others, for no reason motivated logically from within the game; similarly, in *Red Faction* (2001)

some walls can be blasted to rubble, but not all. An example cited by Steven Poole is the fact that a rocket launcher available in *Tomb Raider III* (1998) can blow up enemies but does no damage to a simple wooden door. A specific gameplay requirement – the demand that the player finds a rusty key with which to open the door – undermines any greater degree of approximation to the more real-world logical capabilities of the item. As an example of much greater consistency of functionality, Poole cites *Legends of Zelda: Ocarina of Time* (1998), in which many objects can be put to multiple uses appropriate to what would be expected to be their nature in something relatively more analogous to the real world.²¹

In general, a richer and more responsive game environment increases the potential for immersion in the game-world. As with graphical photorealism, the issue is often framed negatively, limitations tending to be more prominent than strengths. Fundamental aspects of the game-world that most closely resemble their real-world equivalents are less likely to be drawn to the attention of the player. As Richard Bartle puts it: 'The more that players don't have to think about interacting with their environment, the less they *will* think about it, and therefore the more immersive their time in the world will be.'²² If gravity pulls people downwards in the game-world, as in the real world, as Bartle suggests, players will simply take it for granted. If gravity does not work consistently – unless specifically motivated by the use of a device such as a levitation spell in a fantasy/magical context – it will be likely to stand out and intrude on the gameplay experience.

All game-worlds *are* arbitrary and limited constructs. They have nothing remotely like the complex functionality of the real world. But a greater depth of functional detail can contribute to the relative degree of immersive illusion that is created, although it can also be a novelty that draws attention to itself. The environment of *Max Payne* is responsive in more detail than most of its contemporaries, for example. Many background items have a degree of functionality beyond that required for central gameplay tasks, as mentioned in Chapter 1. Television sets can be switched on and off and toilets can be flushed. Functional details such as these create the sense of a game-world comprising more than just a series of graphically rendered backdrops. The player's sense of the arbitrariness of activities required for the completion of levels – or just for survival – is reduced a few notches by the fact that it is not only objects

designed for a specific purpose that have any degree of functionality within the diegetic universe. If the sequel increased the level of graphical realism, a similar upgrading is found in the dimension of functional depth: more objects with which the player-character can interact, a further reduction in the extent to which non-mission-critical material is merely inert background. This indicates a situation in which surplus resources are available to the designers, perhaps suggesting that the scope for additional graphical detail has been exhausted on a particular console or graphics card.

Degrees of functional realism are also important for objects more crucial to core gameplay activities. Military games often invest quite considerably in the creation of functionally (relatively) realistic weaponry, set out in sometimes near-fetishistic detail in the manual. A game such as *Medal of Honor: Allied Assault* seeks to replicate some of the key characteristics of different weapons, as suggested in Chapter 1: their relative values in particular situations of close or more distant combat, or specific details such as the difficulty of reloading the M1 Garand semi-automatic rifle when its clip is partially used – framed as both historical fact and a factor to be considered during gameplay. Weapons create a fairly realistic impression of recoil that makes targets harder to hit. When using a rifle with a telescopic sight to pick off more distant enemies, the barrel jumps sharply upwards after each shot, throwing off the aim and putting a premium on one-shot success (missed shots tend to draw the fire of the enemy, the impact of which creates jolts that make aiming increasingly difficult); when using a sub-machine gun, the player has a choice between the greater firepower of lengthy bursts, in which the muzzle shakes and accuracy is lost, or more carefully controlled single shots or shorter bursts of fire. Details such as these appear to be modelled, if only approximately, on the real-world equivalents; such an *impression* is given, at least, for the benefit of those for whom this is an important issue, even in instances where it might be greatly simplified. A clear distinction is apparent between this approach and shooting sequences in games such as *The Getaway* and many others in which devices are available to target enemies automatically, making gameplay easier but several degrees further removed from any kind of functional realism. A particularly controversial example of functional realism in this domain is the use of 'realistic' body hit zones in *Soldier of Fortune* (2000): 26 different

'hit locations' are structured into the bodies of non-player characters, which respond differently – 'appropriately' – depending on the aim of the player: characters shot in the lower body scream and writhe with pain, for example, rather than dying instantly.

A broad sense of some reality-equivalence of functionality is also implied in real-time strategy games such as the *Command and Conquer* and *Age of Empires* series. Details of the relative capacities of different military units are provided, many of which seem to have some grounding in real-world equivalents (obvious examples being the fact that archers in *Age of Empires* are more effective from relative distance while swordsmen can only perform in up-close engagement). Details such as these are partly driven by the game-specific need for the balancing of the range of different forces and resources provided to each of the various sides that can be played with and against. The result sought by many real-time strategy titles is a relationship between the different sides equivalent to that found in the game 'Scissors, Paper, Stone', in which each side has its own various potential strengths and weaknesses, none of which ensures either overwhelming superiority or inferiority.²³ Variation in detailed, specific capacities also creates an impression of relatively fine-grained distinctions that contributes to a sense of greater reality of function. This might be based to a significant extent on real-world equivalents, as in *Medal of Honor* and *Age of Empires*, but it can also – like quality of graphical rendering – lend a sense of reality to the more imaginary creations of science fiction or fantasy games, or to reality/fantasy hybrids such as the extrapolations from existing technologies found in many games.

Modes of transport can also be provided in this kind of functional detail, from the military vehicles of *Medal of Honor* to the various cars available in many racing games. Some of the latter clearly invest more in notions of realism of behaviour within the game-world than others. Environmental factors can also be modelled with varying degrees of functional realism. If snow appears on the road surface, its contribution to impressions of realism comes partly in its graphical rendering – not the most difficult of challenges, in this case – but also in the extent to which it adversely affects the handling of a vehicle in a manner at least analogous to its equivalent in the real world: that is, the car skids and loses control if driven, cornered or braked too hard (more or less forgivingly, depending on factors such as difficulty settings or the design of particular games).

The issue of realism-of-function is especially prominent in sports-related games, including many driving-related titles, because, as Rollings and Adams suggest, they take place in environments about which the player is more than usually well-informed from experience, even if this may be the mediated experience of watching on television as much as actually taking part.²⁴ Golf games, for example, offer a number of different types and degrees of realism in terms of their functionality.

Two basic mechanisms have generally been used to simulate the golf swing. The original variety involves a three-click operation, using either a mouse or console buttons. An abstracted graphical representation of the path of the swing is provided on-screen, as an out-of-game-world part of the interface. The player clicks once to start the swing, a second time when the gauge reaches the top of the backswing and again in an area marked as the 'hitting zone'. The swing constructed in this way is then acted out, automatically and separately, by the player-character figure of the golfer on-screen (*Links 2003* [2002] offered a development in which the mouse-click swing was performed in real-time, the on-screen figure beginning its backswing at the same time as the player). The aim is to time mouse or button pressing to achieve the required length of backswing and to hit the ball at the ideal sweet spot at the end of the downswing. Getting the former wrong affects distance; the latter affects quality of contact and/or direction (typically, 'hitting' too early produces a slice off-target to the right, too late a hook to the left). This mechanism replicates one important aspect of a real golf swing – timing – but little else; and the way timing is achieved (or not) is via a device used generically in other sports games rather than having any particular 'golf-ness' (the player has to press a button at the right moment to stop the surging line of a power-meter within pre-set limits, either exactly, for a perfect shot, or approximately, for one that is acceptable; exactly the same is used for ambitious shots in the tennis game, *Topspin* [2003], among many other examples).

Later golf games adopted a mechanism that maps significantly more closely onto the real-world experience: the use of a console analogue-stick controller to produce a real-time version of the swing. The left stick on the PlayStation 2 or Xbox is used to enact a miniature swing: pulled back for the backswing and pushed forward for the downswing. The result is something that feels much more like swinging a golf

club – not as much as the VR equivalent imagined by McHoul in the previous chapter, but an interface mechanism distinctly analogous, in its own thumb-scaled realm, to the real-world action. This also creates the opportunity for further realism at the level of functionality. If the stick is moved jerkily, a poor shot results, as is the case usually with a jerky golf swing. If the stick is moved forward and back other than in a straight line, slices or hooks are likely; this, again, is relatively close to the real-world equivalent, if somewhat simplified. Other aspects of functional realism also feature in some golf games: the fact that the ball is likely to be hit to the left if lying on an up-slope or to the right on a down-slope; that the quality of the lie affects how well the ball can be hit; that various kinds of spin can be imparted to control the behaviour of the ball in flight or on landing. Realism-of-functionality can also extend to the level of the emotional reactions of the player: the creation of very golf-like frustration and anxiety in relation to shot-making. On its beginners setting, for example, *Links 2004* often seems rather easy, giving the novice player the capability of a tournament professional: booming long drives off the tee into the fairway and sending iron shots close to the pin. Bad shots tend to infect the level of play, however, much as they do on the real golf course. While playing well, the swing of the analogue stick seems simple and easy. Once a player becomes self-conscious about the motion, however, usually after a mis-hit, more errors are likely and confidence can easily be lost (and annoyed frustration result!).

The emotional dimension is explicitly built into the mechanics of *Outlaw Golf* (2003), a title that in other respects invests less than major franchises such as *Links* and *Tiger Woods* (from 1998) in qualities such as sober graphical realism and the replication of recognizable real-world courses. *Outlaw Golf* is peopled by unlikely players – thugs and scantily clad women-with-attitude – and favours imagined courses such as a New Jersey links crossed by resolutely un-scenic features such as an elevated highway and a pipeline. The general level of graphical detail is less than that found in *Links 2004*, but an extra functional feature is found in the shape of a ‘composure meter’. Bad shots make the composure meter fall – which tends to make more bad shots likely to follow – while good shots have the opposite effect (true to the ‘tough/attitude’ tenor of the game as a whole, the most effective way of improving composure is beating up your player-character’s caddie, although certain feats of gameplay are

required to earn the ‘beating token’ that allows this to be achieved).

Functional realism at a relatively high level of detail often marks the difference between simple abstraction and more substantial simulation: the difference, for example, between the classic *Pong* and a tennis game such as *Topspin* on the Xbox. Relatively simple abstraction has an appeal of its own, reducing more complex activities to a few clean and satisfying lines, as in the case of *Pong*. As a simulation of table-tennis or tennis, it reduces the game to a very limited number of parameters: basically, a dot to be hit backwards and forwards across a line representing the net. The only real variation available to the player is exactly where on the paddle to catch the ‘ball’; either centrally, to hit it back directly, or towards the extremities, in which case shots can be directed at an angle. Compare this with the more literal transcription of tennis found in *Topspin*. The game is, obviously, more ‘realistic’ at the level of graphical representation, providing a three-dimensional figuration of recognizable tennis players, stadium and court, and a regime of ‘cut-away’ shots and other transitional devices closely modelled on television coverage of the real thing. It is also much more ‘like’ tennis in functional terms, enabling player-characters to produce versions of specific tennis shots, using topspin, backspin, lobs and drop-shots, and to develop strategies during rallies – placement of the ball, playing safer or more risky shots – that also mirror, quite effectively, the real-world equivalent.

There are, of course, limits to functional realism, in these and other cases. This is partly a matter of finite resource capacity and the restrictions imposed by game controllers and gameplaying environments, few of which are ever likely to constitute anything close to a full virtual reality version of games such as golf or tennis. Some games, such as the music or rhythm oriented rail shooters *Rez* and *Amplitude* (2003), bear very little in the way of functional realism; they remain abstract in functional and visual terms, making little reference to the function of real-world objects. Limited functional realism is also a positive requirement of games more generally, however – if they are to remain, precisely, *games*. Too much realism of function would make sports and other games simply too difficult, and would diffuse the definition of core gameplay features. A perfect simulation could only be played really well by the very small number capable of performing to the same standard on a real golf course, tennis court, race-track or other sporting arena. Generally, the whole

point of games is to be easier and, for most players, more fun as a result of the fact that they can achieve things they would find impossible in the outside world. There is a clear difference between what is usually expected from a game and a more substantially realized training simulator (a golf device, for example, in which a real club is used to hit a captive ball, from which a graphically displayed model is produced of the shot likely to have resulted from the actual dynamics of contact; or a highly expensive cockpit simulator used in the training of real pilots). What might often be desired in games is sufficient functional realism to create an impression of 'something like' the real thing – necessary, in games with that aspiration, for the creation of a feeling of achievement, rather than a sense of a game being made too easy, abstract or over-simplified, without this being taken too far, to the point at which the dominant experience might become one of frustration. Where this point might lie for one player or another is far from easy to judge, which is one reason why degrees of functional realism – like other difficulty-related aspects of gameplay – tend to vary, both from one game to another and within the settings available in a single title. *Links 2004*, for example, can be played on three different difficulty settings. The more difficult the setting, the relatively more functionally realistic are the parameters of the thumb-stick swing. On easier settings, the game is more forgiving of swings that shift slightly off-centre. On the hardest setting, errors are punished more severely, and other elements such as wind direction have a greater impact on shots – although it is still much easier to hit top quality shots than would be possible for most players in the real world.

The market for driving games is sharply divided, Rollings and Adams suggest, between those who are happy with an enjoyable if very approximate simulation of something like the real driving experience and those who demand a much closer modelling of the real physics of vehicle-handling at speed.²⁵ Most racing games provide some simulation of aspects of real forces that shape performance, 'career' type modes of play usually allowing for the improvement of various dimensions of performance through the purchase of upgraded vehicles or components. The inclusion of multiple factors determining relative degrees of performance helps to increase the impression of functional realism, while also supplying the constituents of greater depth of gameplay in its own right; ideally, the two can work in mutual reinforcement. The 'fun' element of games for many

players, however, is dependent upon considerable departure from realism of function: the pleasure of belting a virtual golf-ball 300 yards down the fairway quite consistently or whizzing around a race-track, bouncing off crash-barriers and other cars without any substantial damage. A higher quotient of pleasure might result when more work has been required for more difficult success to be achieved – as in the periodic breakthroughs that act as motivational carrots in difficult stretches of a wide range of games – but quicker pay-offs are also desired on many occasions. To cater for both, as Rollings and Adams suggest, many sports games offer a combination of more exacting 'simulation' and more immediately accessible 'arcade' modes, the latter including a greater fudging of key aspects of functional behaviour.²⁶

Other aspects of functional realism are often downplayed very strongly. In war-based games, for example, whether first/third-person shooters or strategy games, particular weapons and units might be simulated with a degree of authenticity – but the extent to which they are put into action is not. The number of actual instances of direct combat is enormously exaggerated in most if not all such games. The real experience of warfare is, generally, governed by very long periods of tedium and discomfort, only occasionally punctured by moments of combat action, in which the act of directly killing an enemy in close combat is a rarity. To mirror the American military experience in Vietnam, for example, would be to factor such features strongly into the gameplay – which might make for an interesting and original title, but not one likely to appear on the game-shop shelves. What games offer is a variable blend of elements that aspire or make claims to different kinds and degrees of realism – and that simplify, stylize, reduce or exaggerate as a result of, on the one hand, capacity and other limitations and, on the other, the positive requirements of enjoyable play. This is a balance central to gaming both today and back to the origins of the form, as David Myers suggests in the case of *Spacewar* (1962), the design and subsequent modification of which was shaped by two sometimes conflicting sets of rules: those of simulation and those of play.²⁷ As the game was modified, in successive versions, physical realism – in the modelling of movement and forces such as gravity – was reduced, precisely in order to increase the specific quality of play.

Are there any games that offer complete functional realism? There may be one exception: the format that calls upon the player to perform

computer-related activities identical in form to those required in the fictional world of the game. Examples include *Uplink*, considered in the previous chapter, and the puzzle game *In Memoriam* (2003). In the latter, the conceit is that the game-disk has been sent to the player, among many others individuals, as part of an attempt to solve a kidnapping case involving a serial killer. The actions then required are precisely the same as their real-world equivalent would be, once the premise – however unlikely it seems – is accepted. The player has to engage in activities such as the use of internet search engines to explore both planted and pre-existing real-world information resources. The villain is framed as a crazed genius, fond of setting puzzles and mini-games designed to exasperate the player/detective, a device that produces perfect motivation for the most arbitrary of tasks imposed on the player: the whole point, in the diegetic universe, is that they *are* arbitrary games, the gameplaying arch-fiend being a narrative prototype familiar from other serial-killer fictions. The impression of overlap between real and fictional world activity is increased by the use of the player's email account as another source of information. 'Mixed reality' or location-based games go further in blurring the line between game and real world spaces and activities, examples including *Bofffighters* (2001), produced in Sweden, in which mobile phone text-messaging is the principal medium for locate-and-destroy contests between players in real urban environments. Physical movement and the locating dimension of the game are, functionally, fully realistic – although not the destroying, of course, reduced to the sending of a 'shoot' message when the target is within range, or the being-destroyed, which entails a web-based 'recharging of batteries' before the player can rejoin the game.²⁸

Spectacle and Sensation

Realism at the level of graphical representation can reduce the extent to which the attention of the player is drawn to the issue of image-quality itself, especially when enacted in a consistent manner on-screen. It often declares its status as realism, however, especially in the context of the heavy emphasis sometimes put on such qualities in marketing and other discourses surrounding the playing experience. Realism might, in one sense, be intended to create a relatively transparent effect, based on not drawing attention to deficits in the level of representation achievable in

the playable parts of games, or reducing somewhat the gap between visual resolution in games and audio-visual media such as film and television. But it also offers what can often be termed a 'spectacle' of realism: degrees of graphical realism that are flaunted and designed to be admired as striking or impressive images in their own right. As a form of spectacle of this kind, as in other respects, realism can be a source of appeal in the realms of either real-world reference or more outright fantasy. The *Max Payne* games, for example, offer environments that tend to be somewhat dingy and functional – office spaces, warehouses, apartments and the like – rather than being inherently spectacular. Spectacle is offered at the relative (in game terms) level of detail or consistency with which such environments are reproduced, especially for players equipped with the most up-to-date graphics cards or consoles. Other games offer environments that lend themselves more obviously to the production of spectacular vistas: the various exotic locations of *EverQuest* or the *Tomb Raider* series, the swirling voids and strange other-worldly landscapes of *American McGee's Alice*, the planet-scapes of *Halo* or the multicoloured pulsating-neon computer interiors of *Rez*.

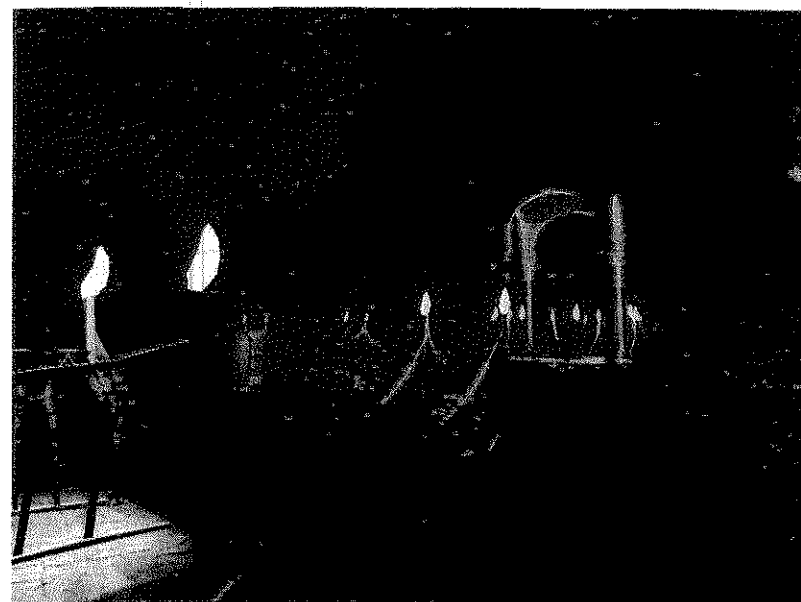
Spectacle is found in games in a number of different forms, including spectacular audio-visual effects realized by the actions of the player. One possible starting point is to consider two different modes of spectacle also found in recent/contemporary Hollywood action or special-effects oriented cinema – as a source of both comparison and contrast with the way spectacle is located in games.²⁹ Some forms of game and cinematic spectacle invite the player to (in effect) sit back in a state of admiration, contemplating the scale, detail, convincing texture or other 'impressive' attributes of the image. Others seek to create a more aggressive, explosive and 'in your face' variety of spectacular impact (although the distinction is not always entirely clear-cut). In cinema, the more contemplative variety tends to offer longer and more lingering spectacular vistas while the latter is more reliant on rapid montage-style editing and/or camera movement to create its visual impact.

The more contemplative variety invites the *look* of the viewer or player while the 'impact aesthetic' offers something closer to an assault on the sensations, a vicarious impression of participation in spectacular action/destruction on-screen. These map onto games to some extent, but with some crucial differences. Spectacle of the contemplative variety

is offered by some videogames, although it is more likely to figure prominently in some than others, particularly in slower-paced games (or slower moments within particular titles), as suggested above in relation to the appeals of graphical realism more generally. New or unfolding spectacular vistas – including those supplied in the form of cut-scenes – are frequently offered as reward and incentive for the completion of particular tasks, sub-sections, levels or entire games. Spectacular vistas can offer compensation for periods in which players become stuck or are forced into repeated attempts at a task, although the opposite might also be the case: pleasures created by even the most spectacular and impressively realized environments are likely to wane as a level or section is failed and restarted for the umpteenth time. Sources of spectacle range from large-scale aspects of the game environment – spectacular imagined landscapes – to closer detail, including the qualities of design and motion of player- and non-player characters.

Many games include large-scale ‘vista’ shots in their expositional cut-scenes, partly to establish a sense of space in the player’s mind, but also often as an enticement to explore the game-world. A panorama of global scale is found at the start of *Age of Mythologies*, for example: the camera pulls out from a localized scene to show a complete world on which various landmarks are viewed along with figures of people going about their various tasks. *Spellforce: Order of the Dawn* (2004) offers a pre-rendered opening cut-scene that leans heavily on the type of fantasy-oriented cinematic spectacle provided by the *Lord of the Rings* films. Swooping camera movements arc between violent subterranean volcanic activity, a vast battlefield through which it explodes and the conflict between two arch-foes that takes place in a tower high above the main battleground. The visuals, rendered in high quality animation, create an impression of dynamism and exhilaration, although the in-game imagery is not of a comparable standard.

Quieter varieties of spectacle are also found, as in the glowing and airbrushed, dreamlike quality of *Prince of Persia: Sands of Time*, suited to its Arabian Nights fantasy setting. At certain moments in the game, the usual pattern of jumping and fighting activities is halted to allow the player-character to admire strange new spaces, clearly marked as magical dimensions existing outside the normal diegetic environmental fabric. In a section titled ‘Did I really see her?’, a dark, enclosed passage is



11. Spectacular vista: the bridge-crossed void in *Prince of Persia: Sands of Time* (2003).

entered, to the accompaniment of non-diegetic, low-key tinkling-bell sounds of the kind often used to figure the presence of magic in fantasy games. The screen goes entirely black, disorienting the player. Out of the darkness, a spectacular vista appears, framed by an elaborate golden arch in which the player-character stands. The virtual camera is located at a distance, behind and above the character, to maximize the depth, scope and impact of this new and ‘othered’ space. Stretching out below is a bottomless smoky-blue void, criss-crossed by rope-and-wooden-slatted bridges strewn with torches emanating an unearthly blue glow. ‘What the...?’, asks the character, as he takes in the spectacle, cueing the player to join him in regarding the space with contemplative awe. In this case, the fantasy-world-within-fantasy-world also serves a functional purpose, as the player-character crosses a bridge to find a health-increasing magical fountain. Magically transported back to the confined hallway of the palace, we hear that he now feels ‘wonderful’, a term that captures both the ‘wonder’ of the world he has visited and the increased ability gained as a result.

Many games draw on the rhetorics of visual spectacle associated with established genre territories, especially science fiction, horror and high-fantasy. Early games with limited graphical resources, such as *Space Invaders*, used the black void of outer-space as merely the backdrop for gameplay, the emphasis being on intensive gameplay rather than space as a source of spectacle. Later games provided space and planetary vistas closer to the equivalents found in film and television science fiction. Despite being rather blocky in its graphical qualities, the slow-paced puzzle game *Dig* (1994) presents images such as Earth as seen from space, asteroids and glowing celestial bodies, as well as depicting the landscape of a desolate planet. Similar environments are realized in greater detail in later science-fiction oriented titles, from the fine detail of the spaces of *Unreal II* to the spectacle of a pair of alien moons rising against a purple sky in *Halo*. In horror games, the dominant source of spectacle lies in the visceral and the monstrous, in assorted weird and wonderful forms. Spectacle serves here not just to solicit the gaze of the player but also to unsettle.

Environmental spectacle that evokes myth, magic and mystery is particularly important to games set in high-fantasy locations, which often create extensive worlds composed of various differently styled landscapes designed to engage the look of the player journeying towards the achievement of particular quests. High-fantasy offers much that lends itself to spectacular visuals, its imagined medievalist past providing imagery such as highly decorated guildhalls, temples, castles and fortresses, and landscape features ranging from the volcanic to deserts and seascapes. The gaze of the player is often the first thing to be engaged by a dark forest that harbours ancient ruins and fabulous beasts, or impressive cityscapes such as Vah Shir, home of the cat people in *EverQuest* – before the striking impression gives way to renewed emphasis on performance of the game-tasks in hand. Many players of *EverQuest* and other such games spend a great deal of time travelling to see the different spaces of the game-world, acting like tourists of the virtual landscape (maybe even snapping photos with the game's screen-shot facility). Such activity is promoted in some cases by the fact that certain spaces are only available for short periods of time.

Spectacle can also be found more locally, sometimes used to mark out significant and sought-after objects. In Warren Robinett's early

action-adventure title, *Adventure* (1978), the object of the quest is an 'Enchanted Chalice', presented with a shimmering effect to express its importance and magical qualities, an impression created by an image that cycles rapidly through the spectrum of available colours. In *Buffy the Vampire Slayer: Chaos Bleeds*, the final boss can only be defeated by the use of a special weapon, Hope's Dagger, an object that is hard-won by collecting the pieces of the character Hope's body throughout the rest of the game. The dagger is presented as a glittering jewelled object that stands out from more utilitarian weapons such as wooden stakes and gardening tools used during the game. Light effects are a frequent source of the more localized variety of visual spectacle, ranging from the neon-glowing body-suits of *Tron 2.0* (2003) to the cloudy masses of glowing colour used synaesthetically to represent different types of collectable smell in *A Dog's Life* (2003). Games that feature the use of magic often use particle-based lighting effects, combined with animation, to indicate the use of spells. A range of different visual effects are produced, for example, by spells cast by key-pad combinations when playing the witch, Willow, in *Chaos Bleeds*. The numerous spells available in *EverQuest* have their own individual spectacular qualities, examples including grasping hands summoned from the earth to claw at a targeted enemy and a spell that produces a large glowing yellow shield around the targeted player. Other spells transform player images into various forms: bears, wolves, or the 'boon' spell that strikingly turns a player-character into a scarecrow with a pumpkin head and light shining from the eyes. The main player-character, Jen, is subjected to spectacular magical transformations into various demon forms in *Primal*: at the player's command, a cut-scene ensues in which she lifts into the air, bends backwards and is surrounded by a glowing starburst (a rather orgasmic image), before changing into monstrous new form and gaining increased powers. Players of *EverQuest* can also buy diversions such as fireworks that have little purpose related to gameplay and can be used to produce spectacle for its own sake – often advertised for the enjoyment of other players.

Lizard-like alien creatures, muscle-bound barbarians, well-stacked warrior women, cute little dragons and hulking monsters: characters and non-playing characters are also potential sources of spectacle in games. Some allow considerable scope for players to map their own 'skin' designs into the game. Player-characters range from the excessive



12. Spectacular transformation: cut-scene in which the principal player-character of *Primal* (2003) is about to shift into new and more powerful demonic form.

in appearance (the likes of Lara Croft and Duke Nukem, the gender-political dimensions of which are considered in the next chapter) to more 'ordinary' figures such as the protagonists of *Max Payne*, *The Getaway* and *Silent Hill*. Spectacular foes range from the skinless zombies, cloven-footed demons and blood-thirsty vampires of horror games to the assorted alien forms found in science fiction. High-fantasy offers its own array of fabulous beasts, from the obligatory unicorns and dragons to more inventive creations or combinations.

Where they are found, the potential pleasures of spectacle designed to attract the 'look' of the player are often interrupted, however, by the immediate requirements of gameplay. Too much idle enjoyment of spectacular environments or other features can be bad for the health of the avatar, who is liable to be shot, eaten or to face some other unpleasant fate in many games if attention is directed solely or excessively to the quality of the surroundings – whether those of landscapes or antagonists. The very notion of 'sitting back' and merely contemplating aesthetic qualities is anathema to most forms of gameplay, the demands of which require, in many games, a more or less constant level of response from the player. The urgency of the need to focus on pressing gameplay

requirements can be a powerful distraction from any close consideration of qualities such as graphical realism or spectacle – a blessing, probably, for games lower in such resources, but also a reminder of the fact that, in the last resort, the demands of core gameplay are paramount. That said, it is notable that even the most frenetic first-person shooters figure among games highly rated for the quality of their visuals: Gamespot's ten 'best-looking' games poll of 2001, for example, included *Unreal* (1998), *Half-Life*, *Unreal Tournament* (1999) and *Quake III Arena* (2000) as well as perhaps more obvious contenders such as *Myst* and *American McGee's Alice*.³⁰ Audio-visual qualities of realism and/or spectacle are likely to be appreciated somewhat subliminally in many cases, contributing to the overall impression created by games but in a manner that is far from always at the forefront of attention.

If the demands of gameplay are often a bar to more leisurely or contemplative enjoyment of spectacle, they clearly offer much potential for the extension of the kind of impact-aesthetic provided by some films. Techniques such as hyper-rapid editing, unstable 'subjective' camerawork and the propelling of objects at high speed out towards the screen are often used in Hollywood action sequences to create a heightened impression of viewer proximity to, or participation in, the action. Some of these are directly mimicked in games, including the impression created of a shaking or unsteady 'camera' at moments of impact on the player-character, as suggested in the previous chapter. Games can go much further, though, in the translation from spectacular action to the creation of intensive *sensations*. Impact that remains entirely vicarious in the cinema can become more literally and physically transmitted to the gameplayer, if in highly stylized forms. The shaking of the camera when the player is under dangerous assault can have effects that are not just aesthetic but functional, affecting the ability of the player to engage in the task at hand (when a player-character in *EverQuest* is subjected to a strong blow, for example, the camera spins, creating disorientation on the part of the player). Impact can also be translated through the various kinds of haptic interface devices considered in the previous chapter.

Combat sequences in many games create a sense of assaultive impact and sensation that can send the pulse racing. Limited scale and relatively low fidelity of graphics reduces the audio-visual impact of such sequences to a level far below that achieved in the cinema, although the 'in-your-

face' variety of impact is increased in a literal sense through the close proximity in which the player is often located to the screen (especially in the case of PC games). Entire new dimensions of impact and sensation result, however, from the central fact that the player has to *respond*. Explosive spectacle in action films impacts *on* the viewer. For action-movie fans, part of the pleasure is one of being 'done to', as it is put by Martin Barker and Kate Brooks.³¹ Action-oriented games offer a similar pleasure of sensational impact, of things happening forcefully *to* the player, via the avatar, but one founded on the requirement for a substantial reciprocal response from the player: a 'doing to' as well as being 'done to', an opportunity to engage with the source of sensational impact: to fight back, to attempt to negotiate difficult and potentially hazardous terrain, and so on. This can entail a frenzied response on the part of the player, as, for instance, in *Max Payne*, in which a difficult shoot-out might be re-attempted rapidly many times in succession in an extremely compressed burst of intense interactivity. If flames and fireball effects come out at the avatar and at the screen in one punishing sequence, in which Max has to be negotiated through a restaurant wracked by a series of explosions, the player has also to plunge him (repeatedly) *into* the inferno – in an active attempt to negotiate the threat – rather than just being assaulted by cinematic dimensions such as jarring and camera-shaking impact.

Pleasures resulting from spectacle and from a physical intensity of engagement are often combined in individual game sequences. In one mission in *The Getaway*, for example, the player-character is called upon to break a villain from a police van near a virtual equivalent of the Old Bailey courthouse. As the player-character arrives close to the scene, a non-player character member of the criminal gang involved in the operation comments 'wait 'til you see this', cueing the player to anticipate something spectacular. A police car escorting the van is then torched as part of the escape plan, a fairly small-scale outbreak of spectacle – after which the player-character is required to chase the van, as it makes off at speed, and eventually crash into it repeatedly to force it to a halt. The player-character has to steer around the blazing police car and then go *full pelt* after the van as it careers off into traffic. The experience is one of great intensity, encouraging considerable peripheral exertion from the player: pressing much harder than functionally necessary on the accelerator button on the console controller, leaning forward and/or from side to

side while dodging other vehicles, *shouting* (fruitlessly, of course) at other vehicles to get out of the way – all of which can be taken as indicators of a heightened degree of imaginary presence in the game-world, as well as being signifiers of immersion in the game *as game*.³² Gameplay of this kind is exciting, and can also be highly frustrating, especially on repeated attempts and in relatively lengthy missions that – in this case – cannot usually be retried only in part. Failure means starting again, which raises the stakes once part of a mission has been accomplished, thus increasing the intensity of investment likely to result in the remainder. A similar kind of intensity is offered by many other games, especially in sequences in which the player is put under increased pressure by factors such as particularly heavy assault, tight deadlines or direct competition with others (human or computer-generated). Examples include the frantic button-mashing characteristic of many beat-'em-up games or the intensity created in racing games when straining 'desperately' to overtake or avoid being overtaken by another vehicle. This kind of pressure can be increased in multi-player games by the sense that the player's actions are being monitored by others, particularly when the fate of other player-characters might also be at stake.

The experience offered by this kind of intensity of gameplay has something in common with one of the four basic qualities outlined in Roger Caillois' typology: games that produce what he terms *ilinx*, from the Greek term for 'whirlpool', the source also of the Greek expression for 'vertigo'. Games which produce a vertiginous experience 'consist of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind.'³³ In its most literal sense, this involves games that entail a physical whirling or spinning of the human body. Impressions of something like vertigo – nausea, at least – can be created by some videogames, especially when played in the first person and when rapidly navigating tortuous spaces, a gaming tradition established by the vertiginous high-speed play of the pioneering first-person-shooter titles *Wolfenstein 3D* and *Doom*. An impression of giddiness can also be created in third-person games such as *Prince of Persia: Sands of Time* by combinations such as the use of high-angled camera positions, camera movement and player-character activities such as balancing on precipitous ledges and swinging across yawning voids. A more displaced sense of *ilinx* is also created by sequences such as the

one from *The Getaway* described above, and many other high-intensity gameplay activities, an impression verging on frenetic paroxysm including elements described by Cailliois such as 'a question of surrendering to a kind of spasm, seizure, or shock'.³⁴ High-intensity sequences can certainly generate, in some circumstances, feelings of frenzy and panic that can override more rational and effective activity (wild shooting in all directions rather than more measured response, for example), just as intensive assault in the real world tends to result in a momentary by-passing of the more rational parts of the brain. Games that contain this kind of material tend also to provide quieter interludes to modulate what might otherwise be an overwhelming and less pleasurable experience; the police-van-break mission from *The Getaway* is followed by a stealth-based sequence that creates intensity of its own, but in a very different, un-frenetic register.

One of the reasons for the prevalence of violence in many games is, almost certainly, the extent to which violent action (and the effort to preserve the life of the player-character) lends itself readily to the production of this kind of intensity, in the same way that it produces a clear sense of action/feedback cause-and-effect in gameplay. Conflict, for Chris Crawford, is one of the defining characteristics of games, and as Crawford suggests, violence is the most extreme form of conflict: 'gorily physical, utterly direct, and maximally intense'.³⁵ For many, including Crawford, the degree to which games rely on these qualities is questionable, on aesthetic as well as moral grounds, demonstrating a lack of subtlety and variation in game design; an emphasis on what Crawford considers to be essentially child-like direct, intense and physical engagement, a niche into which he suggests much of mainstream gaming has become stuck.³⁶ Many games also offer intensity of experience of a less crude variety, however, including the multi-tasking required by real-time strategy games. In the most intensively heightened games, the focus tends to be relatively narrow, as in the heat of the action in a first-person shooter, in which concentration is focused on the immediate tasks of navigation, shooting, survival and the inventory-management required to support these core aspects of gameplay. Strategy games usually offer a broader and more diffuse range of tasks to which simultaneous or alternating attention is required.

Different types of game offer different kinds and degrees of intensity,

not all of which are appealing to all actual or potential players or in all playing circumstances. How the basis of the appeal of the most intensified gameplay sensation might be understood is not an easy question to answer with any certainty. It might be associated primarily with particular demographics, as Crawford suggests, especially relatively young males, given the consonance between direct, intense and (mostly virtual) physical engagement and prevailing constructions of masculinity. The intense, sensational experience might also have wider appeal, however, as one ready source of the 'flow' state examined in Chapter 1; or, more generally, as an experience defined by intensity and clear-cut action that contrasts pleasurably with the more mundane, routine and complexly ramified nature of daily life for most people.³⁷ It is sometimes argued that contemporary media have a particular leaning towards the production of such experiences, an emphasis on 'surface' intensity ascribed to a 'postmodern' era and often contrasted with 'deeper' experiences such as those associated with literature or less mainstream cinema. If the intensity of experience offered by some media, including games, has increased over time this can also be explained more locally, however, without the evocation of large-scale social-cultural change. Certain tendencies towards 'upping the ante' are built into media such as these if a broadly equivalent impact is to be maintained over time, given the extent to which viewers or players are likely to become habituated to particular effects, once established as part of a familiar repertoire. Impactful sensation also has a longer tradition in popular culture, however, in events such as festivals and carnivals and, closer to the world of games, location-based entertainments such as those provided by rides in amusement and theme parks.

Music and other sound effects can also be used to crank up the intensity of gameplaying experiences. The soundscape of *Silent Hill 2* is designed to discomfort, to jar and to set the player on edge, as befits a horror game. Scratchy, sharp, metallic sounds are combined with a piano-frame being hit at the bass end, heavy echo creating a diffused skein of dissonant sound that appears to come from some hellish depths. The disordered crackle of radio-static adds to the cacophony, alerting players to the proximity of monsters veiled in the mist that cloaks much of the gamescape and often inducing a panic-stricken reaction in which the player-character is spun around in search of the source of threat. A similar level of intensity is promoted in different form by the fabric of sound created in *Unreal*

II. An onslaught of noise fills the air when the player-character is caught up in a dog-fight between aliens and soldiers in the dark. Soldiers shout directives and scream for help when attacked; weapon-fire is heard from what appears to be a 360 degree perspective around the player-character (and it is raining heavily). Cued by pleas for help from other soldiers, the player-character runs around in the darkened space, attempting to locate and contain the threat. The intensity of the sequence comes to a head when a spacecraft hovers overhead, assaulting the ears as its volume drowns out everything else. The weight and density of the soundscape creates a real sense of disorientation and panic, clouding the ability of the player to think more rationally about what action to take. Much the same effect is achieved in the Normandy beach landing sequence of *Medal of Honor: Allied Assault*, closely replicating the aural assault created in the scenes from the film *Saving Private Ryan* (1998) on which it is based.

Quieter sensations of unease and uncertainty can also be created, as in many horror games, including vicarious feelings of claustrophobia in dark, enclosed spaces. Strong impressions of suspense and anticipation are also generated more widely in games, especially in the moments preceding the more frantic or furious engagements in gameplay: when about to lean around a corner not sure what to expect (the first time), or when knowing what to expect but not *exactly* when or how well the player will fare (on subsequent attempts at the same stretch of gameplay).³⁸ Tension can also be created when playing against the clock, another situation in which intensity can have a deleterious panic-inducing impact on the quality of play. The achievement of goals offers a relaxing of intensity, a sense of relief often coupled with an impression of mastery – until, that is, the next task/level/game is attempted.

Games can also create sensations based on particular impressions of movement through the gamescape. One of the pleasures of *Descent* (1995), an early first-person PC game in which the player-character occupies a small mobile spacecraft, is the sensation of flying effortlessly through space, unhindered by gravity and arcing smoothly and swiftly through the subterranean tunnels of an alien planet. A more enhanced sensation of this kind is provided by *Rez*, the on-rails motion of which creates an impression of lightness and of inexorable movement towards an ever-receding vanishing point, a feeling that carries with it something of the sublime: a sense of the player-character being overwhelmed but

also liberated within an infinite space. A smooth-gliding sensation is also created in travel by mini-hovercraft in *Beyond Good and Evil* (2003), which can be experienced in both first- and third-person modes, and which is enjoyable for its own sensual appeal in addition to its functionality as a mode of transport and for in-game racing competitions and exploration. Levitation spells such as 'Dead Man Floating' in *EverQuest* create a similar sensation (as well as keeping the player/character out of the reach of earth-bound enemies), distinct from the usual slightly jerky running motion used in the game.

An important dimension of the spectacular and sensational qualities offered by games is the extent to which these can actively be created by the actions of the player/player-character – a dimension specific to games, in comparison with spectacular/sensational media such as Hollywood cinema. In many cases, this is a spectacle rooted in destruction, although players might also gain pleasure from contemplation of structures they have created in construction-based games such as the *Sim City* series (from 1991), the spectacular and/or realistic qualities of which usually increase with each new iteration. The pleasure of blowing up buildings or shooting enemies spectacularly into pieces is clearly factored into many titles, some of which have become notorious as a result. The fact that gameplayers are actively involved in such processes – rather than just watching them on a screen – is usually seen as having significant implications for the social-cultural dimension of such material in games, an issue to which we return in the following chapter. Spectacular destruction of bodies tends to be found most commonly in game-worlds in which the bodies involved are either fantastic or exaggerated, rather than in those with the greatest aspirations towards representational and/or functional realism. Exceptions to this tendency, such as *Soldier of Fortune* and *Manhunt*, are usually sources of particular controversy. This is largely a matter of moral sensitivities. War games based on real, historical conflicts tend to produce relatively unspectacular enemy deaths, as is the case in titles such as *Medal of Honor* and *Call of Duty* (2003). The more fantastic the opposition, the freer developers generally feel to allow indulgence in player-created gore-fests. Examples include the protracted fights with various hybrid part-human/animal/plant monsters in *The Thing*, where several weapons – bullets, flamethrowers, grenades and the like – are often required to dispose of resistant threats, or the relentless shooting needed to dispatch

the seemingly endless zombie hordes of *House of the Dead III* (2002). Where gory effects related to human rather than fantastical bodies have been treated as the stuff of spectacular exultation, controversy has usually resulted, the most notorious example probably being victory sequences in *Mortal Kombat* in which the player-character performs moves such as ripping out the opponent's heart or pulling out their skull and spine.

Games produced by id software and Rockstar have particularly excelled in the spectacle of death. The reduction of foes to cartoonish messes is clearly marked as 'unrealistic' in the likes of *Doom* and *Quake*, and to a large extent in Rockstar's less fantasy-oriented *Grand Theft Auto III* and *Vice City*. A gratuitous spectacle of violence is available to the player as an optional extra in *Grand Theft Auto III*, in which non-player characters can be killed and then excessively beaten after death, with resulting splurges of blood on the floor. *Manhunt* opts for a more realistic and disturbingly intense aesthetic, including up-close methods of killing such as suffocating a victim with a plastic bag over the head or using a shard of glass as a knife, the effects of which are more than usually realistic at the level of both graphics resolution and in the absence of the buffer created by a more obviously fantastic framework. The deaths of player-characters can also offer servings of spectacle, which might be considered as compensation for moments of failure. Max Payne often performs a pleasing pirouette at the moment of death while the player of *Half-Life* is given the strange perspective cited in the previous chapter of a first-person view of the dismembered remains of the player-character's own body.

Spectacular destruction can also be wreaked on inorganic matter. Parts of the in-game environment can often be destroyed, as part of the requirements of gameplay objectives and/or for the specific pleasure of the spectacle that results. In *Max Payne*, for example, objects such as televisions explode in a pleasing manner – entirely gratuitous – when shot. In driving games such as *Colin McRae Rally 4* (2004) that register damage on the image of the vehicle (when played in third-person perspectives), enjoyment closer to the *paidea* than the *ludus* end of the scale can result from experiments in the extent to which a car can be wrecked before becoming inoperable. War and other combat-oriented games often require or permit the player to use explosives to destroy enemy vehicles or structures, although this is another case in which the

enjoyment of the spectacular results is often leavened by more pressing gameplay requirements such as escaping the blast radius or avoiding some other form of ongoing attack.

The creation of spectacular action is specifically rewarded by some games, forming the basis for gameplay in many stunt-based games, including the *Cool Boarders* series (from 1996) and *Tony Hawk's Pro Skater* series (from 1999). The creation of more destructive spectacle is rewarded in examples such as *Burnout 2: Point of Impact* (2003), which has a 'crash mode' in which points are earned for creating spectacular vehicular pile-ups. The spectacular results of gameplay can also be available for more leisurely contemplation, in the form of replay sequences or 'cinematic' cuts away from the immediate action, as provided in *Need for Speed: Hot Pursuit 2* (2002), in which 'zone' and 'jump' cams provide instant slow-motion shots of exploits such as slamming into road blocks or making vehicles fly through the air.

The pleasure of player-generated spectacle may be two-fold: the pleasure of the spectacle in itself, as in other cases, but also the very game-specific pleasure of these forms of spectacle as a vivid example of feedback, one of the key qualities of gameplay considered in Chapter 1. To witness, in striking form, the destruction of buildings or enemies brought about by the player is to receive strong evidence of cause-and-effect, specifically of the *effect* of player/player-character agency, a quality that can contribute to the wider impression of immersion in the game-world (as suggested in Chapter 2). A dimension such as the spectacular, then, which might from one perspective appear to be somewhat secondary in games, can contribute to very central aspects of the broader gameplay experience. The same can be said of the various forms and degrees of realism offered by games. They all contribute to the overall experience, their level of significance varying from one game – and from one player, or one playing circumstance – to another.