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CHAPTER 8

A “Shot-by-Shot” Analysis of *DOOM*, Part 1

Knee Deep in the Dead

You’re standing in some kind of entrance hall. There are open windows, and you can see mountains in the distance. There’s a carpet area, a barrel. Out of a hole in the wall to the right, you can see a courtyard with a pool of green gunk in which there’s a glowing armor suit. Off to the left, an antechamber has a set of stairs leading up to green armor on a plinth. There are some helmets and blue vials about. Your hand, holding a frankly quite small pistol, sits above a HUD, the centerpiece of which is a chisel-jawed hardass with a crew cut, looking pensively from left to right. You fire a shot from the pistol, which jerks up with the recoil; somewhere in the distance, something yowls in response. Welcome to the Phobos Base.

All right, then. Let’s dispense with the story first, as it’s not going to take too long in the grand scheme of things. According to the game’s manual,

In *DOOM*, you’re a space marine, one of Earth’s toughest, hardened in combat and trained for action. Three years ago you assaulted a superior officer for ordering his soldiers to fire upon civilians. He and his body cast were shipped to Pearl Harbor, while you were transferred to Mars, home of the Union Aerospace Corporation. The UAC is a multi-planetary conglomerate with radioactive waste facilities on Mars and its two moons, Phobos and Deimos. With no action for fifty million miles, your day consisted of suckin’ dust and watchin’ restricted flicks in the rec room.

For the last four years the military, UAC’s biggest supplier, has used the remote facilities on Phobos and Deimos to conduct various secret projects, including research on inter-dimensional space travel. So far they have been able to open gateways between Phobos and Deimos, throwing a few gadgets into one and watching them come out the other. Recently however, the gateways have grown dangerously unstable. Military “volunteers” entering them have either disappeared or been stricken with a strange form of insanity—babbling vulgarities, bludgeoning anything that breathes, and finally suffering an untimely death of full-body explosion. Matching heads with torsos to send home to the folks became a full-time job. Latest military reports state that the research is suffering a small setback, but everything is under control.

A few hours ago, Mars received a garbled message from Phobos. “We require immediate military support. Something fraggin’ evil is coming out of the gateways! Computer systems have gone berserk!” The rest was incoherent. Soon afterwards, Deimos simply vanished from the sky. Since then, attempts to establish contact with either moon have been unsuccessful.

You and your buddies, the only combat troops for fifty million miles were sent up pronto to Phobos. You were ordered to secure the perimeter of the base while the rest of the team went inside. For several hours, your radio picked up the sounds of combat: guns firing, men yelling orders, screams, bones cracking, then finally silence. Seems your buddies are dead.

Things aren’t looking too good. You’ll never navigate off the planet on your own. Plus, all the heavy weapons have been taken by the assault team leaving you only with a pistol. If only you could get your hands around a plasma rifle or even a shotgun you could take a few down on your way out. Whatever killed your buddies deserves a couple of pellets in the forehead. Securing your helmet, you exit the landing pod. Hopefully you can find more substantial firepower somewhere within the station. As you walk through the main entrance of the base, you hear animal-like growls echoing throughout the distant corridors. They know you’re here. There’s no turning back now.

There are no cutscenes in *DOOM*. The story doesn’t intrude any further into the action beyond loosely theming the levels and bolting the three episodes together with a bit of linking text. So we can take the core pegs from the backstory: it’s Hell in there; you’re on your own; you’re underequipped

and outnumbered; whatever is going on, it's kind of UAC's fault one way or another (shades of the corporate conspiracies of *Aliens*); and you are a kick-ass loner who likes to shoot first and ask questions later, albeit a moralistic one. So don't be expecting any diplomacy in what follows.

While *DOOM*'s story could be criticized for being fairly crude, that would be missing the point. A more interesting way of thinking about story in games than getting all riled about narrative sophistication or comparative analysis with other media forms is to stick to the question of story's purpose or function. *DOOM* may not be literature, but as a functional tool for supporting gameplay, it's absolutely spot on. When we think about plot in stories, it makes more sense to think of it as being a reductive process, rather than additive. We tend to conceive of plot as being a causal sequence: this happens because that happened, which happened because that happened, and so on and so on, with progression in world, character, and so forth until the credits roll. In the meantime, we've carved out a nice dramatic arc. However, what is also going on is that our expectations and interpretations of these causal sequences are being steered, managed, and, critically, reduced. Details of the story work to influence our expectations and understandings of events. When we discover that Gandalf is a wizard in J. R. R. Tolkien's *The Lord of the Rings* (1954–55), a whole set of preexisting understandings about what that might mean swings into play and helps us contextualize his actions accordingly, making the action make sense and stopping us from expecting things that are not going to happen. In other words, we know that Frodo is a Hobbit, which means that when he is faced with a tall door with a high handle, we don't spend our time thinking, "That's unrealistic. Why doesn't he just open it?" We know he's going to have to find a box to stand on first. Games have always suffered a little from trying to stop players from wanting to do obvious actions that the system doesn't support, and story is a particularly good way of not so much hiding this but giving the player a tidy, useful get-out clause when faced with a dissonance between what the game allows and what a reasonable action might be.

Story in games is arguably focused on this target of expectation management and contextualization (apart from the equally valid function of being something to read about on the back of the box). It can be used to help us accept the world, or *diegesis*, that the game presents. In the case of *DOOM*, it helps limit the expectations of what we might find and how we might be allowed to react (in terms of supported actions), focusing and driving gameplay. Everybody's dead: don't expect to find other people to talk to.

There's no talking, no need for social artificial intelligence, no need to worry about intricacies of plot, no worries about what choices we might have to make. Everything that moves wants to kill us and is a brainless, hate-filled, bloodthirsty aberration and an insult to God and man: shoot anything that moves (unless you can chainsaw it instead). Enjoy the slaughter. Remember, you are an honorable man (you socked that civvy-killing coward of an officer), and this is not just about saving the world; it's about revenge. A weird hellish dimension is leaking into this universe, which means anything goes. So if we want to dump a castle built of kidneys into the middle of a toxic waste refinery, that's just the way it goes here in Hell. Given that the bases have been sucked into Hell and warped and twisted and eviscerated by the process, if we miss a few details about normal, expected life, that's just what happens when you rip stuff out of one dimension and dump it into another.

This might all sound a little crass, but it's actually quite important. *DOOM*'s backstory gives you a solid, robust framework for settling into a well-defined set of expectations about just what's going to happen for the next few hours, how you need to respond, and what the system is going to give you in response. It's a contract, and it's a very well-honed one. Ironically, in the world of contemporary shooters, *DOOM*'s simplicity stands up really well. We're not going to have that near-the-end rush of exposition, extrapolation, and unconvincing connectivity as plot and character elements are hurriedly thrown together to make some semblance of dramatic conclusion or sense. We're not going to have to try and avoid the fact that our superintelligent scientist opted to shoot his way through four gazillion heavily armed exoskeletal shock troopers rather than just using his world-saving brain to reprogram the landing coordinates of the pandimensional fleet to have them miss the Earth altogether. We won't have a combined technomagical force field enslaving the whole of humanity, kettling them into a killing zone called Earth, able to be sabotaged with the touch of one button, just like pulling the plug . . . Oh wait, that's *DOOM II*. Look, the point is that you know what you are getting in *DOOM*, and the game can just sit back and concentrate on delivering. We will be expected to run and shoot and run and shoot, until there are no more corridors and no more demons. Then we will win, and they will lose. Regardless of the increase in sophistication of both artificial intelligence and world spinning, as the dominant drivers of story in games, *DOOM*'s lean, mean, storytelling machine still stands as a beacon of how to do it.

id doesn't hold back in the opening seconds of *DOOM*: we get the full

impact of the new engine's capabilities right there in front of us. The cut-through sectors give you a glimpse of a huge exterior space, which pushes the variable height into a whole new dimension. Slightly more subtly, the entrance lobby contains a drop-down central carpeted area and is distinctly nonsquare in shape. Off to the left, there is a staircase to a smaller room, with pillars breaking the space around this into more complex shapes. The color palette of browns and grays shouts a level of realism that *Wolfenstein 3D* didn't get anywhere near. A barrel positioned temptingly in the center of the screen just aches to be shot at and delivers a meaty crunching explosion that scatters debris across the screen. There's a puddle of beefy chunklets in the center of the carpet and a body beyond that. The lights vary in this room—we can see the light from the large window to the right. When we pause by this window, the open areas seem huge, and we can see a lake of animated green goo. A glowing piece of armor sitting in the lake tells us straightaway that we can leave the corridors and rooms and actually get outside. Right across the lake, there's another window and a distant figure. We fire experimentally and hear him roar far off and then fire right back. Bobby Prince's crunching rock soundtrack kicks in. We skirt around to the left toward the pillars (which are throbbing and glowing with light) and head up the staircase to a plinth with animated scrolling textures, to collect some armor. On the way, a shaven-headed goon with a shotgun bellows at us. We fire, and he flies backward in a gush of blood, dropping the shotgun. We collect it and scoop up some blue health vials and some archaic metal helmets for an armor bonus, and we're ready to go. *DOOM* doesn't bother with gentle introductions; we're straight into the action.

Other innovations introduced in the first level include multiple vertical levels included in the same area. In the third room we enter, Imps stand on a raised platform in the far corner, while Zombie soldiers advance along a walkway that zigzags over green radioactive waste. There are a number of linked secrets, establishing that opening up new areas involves not just finding and triggering buttons and trip wires but triggering things in sequence. In this case, we have a different-colored wall panel, dropping down into a passage that takes us to the lake of waste with the superarmor, then a trip wire in the final room that lowers the Imp platform, announcing dynamic vertical-level adjustment and opening up a little area with a shotgun and shells. Finally, moving back out of this area and toward the second room opens a timed lift in the corner of the secret shotgun area, which we can run back to before it raises again (and it only does this once; some secrets are

nonrepeatable). The lift leads to a short corridor with a couple of small armor bonuses before delivering the real reward, a one-way wall with a view over the walkway room. In the space of a few short and small secrets, the game trains the observant player or completionist to watch for wall discoloration, lines of light/shadow and new sectors as trip wires, raising and dropping platforms, and linked sequences.

Hangar is a short level, a rapid-fire introduction to the world and gameplay. According to the par times (i.e., the target time to complete the level) given at the end of each level, a great example of a cheap and simple feature that bolts on an entirely new form of replay, the goal is thirty seconds. The fact that this par becomes increasingly difficult as the game progresses adds weight to Romero’s claims about the importance of skill in playing *DOOM*. To achieve a par speed requires real dexterity, of a different kind than that needed to survive the Nightmare difficulty level.¹ In fact, speedrunning became such a phenomena that you can still find archives out there collating videograbs of the very best, and they really are quite extraordinary to watch. Over on the DooMed Speed Demos Archive, for example, we can see Radek Pecka clear all four episodes on Nightmare difficulty in just over forty minutes² and Thomas “Panter” Pilger clearing the Hangar in a giddy nine seconds.³ This culture was enabled by the game’s capacity to record play. This, along with the obsessive and vocal character of *DOOM*’s fan base, ensured that the top speedrunners, like clans and modders, were minor celebrities in their own right. Speedruns developed their own vocabulary, with different formats requiring different ways of clearing the level. UV Max, for example, requires the player to hit 100 percent of kills and secrets on Ultra Violence before exiting the level, as opposed to UV Speed, where surviving to the exit as fast as possible is all that is required. Then there are “Tyson” runs, where the player only has access to fists and a pistol but is still required to rack up 100 percent of kills. The list goes on. Annual awards such as Compet-n gave speedrunners a platform and everyone else a focus point to check out the crazies and feel slightly inadequate about their own attempts to hit par.

In the meantime, we’ve stumbled out of the Hangar and into the Nuclear Plant, where we share the stage with none other than Bill Gates, who was superimposed onto this level complete with trench coat, shotgun, and chunky wool knit cardigan for a promo video screened at a Windows 95 event, promising support for “games like these.”⁴ Seriously. And next time your PC crashes, just think, “Don’t interrupt me!” In E1M2, the complexities the new engine allowed are really let off the leash by Romero, in a much larger

and more complicated setup. While the texturing is still predominantly sci-fi industrial (we really don't start seeing heavy gothic, pseudomedievalist architecture until Sandy Peterson's work starts making its presence felt in Episode 2), there's a wide spread of lighting styles and environments. The first room is a large space, with a split-level central room-within-a-room, complete with lift and strobing lights. A sweeping staircase arcs around the room, joining at a high level corridor that makes the most of *DOOM*'s ability to give the impression of vertically stacked environments even when the sensation was cheated and the sectors actually lay side by side. A short open-air environment can be opened with a secret door, and we find our first keycard, starting the process of hunting and doubling back that still characterizes most linear shooters today. Leaving the first large room, we find ourselves in the dark corridors that, more than anything else, are classic *DOOM* environments. Off to the right, a dismal nukage-filled chamber hides a button on a pillar that will open the first genuinely terrifying section: a small maze of computer banks stocked with Troopers and Imps that is, to a large extent, either strobe-lit or not lit at all. This section, where there are plenty of places for Imps to hide, is where sound flooding really comes into its own. The first shot fired provokes a chorus of snarls and hisses, and the only way forward is into the flickering dark. Do you hold your breath and edge slowly forward or just make a run for it?

Buried in the dark (in this part of the map that is nonessential, which is extraordinary given its scale) are some goodies: a chainsaw and a backpack. But it's not just the tangible rewards that pull you in: the real point of subjecting yourself is the thrill of the scare and the rush of the battle. Exploration is encouraged by a much easier "secret" area along the main spine of the level. We can ignore the nukage/button room and the dark maze and plough on up the stairs toward the exit, but there's a very obvious drop-away lift that sends you down to a room with a window to the chainsaw area. Again, we are being offered the opportunity to charge through the levels or to move more slowly and unlock all the secrets. This idea of minor deviations from a central spine are core design tactics for nearly all linear shooters. Arguably, *DOOM* is responsible for that, which represents another massive contribution to the genre, if not the medium.

On we go toward the Toxin Refinery, which has the most complex sequence of secret sections so far. Once again the level presents a fast, linear solution coupled with a much larger exploratory area, which culminates in opening up a new section that ultimately leads to a bonus secret level.

It also builds further the complexity of vertical scale. This is evident from the donut-shaped exterior section that includes not just a walkway across a deep drop to nukage but an Imp sniping from a higher corridor and a complex system of rooms in the secret section, which are visible from the central corridor. To access these, we must run through the first secret area in time to catch a lowering and raising wall that provides access to a hidden area containing a rocket launcher. The room with the rocket launcher also contains a nukage-filled tunnel leading to a switch that raises a bridge crossing from the very first room to a brick wall, which is actually a hidden door. Also running off the first secret area is a second dropping wall section that spirals down the stairs to a room with a Soul Sphere on a pillar, visible from the corridor just off the player start point. The exploring player has a choice between the two exits, one leading on to E1M4 Command Control, the other, via the newly opened bridge secret, to the bonus level E1M9 Military Base. Let’s detour through the latter first.

E1M9 swaps a straightforward linear design with nonessential side areas for a more hub-and-spoke approach, with four major rooms branching off a central open-air location (fig. 10). At the center of this is what appears to be a large cage, packed full of Imps. This is one of the potential indications that there is slightly more story going on than first appears, as it would seem that the UAC is actually aware of the Hellish denizens. This is, of course, now a standard aspect of the average FPS story, where the simple fact of invasion by alien or supernatural forces is given more flavor by the added conspiracy of dark forces within the military-industrial complex. *Half-Life* really trades off this idea, with black ops units being sent in to massacre the Black Mesa scientists and cover up the attack (in the We’ve Got Hostiles level), the discovery of labs to experiment on Xen aliens (in the Questionable Ethics level), and, finally, the use of the human teleport devices to reach the Nihilanth at the end of the game. In *DOOM*’s case, it’s entirely questionable whether or not the average player will pick up on this subtle subplot. To be honest, only when seeing it mentioned on a forum as I was doing the rounds for this book did it cross my mind that the structure at the center of E1M9 was actually a “cage” used to “imprison” Imps. You live and learn.

Anyway, there are a couple of additional things in E1M9 we should pick up on. First, in a room to the northeast of the base, which is open and available from the start (which means, given that a large proportion of the base is locked down, it’s highly likely to be found by the player), there is a pentacle of glowing red material on the floor, a candle at each corner, and a very

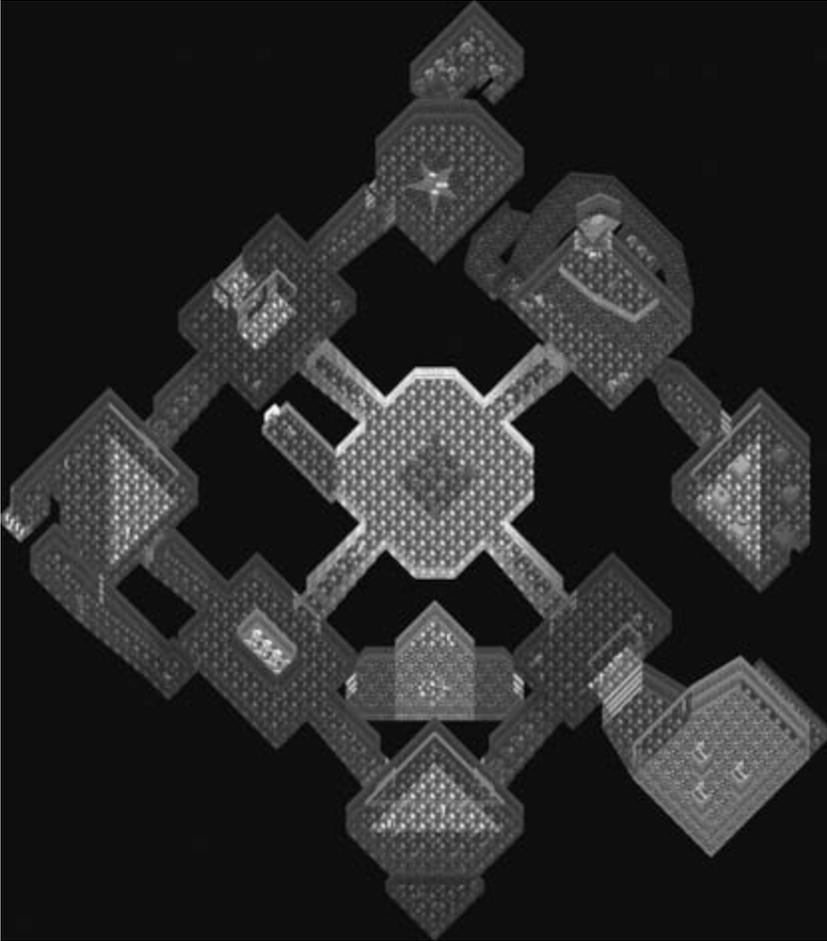


Fig. 10. The hub design of *DOOM*'s E1M9 Military Base.
(From Ian Albert, www.ian-albert.com/doom_maps.)

tempting missile launcher in the center. We'd have to be the most naive of players—not to mention probably to have slept through the previous three levels—not to smell a trap, but this is *DOOM*, we're playing it, and trap or no trap, we want that new gun. As soon as we grab it, however, *DOOM* lets rip with a new trick: teleporters. These days, teleporting around a level or using teleporters as a means of dumping monsters into any spawn point (without, frankly, needing to justify it at all) is old hat, but here we're seeing it for the first time, and it is quite a first time. With a series of green flashing

sprites, the room fills with Pinkys, Imps, and Troopers, and all hell breaks loose. The monsters are being piped in from a room sitting just next door to this one, without a connecting door but with a direct portal turned on by the trip switch of the player picking up the launcher. Interestingly, we only find a teleporter on two other occasions in Episode 1. There is a pentacle in another secret area in E1M5 Phobos Lab that doesn't really do much apart from add some intrigue and send us back to the start. The other is found in basically the very last moment of the episode, following the defeat of the Barons, but we'll come to that in due course. In Episodes 2 and 3, however, teleporters play a much more active role, including maps that are built around them as a central mechanic in E2M1 Deimos Anomaly, E3M5 Unholy Cathedral, and E3M7 Gate to Limbo.

The second design point we should mention is the first (and, in reality, only) bit of platforming in *DOOM*, which takes place in a secret area just off the exit room. In here, we're presented with a series of pillars with items perched on top of them. At the far end of the room, a raising section is triggered by the player's entrance. From the top of this, it's possible, by sprinting and making sudden stops or turns, to make it from pillar to pillar, snatching up choice items such as a chainsaw, ammo, and a backpack. It's actually very tricky to get this right, and it is interesting that it's the only time a player has to do anything like it in all three episodes. Once FPS games added in a jump feature, platforming became more popular (although it is somewhat out of favor again, *Mirror's Edge* notwithstanding). Certainly, Romero didn't consider that it could be supported as a common feature of gameplay.

I just put those platforms in there as the ultimate torture. Since you couldn't look down, it made the running and “jumping” really difficult. It was just there to give the player a tough challenge and reward. In *DOOM II*, the player encounters this in level 2. I didn't want to include it in any mainstream areas of the game, because it just wasn't fair, since jumping wasn't supported and you couldn't see your feet. I loved *Half-Life's* Xen level and its jumping. If I have good jumping and air control in a game, I have no problem with jumping on ledges. (JR)

It is clear that over the course of Episode 1, Romero was systematically testing the design potential of the engine, not just with teleporters and platforming but through the use of strobing lights, exterior areas, multiple trip wires, sequenced monster closets, cut-through sectoring, and linked

set piece. Essentially, as he added “world interactive elements (strobe lights, switches, platforms, stairs rising/falling, et cetera),” this was defining both the order and nature of the levels he designed. In other words, we can get a sense of the order in which features and functions were added to *DOOM* by checking them against the order in which Romero remembers making the levels: E1M2 around April 1993, then E1M5, E1M3, E1M6, E1M1, E1M7, and E1M9 (with Petersen building E1M8 at around the same time as E1M7).

Hall shares credit with Romero on E1M4 Command Control (he worked on it around June 1993), which is interesting as a level clearly divided into two major areas, each of which allows for a much more open choice of approach than previous levels. The center point is a large circular chamber containing the blue key needed to access the second half of the level. This is reached via one of three possible paths: a short run through a more or less empty room, a battle with Troopers and Pinkys in a larger computer lab with a tall upper walkway, or a darker nukage area with Imps and a chance to rack up a few extra items by running along the river of damaging guck. Whichever path is taken, we end up releasing a whole bunch of Imps from inside the circular chamber, picking up a chaingun and the blue keycard, and opening up the second part of the level. There are two initial directions to head in, although the level is actually linear from here on in. We can shortcut to the exit, via a blue computer room that, at a trigger, actually drops all of its inner walls⁵ to release a bunch of monsters who have been perched atop them, but we’ll be faced with a set of stairs that leads to an exit yet has a section of floor missing. To actually get to this, we need to hit the first proper maze section in the game, although it’s probably worth stating that this isn’t a maze under any real definition of the term. It’s not exactly hard to find our way through it. The point is more that we’ve moved from open corridors, where we could see stuff (Pinkys, fireballs, that kind of thing) heading in our direction from a way off and honed our strafing skills to avoid getting hit. Suddenly we’re in tiny, cramped, poorly lit corridors, without the time or space to do either. Just like platforming, this abrupt change of environment forces a different gameplay style, where even hardened players are forced to push forward slowly, then backpedal furiously, firing as they go. Either way, the button to raise the floor section lies at the end of the maze and then it’s straight on to E1M5 Phobos Lab.

Here, the level is based around two large set-piece areas with a third

tucked away at the end of the level. The use of split-levels and windows ramps up here as well. The first large open area is a walkway around a nukage pit, which is overlooked by a small office room, and both are accessible from the opening area. It's possible to snipe monsters in the open area from a window here, and the other exit of the room looks out over another nukage pit, with an inaccessible door set further along the wall. To get at this, another route off the opening area leads to a projecting vantage point over the room (another window), which triggers a walkway being raised from the nukage to allow the player to gain entry to the previously denied door. Inside here, we find another small room with another window, allowing the player to empty a room of monsters previously undiscovered, in relative safety. Once again, exploration gives rewards. The forced route through the level requires the player to travel through the first open area to the second set piece. Here, a lift drops the player into a curving horseshoe staircase with Imps sniping from high-level vantage points to either side. The horseshoe surrounds another nukage pool with a switch on the far side, and two pillars, which drop monsters into the room and then raise once (but just the once, meaning a choice must be made), enabling the fast player to access some items. Reaching the nukage pool also opens two large monster closets, and the switch itself opens a door across the nukage in the first large open section, leading the way to the back part of the level. Opposite the switch in the second set piece is a secret door, leading to a tiny area with another secret door, which leads to the large exterior environment visible through windows in the preceding room and a bonus. Again, we don't see this kind of supersmall, superfast, sequenced secrets again in the game, until possibly the strange final section of E3M4 House of Pain, and it feels once more like Romero is playing with design, seeing what the engine can do and how it works.

What's really impressive about the entirety of Episode 1 is that it doesn't settle into a few brilliant tricks. There's an evolution of environment and a focus on particular aspects of its capabilities in each level, making them feel, for me at least, slightly more varied than Episode 2 (although it does feel as if Petersen is engaging in a parallel, if quite different, process of design exploration in Episode 3). Once again, this is quite probably due to the simultaneous evolution of the engine, tools, and functions alongside the level and gameplay design.

The final set piece of E1M5 is a large room full of monsters, which would be fine if it weren't for the fact it is very, very dark. A pulsing strobe light

means the action is staccato and panicky, and this feels like the first time Romero really pushes the dynamic lighting id Tech 1 enabled as a *design tool* to create unique gameplay rather than just an atmospheric *art tool*. Prior to this, we've had the terrifying "Lights off! Monster closet open!" moment in E1M3 when grabbing a keycard, but suddenly we're confronted with a large, confusing area already full of howling monsters we have to plunge into. Tension was, of course, as much a trademark of *Wolfenstein 3D* as was slaughtering Nazis, but the only way you couldn't anticipate what was up ahead was if it was around a corner or beyond a door. The kind of set piece E1M5 offers at its close established a template that the overwhelming majority of FPS games since have drawn on at some point. In this one dark room, the seeds are sown for *S.T.A.L.K.E.R.: Shadow of Chernobyl's* terrifying X-Labs (GSC Game World 2007) and, of course, for the pitch-black tunnel crawls of *DOOM 3* (id Software 2003).

By caricaturing Phobos Lab as the "set-piece" level, I do not mean to underplay the importance of set pieces elsewhere in Episode 1 or *DOOM* as a whole. There are plenty of other examples, and there are even whole levels based around singular concepts (such as E3M9, which I'll discuss in much more detail later on), but Phobos Lab is a very striking case of three very distinct areas linked together. In contrast, although we can break E1M6 Central Processing into the "maze" area, the Red Key Trap Room and the Final Big Chamber of Horrors, these areas flow into one another in a way that feels distinct to the more 1-2-3 setup of its predecessor. Central Processing is Trap City: it packs more monster closets per square inch of level design than most titles manage to get into a full game.

As we took the detour through the Military Base, we're already familiar with the design principle that if something looks too good to be true, it probably means that there's an Imp hiding in the wall next to it, ready to rip your spine out through one of your eye sockets. Equally, we've already been subjected to the experience of keycard triggers, in E1M3. Central Processing, however, doesn't offer the choice of a bonus item or restrict itself to a couple of Imps. Sooner or later, to progress in the level, we're going to have to grab the red keycard—you know, the one in the huge, suspiciously empty room. There's none of the shock tactics of the Toxin Refinery, *DOOM* simply delivers in spades, sliding open half the walls in the place to flood the room with Troopers and Imps. If we survive that fight, it opens up the area containing the blue key card, which sits on a promontory over a nukage pit and just happens to release a Pinky and friends from the wall directly

behind us (naively, we didn't have the presence of mind to approach the keycard backward). A quick trawl through another maze-like section, actually a series of interlinked crossroads over more nukage, gets us access to another keycard and the final big room of the level. Or so it would seem. In fact, Romero pulls a sly trick and positions a switch where the natural level end would be, which opens up an area to the east. This is something of a nod and a wink to the player—Romero saying, “Yeah, I know you think how this game works now, but we've still got a few tricks up our sleeves.” In reality, Episode 2 was only a couple of levels away, and once Petersen started playing around, some of the expectations of how things worked went straight out of the window. In E1M6, we find that Romero had one final set of traps lurking up his sleeve. After clearing the dark, grimy final room, we are forced into releasing a whole fresh batch of enemies from a bunch of hidden areas in order to get at the exit.

The penultimate level of Episode 1, E1M7 Computer Station, is my personal favorite *DOOM* level ever (Romero's too, as it happens). It's also one of the original designs, appearing in both the 0.4 and 0.5 alphas. E1M7 is all about windows and remains quite possibly one of the most well-designed exercises in backtracking in game history (fig. 11). A river of nukage flows right through the center of the level, splitting it in two. Long windows down the corridors let us see the keycards we are going to need to get hold of and, on the other side, a clear line of sight right through to the exit room. To get there, we need to cover the ground right to the far side of the level, crossing over the nukage, then follow the path right down on the opposite side of the river, where we can see the next keycard we need lurking back near the start. We need to head all the way back there, pick it up, and then backtrack *again* to halfway through the level to open up the door into the final section. Here, we need to detour around to find a switch that is right next to a window showing us the room next to the exit this detour started from, now opened up to allow access to the exit and release a bunch of goons in the opposite direction, meaning a final backtrack is needed.

Anyone with more than a passing interest in games, particularly FPS games, will know that the gold standard for backtracking rests not with *DOOM* but with *Halo: Combat Evolved*, which takes it for the sheer audacity of running an entire level backward under a different name (there are lots of little changes, of course, but Two Betrayals uses basically the same environment as Assault on the Control Room). However, *DOOM* got there first, and if that's not an argument that holds for E1M7, then we'll get back

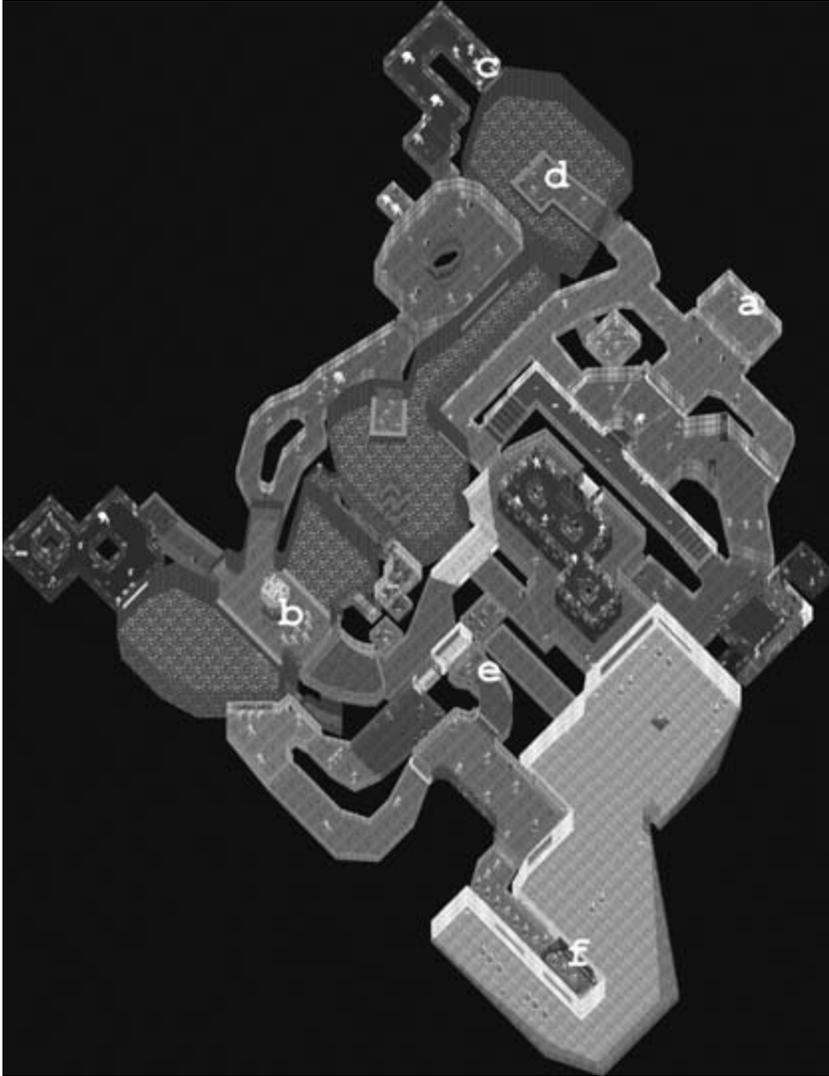


Fig. 11. *DOOM*'s E1M7 Computer Station. Players begin at point A and move through point B to point C, at which point they can return and access point D. This gives them the keycard to open E and finally reach the exit at F. The extent of the backtrack should be obvious. (From Ian Albert, www.ian-albert.com/doom_maps/.)

to the higher-than-high concept level of E3M9 in just a while. Backtracking is a bit of a dubious proposition in design, not particularly popular with players even if it's a great way of wringing the maximum possible value out of any given set of assets. Perhaps it's because *DOOM* was fairly low-resolution (although it certainly wasn't seen as low-res at the time), but the amount of backtracking in this level doesn't feel like a way of padding out gameplay without having to provide new features. Essentially, we get two and a half runs through the same environment, with new monster closets activated at the target of each run. That the monsters don't sit around waiting to be activated but actively come looking for us adds a certain edge in comparison to the first run-through, as previously “empty” rooms suddenly contain fireball-hurling Imps. Equally, the par time of the level is a mere three minutes, itself an exaggeration if Romero is to be believed (he claimed to have added thirty seconds onto his timings for each level⁶ in a *PC Zone* interview in 2002). Even playing at a normal human speed, the level is probably going to be over in under fifteen minutes, which is a far cry from some of the repetitive backtracking and respawn battles of, well, *Far Cry 2* (Ubisoft Montreal 2008). In other words, the backtracking here is more succinct and doesn't outstay its welcome. Saying that is possibly a little unfair, as *Far Cry 2* has enormous rewards for the exploring player in terms of visual design and atmosphere. But, being linear, *DOOM* sculpts the backtracking experience to a far more effective degree. It's a trick that id themselves repeated in *DOOM 3*, where the entire opening section of the Mars Base is one long sequence of cascading triggers. When the player hits the end of the section and finds the scientist, triggering the invasion, a huge proportion of the level is changed, adding triggers for animations and scripted sequences, as well as new props and decals, and diverting players along alternate routes in places, as they then work their way right back to the beginning of the level again. Technically, it's a brilliant piece of design, a hugely impressive beginning to a game that, in some ways, struggles afterward to live up to this stroke of genius.

This rounds off our tour of Phobos Base, as we dive headlong into the final level of Episode 1. E1M8 Phobos Anomaly, based on an original design by Hall, is the player's first encounter with Sandy Petersen's design, and there is an instant shift in feel and flavor. The actual map itself is tiny, comprising two lead-in rooms (one full of Pinkys and barrels, basically an entertaining chain-reaction reward for making it this far) and a second small chamber with two recesses containing guns and ammo for the big

finish. Beyond these is a star-shaped chamber with two big closets and two big horn-faced, goat-legged, green-fire-hurling, giant Barons of Hell, which is a cue for general panic, running around, and carnage. Barons dispatched, the entire room disappears, the walls sliding into the floors and leaving us on a star-shaped dais in an open courtyard. There's nothing to do except head for a small structure, whose stairs rise up to let us find ourselves on a platform with a giant decal of a pentacle superimposed on a satanic visage. Standing on this ends the episode and, if you were a shareware player, the game—by killing you. You are instantly teleported into a pitch-black room full of monsters who will kill you, no matter how many shots you fire. When you do bite the dust, the game throws this at you:

Once you beat the big badasses and clean out the moon base you're supposed to win, aren't you? Aren't you? Where's your fat reward and ticket home? What the hell is this? It's not supposed to end this way!

It stinks like rotten meat, but looks like the lost Deimos Base. Looks like you're stuck on the shores of Hell. The only way out is through.

To continue the *DOOM* experience, play *The Shores of Hell* and its amazing sequel, *Inferno*!