

BUILDING IMAGINARY WORLDS

The Theory and History
of Subcreation

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analogies are not made explicit. By changing the defaults of the Primary World, especially in playful ways that reveal and reverse audience expectations, secondary worlds can make strange the familiar by exploring alternatives to the ordinary.

That secondary worlds often differ markedly from the Primary World has led some people to consider them “unrealistic”, which is to miss the point of most secondary worlds. While secondary worlds may represent strange and fantastic alternative worlds, to automatically claim that they are “escapist” (with the term being applied pejoratively) is to do them an injustice. Tolkien himself dealt with such accusations, writing:

... it is plain that I do not accept the tone of scorn or pity with which “Escape” is now so often used: a tone for which the uses of the word outside literary criticism give no warrant at all. In what the misusers are fond of calling Real Life, Escape is evidently as a rule very practical, and may even be heroic. In real life it is difficult to blame it, unless it fails; in criticism it would seem to be the worse the better it succeeds. Evidently we are faced by a misuse of words, and also a confusion of thought. Why should a man be scorned if, finding himself in prison, he tries to get out and go home? Or if, when he cannot do so, he thinks and talks about other topics than jailers and prison-walls? The world outside has not become less real because the prisoner cannot see it. In using escape in this way the critics have chosen the wrong word, and, what is more, they are confusing, not always by sincere error, the Escape of the Prisoner with the Flight of the Deserter.²⁸

When one considers that the stories set in many secondary worlds often include oppression, conflict, war, and dark times for their characters, it soon becomes clear that these are not worlds that someone would want to physically escape to, much less reside in.

Having examined how worlds are distinct from the stories set in them, and how “secondariness” is a matter of degree, we may now turn to the three main properties needed to produce a secondary world, hold it together, and make it distinct from the Primary World.

Invention, Completeness, and Consistency

If a secondary world is to be believable and interesting, it will need to have a high degree of invention, completeness, and consistency. Of course, no secondary world can be as complete as the Primary World, inconsistencies are increasingly likely as a world grows, and no world can be the product of invention to the point that there is no longer any resemblance to the Primary World. Nevertheless, unless an effort is made in all of these directions, the resulting subcreation will fail to create

the illusion of an independent world. Without enough invention, you will have something set in the Primary World, or something quite close to it: our world with vampires or aliens added, or some new technology, or some strange occurrence that sets the story in motion; but not a world unique, different, and set apart from our own. Without an attempt at completeness, you have the beginnings of expansion beyond the narrative, but not enough to suggest an independent world; too many unanswered (and unanswerable) questions will remain which together destroy the illusion of one. And without consistency, all the disparate and conflicting pieces, ideas, and designs will contradict each other, and never successfully come together to collectively create the illusion of another world.

At the same time, as each of these three properties grows, world-building becomes more challenging. The more complete a world is, the harder it is to remain consistent, since additional material has to be fit into existing material in such a way that everything makes sense. Completeness also demands more invention, as more of the world is revealed. The more invention a world contains, the more difficult it is to keep everything in that world consistent, since every Primary World default that is changed affects other aspects of the world, and those changes in turn can cause even more changes. Likewise, consistency will limit what kind of invention is possible as a world grows. Therefore, all three properties must be considered simultaneously as the world takes shape and develops.

Invention

Invention can be defined as the degree to which default assumptions based on the Primary World have been changed, regarding such things as geography, history, language, physics, biology, zoology, culture, custom, and so on. These differences, obvious markers indicating a work's status as fiction, must be carefully presented (in the case of audiovisual media, designed and constructed as well) to be believable. Credibility is not only a matter of their technological construction (laughable failures in this area include the bad special effects in B-movies), but also their design, which must incorporate a certain logic to seem real and practical, instead of merely fanciful or random. Believable design is especially important for genres like fantasy and science fiction, which typically contain more invention than other genres. Tolkien recognized this need, writing:

Fantasy, of course, starts out with an advantage: arresting strangeness. But that advantage has been turned against it, and has contributed to its disrepute. Many people dislike being "arrested". They dislike any meddling with the Primary World, or such small glimpses of it as are familiar to them. They, therefore, stupidly and even maliciously confound Fantasy with Dreaming, in which there is no Art; and with mental disorders, in which there is not even control: with delusion and hallucination. ... Fantasy also

has an essential drawback: it is difficult to achieve. Fantasy may be, as I think, not less but more subcreative; but at any rate it is found in practice that "the inner consistency of reality" is more difficult to produce, the more unlike are the images and the rearrangements of primary material to the actual arrangements of the Primary World. It is easier to produce this kind of "reality" with more "sober" material. Fantasy thus, too often, remains undeveloped; it is and has been used frivolously, or only half-seriously, or merely for decoration: it remains "fanciful". Anyone inheriting the fantastic device of human language can say *the green sun*. Many can then imagine or picture it. But that is not enough—though it may already be a more potent thing than many a "thumbnail sketch" or "transcript of life" that receives literary praise.

To make a Secondary World inside which the green sun will be credible, commanding Secondary Belief, will probably require labour and thought, and will certainly demand a special skill, a kind of elvish craft. Few attempt such difficult tasks. But when they are attempted and in any degree accomplished then we have a rare achievement of Art: indeed narrative art, story-making in its primary and most potent mode.²⁹

The degree and depth to which something is invented depends on the skills of the subcreator and the needs of the work. Invention will inevitably play a crucial role in whatever story is present; otherwise, there would be no need for invention and the story could simply be set in the Primary World. Even if the world exists for its own sake, with story added as a mere structuring device, the ideas behind the changes of Primary World defaults will dictate the degree to which they are changed.

We can divide Primary World default changes (in which invention occurs) into four distinct realms, each of which affects the design of a world on a different level. The first involves changes in the *nominal* realm, in which new names are given for existing things. Very little in the way of world defaults is changed in such a case, although new language may be invented. New names may call attention to different aspects of familiar things, or even define new concepts, since language bears an inherent cultural worldview within it (another tool available to the subcreator). Almost every world features new names, but usually more than just names are changed, since a new language usually implies a new culture.

The most changes to be found are in the next level, the *cultural* realm, which consists of all things made by humans (or other creatures), and in which new objects, artifacts, technologies, customs, institutions, ideas, and so forth appear. In addition to these, authors have invented new countries and cultures, new institutions and orders (like the Jedi, Bene Gesserit, or the Aes Sedai), and even new concepts, like J. R. R. Tolkien's "mathom" or Philip K. Dick's "kipple".³⁰ The use of fictional cultures allows an author to comment on existing cultures by contrast, and create hypothetical situations without the limitations and

connotations that would come with the use of an existing culture. At the same time, fictional cultures are often modeled after real cultures, using different combinations of their traits that an audience might find familiar, but in new configurations, some which play with stereotypes and audience expectations in interesting ways (like the androgynous Gethen of LeGuin's *The Left Hand of Darkness* mentioned earlier, or the Tassulians of C. I. Defontenay's *Star* (1854) who are all hermaphrodites). Cultures like the Gethen and the Tassulians rely on new species of beings, which brings us to the boundary of culture and nature.

The third level is the *natural* realm, which includes not only new landmasses (or other places like underground regions), but new kinds of plants and animals, and new species and races of creatures. The unique aspects of these creatures are often crucial for the role they play in their world and its stories; for example, the Hobbits in *The Lord of the Rings* or the sandworms in *Dune*. Invention in this area sometimes extends beyond individual species of plants and animals to entire ecosystems that integrate a number of them together (as in the film *Avatar* (2009)). Because this level goes deeper than that of cultural things, invention in the natural realm must either rely on convention (for example, well-known fictional animals like unicorns, dragons, and griffins) or attempt to have some plausible explanation relating to biology and zoology if some degree of verisimilitude is desired (which it may not be). On a small scale, invention in the natural realm proposes new flora and fauna, while on a larger scale, it may propose new planetary forms, such as the worlds of Larry Niven's *Ringworld* series or Terry Pratchett's *Discworld* series, which have planets shaped like rings and discs, respectively.

The deepest level is the *ontological* realm itself, which determines the parameters of a world's existence, that is, the materiality and laws of physics, space, time, and so forth that constitute the world. For example, the worlds of Edwin Abbott's *Flatland* (1884) and A. K. Dewdney's *The Planiverse* (1984) are both set in two-dimensional universes very different from our own, and in both cases, their books are dominated by the encyclopedic impulse described earlier, using narrative as little more than a vehicle to explain their worlds. Alan Lightman's *Einstein's Dreams* also features vignettes of universes in which time and space behave differently, and reflects philosophically on each one. A number of common science fiction conventions, including faster-than-light travel, other dimensions, time travel, and wormholes used for interstellar travel, usually imply laws of physics that are different from those currently understood, but the full consequences of such differences are typically not carried out in the design of the world. In the few instances where this does happen (as in *The Planiverse*), the world necessarily takes center stage and narrative becomes little more than a frame story used for advancing the exploration (and explanation) of the world. As such, relatively few books subcreate at this depth.

Of these four levels, the first two involve things more easily changed by humans (or other creatures), while the last two are usually far more difficult to shape or control.³¹ The second and third, covering culture and nature, have the

greatest balance between familiar Primary World defaults and new subcreated ones. This seems to be the best combination for Secondary Belief as well. All invention that occurs in a world must remain analogous, in some way, to the Primary World in order to be comprehensible (unless, of course, if the whole point is that something is *not* able to be understood, like the sentient sea in Stanisław Lem's *Solaris* (1961), which the story's scientists know is intelligent even though they are unable to find a way to communicate with it).

Successful invention may spill over into other worlds; objects and ideas that prove useful or solve narrative problems can appear in multiple worlds and even become generic conventions. Faster-than-light spaceships, laser guns, magical swords, incantations, wormholes, changelings, anti-gravity technology, elves, dragons, clones, force fields, sentient robots, and other tropes of science fiction and fantasy have all transcended their worlds of first appearance to become familiar and acceptable conventions that need little explanation or justification when they appear in a new world, provided the work they appear in is of the right genre. (Some things, though, have been overused to the point of becoming clichés; those of the Fantasy genre are brilliantly collected in Diana Wynne Jones's book *The Tough Guide to Fantasyland* (1996).)

However, there are certain areas in which invention usually does *not* occur, because it would be detrimental to narrative and the audience's experience. In order for a world to be taken seriously, audiences have to be able to relate to a world and its inhabitants, comparing their situations to similar ones in the Primary World. As a result, we rarely find stories based on non-humanoid characters like amoebas or gasbags living in Jupiter's atmosphere; and when we do, they are inevitably anthropomorphized to make their experiences relatable (like the lives of the rabbits in Richard Adams's *Watership Down* (1972)). Worlds must also retain some form of causality, concepts of good and evil, and emotional realism. Without causality, narrative is lost. The way that events are connected by causality may change greatly, but causality must be present for actions to have foreseeable consequences and for events to cohere into a narrative form. Likewise, what cultures consider to be good and evil may vary, but the concepts themselves must be present, as they are in all human cultures. Without them one would have not only lawlessness, but all narrative would become pointless, since it would no longer matter what characters did or what happened to them (as discussed in the MacDonald quote given earlier). Finally, emotional realism is necessary for character identification. Emotions may be differently expressed or even be suppressed (as they are for *Star Trek*'s Vulcans), but they must be present in character interactions. A lack of emotional realism will make empathy difficult, severely limiting or even eliminating identification with the world's characters.

In order to maintain audience interest, invention must take audience knowledge into account and attempt to avoid implausibilities that could disrupt a world's believability. Even though audiences know something is not real, Secondary Belief is easier to generate if the proposed inventions fit in with what

the audience knows (or does not know) about the Primary World. A story set on another planet does not contradict any known facts, since we do not know what life there may be on other planets. Likewise, a fictional island in the South Pacific we can reasonably accept, because few people can claim to know all the islands in the Pacific. However, invention that conflicts with what the audience already knows is harder to accept; for example, a fictional U.S. state would make Secondary Belief more difficult for an American audience who know the 50 states than for a foreign audience who did not. Likewise, a fictional African country may be easier for an audience to accept than a fictional North American country, simply because there are more African countries and fewer people who can name all of them.³² In 1726, Jonathan Swift could claim Brobdingnag to be located on a peninsula off the California coast, because his audience was European and far less familiar with the lands across the ocean that were still being explored (and, of course, because he was writing a satire). If invention blatantly contradicts what we already know, it can only work in a lighthearted fashion (like the fictional U.S. states of Missitucky in the Broadway musical *Finian's Rainbow* (1947) and Michisota in Lisa Wheeler's children's book *Avalanche Annie: A Not-So-Tall Tale* (2003)); or as an alternate reality or a thinly veiled version of a real place (like Sinclair Lewis's Gopher Prairie, based on Sauk Centre, Minnesota; Leo Edwards's Tutter, based on Utica, Illinois; or William Faulkner's Yoknapatawpha County, believed to be a version of Lafayette County, Mississippi); or as a composite that typifies a kind of state without referencing any particular real one (for example, the Colorado-like state of Fremont in James Michener's *Space* (1982) or Winnemac, the half-midwestern, half-eastern state in the novels of Sinclair Lewis). Fictional counties, cities, and towns, however, are easier to accept, because there are so many real ones, that quite likely no audience member will know them all (though the invention may seem contrived if one happens to live right where the fictional place is supposed to be).

Invention, then, is what makes a secondary world “secondary”. Despite the initial freedom that a subcreator seems to have when inventing, each invention and changed default places limitations on further directions the world can develop in, making systems of integrated inventions more difficult, the more completely one has invented a world.

Completeness

Imaginary worlds are inevitably incomplete; Lubomír Doležel has even suggested that incompleteness is “a necessary and universal feature” of fictional worlds, and one of the main ways they differ from the actual world.³³ True completeness is impossible; so *completeness*, then, refers to the degree to which the world contains explanations and details covering all the various aspects of its characters' experiences, as well as background details which together suggest a feasible, practical world. Stories often have very incomplete worlds, and world detail beyond what

is necessary to tell the story is often considered extraneous. However, if a world is to be important to an author or audience, to be the setting of a series of stories or a franchise, or just be compelling enough that an audience will want to vicariously enter the world, then completeness—or rather, *an illusion of completeness*—will become one of the subcreator's goals (with the exception of enigmas and deliberate gaps that arouse speculation, which are discussed toward the end of this chapter). As Tom Shippey puts it in *The Road to Middle-earth* (2003), "the more unnecessary details are put in, the more lifelike we take fiction to be."³⁴

While stories require a certain degree of completeness to be convincing and satisfying, including such things as well-rounded multi-dimensional characters and sufficient backstory to explain motivation, worlds need additional information to appear fully developed and convincingly feasible. To begin with, characters must have some source of food, clothing, and shelter to survive, and come from some kind of culture. On a larger scale, communities will likely need some form of governance, an economy, food production, a shared form of communication, defense against outsiders, and other such things. Some things may be central to the story, while others may only be in evidence in background details, with just enough hints provided for the audience to answer basic questions concerning a character's subsistence and livelihood. Even questions left unanswered will not disturb an audience if there is enough information present for them to piece together or at least speculate as to what the answer might be. So long as audiences do not find their questions *unanswerable*, the world will appear to be sufficiently complete. It may take some work to gather and relate the relevant details in order to answer a particular question; but such effort is exactly what many fans enjoy, and such activities fuel debate and further speculation about a world.

For example, we might question the feasibility of the desert settlements on the planet Tatooine, as seen in Episodes I, II, III, IV, and VI of the *Star Wars* films, beginning with basics like food and water. We are told that Owen Lars runs a moisture farm, with vaporators that collect water from the atmosphere. In some shots, there are clouds in the sky, so water vapor is present (and the clouds seen in Episode IV were actually present over Tunisia when the film was shot, so it is realistic). So they have water, but is there enough? While the Lars homestead appears to be in a remote and unpopulated area, Mos Eisley and Mos Espa are relatively large cities; this can be seen in the various street scenes and establishing shots. Even if there is enough water, what about Tatooine's food supply? There appear to be no farms, and certainly not enough moisture for growing crops (though in Episode II we are told that Shmi used to pick mushrooms off of the vaporators). No trees of any kind are seen anywhere, and very little greenery appears, except for a few small houseplants on the Lars Homestead, and a bit of greenery growing in the background of two shots in Episode IV when Luke leaves with C-3P0 to find R2-D2 (see Figure 1.2).

Yet, we see meals being eaten in people's homes on Tatooine in Episodes I, II, and IV. Where does the food come from? One clue might be found in the



FIGURE 1.2 Evidence of plant life on Tatooine. In the top image alone, one can find nine instances of plant life growing in the Lars homestead. In the center image, Aunt Beru holds a large vegetable (actually fennel) which she uses for cooking. In the bottom image, one can see a fringe of greenery growing in the valley along the path over which Luke's landspeeder passes as Tusken Raiders watch from above. All images from *Star Wars Episode IV: A New Hope* (20th Century Fox, 1977).

merchants' stalls in the streets of Mos Espa. In Episode I, Jar Jar Binks steals a froglike gorg from one stall, where many more are hanging. Are these animals imports from other planets, or are they native? In an exterior shot of Jabba the Hutt's palace in Episode VI, we see another larger creature shoot out its tongue and eat a smaller creature. And there are much larger animals on Tatooine as well; for example, a herd of banthas are seen in Episode VI, and dewbacks are seen in Episodes I and IV. Dewbacks are creatures large enough to ride, and banthas are the size of elephants. So how do these desert creatures survive? Larger animals can eat smaller ones, but at some point in an ecosystem the animals need plants to eat, and some source of water. Some plant life is indicated: in Episode IV, Luke's Aunt Beru is seen putting a vegetable of some kind into a blender-like machine; in Episode I there is a bowl of fruit on the table in the Skywalker hovel; and in Episode II, when Shmi Skywalker is a captive of the Tusken Raiders, she is tied to a frame made of thick wooden branches inside a hut. Where do the vegetables, fruit, and wood come from? We might suppose that there are other areas of Tatooine that are vegetated, but all shots of the planet from space do not show any green or blue areas (though we do not see all of the planet's surface in these shots).

If we suppose that Tatooine's food is imported from other planets, what does this mean for the planet's economy? What exports might they have to balance trade? Such questions are better answered for the planet Arrakis in Frank Herbert's *Dune* series. Arrakis, also known as Dune, is a desert planet whose main export is the expensive spice called *melange*, which is produced by Dune's sandworms and required by Guild Navigators for interstellar travel (which is only possible using the spice). The valuable spice gives Dune political importance, and helps make the planet economically feasible in the process, since whoever controls the planet controls spice production. Herbert even includes a short section at the back of *Dune* (1965) entitled "The Ecology of Dune". Could Tatooine be similar? At one point in Episode IV, Luke, believing what his Uncle Owen has told him, says that his father "was a navigator on a spice freighter", which sounds very much like *Dune*. In the background of a desert shot in Episode IV, we can see a long skeleton of what appears to be a snake-like animal, that could have been inspired by *Dune*'s sandworms (the central part of the Sarlaac also looks a bit like one; and sandworms on Tatooine are mentioned in the short story "Sandbound on Tatooine" by Peter M. Schweighofer, and in the video game *Super Star Wars* (1992) for the Super Nintendo Entertainment System). Finally, the sector that Tatooine is in is called *Arkanis*, which is very close to *Arrakis*, suggesting that Tatooine's design may have been influenced by *Dune*.³⁵

Therefore, the movies are somewhat inconclusive about food and plant life on Tatooine. If we go beyond the movies into the *Star Wars* "Expanded Universe", which includes media beyond the films, we find that there are a few native plants on Tatooine. The plants growing at the Lars homestead are "funnel flowers" (first identified as such in *The Illustrated Star Wars Universe* (1995)); according to Barbara

Hambley's 1995 book *The Children of the Jedi*, "deb-debs" are sweet fruits grown in oases; and "hubba gourds" appear in a few works, their first appearance being in the short story "Skin Deep: The Fat Dancer's Tale" by A. C. Crispin.³⁶ Also, the *Star Wars* Wiki database, *Wookieepedia*, tells us that the gorg seller in Episode I is named Gragra, and that she "was a Swokes Swokes gorgmonger that worked in the marketplace of Mos Espa" who "grew her food in a sewer zone underneath Mos Espa."³⁷ The additional details do not fully answer our questions, and even raise questions of their own, but they do hint at what solutions there might be.³⁸

While this example requires information to be drawn from several sources and combined, for fans familiar with a franchise, such an activity makes use of their specialized knowledge (rewarding them for the time and effort they have invested in the franchise) and their gap-filling may occur more quickly and automatically than audience members with less familiarity, resulting in a different experience of the world. In this particular case, we can even see how knowledge of multiple worlds (in this case, those of *Star Wars* and *Dune*) can influence the process of extrapolation. While casual audience members only interested in following a narrative will not actively piece together such world data or pursue them in different venues, they can still get a sense of how well a world seems to be fleshed out and revealed, and this may affect the reception of the work as a whole (see the discussion of world gestalten in the following text).

The completeness of a world is what makes it seem as though it extends far beyond the story, hinting at infrastructures, ecological systems, and societies and cultures whose existence is implied but not directly described or clearly shown. Likewise, a sense that a world has a past history is also necessary for it to seem complete. Tolkien was very aware of the need for an implied background and history, writing about *The Lord of the Rings* in two of his letters:

It was written slowly and with great care for detail, and finally emerged as a Frameless Picture: a searchlight, as it were, on a brief episode in History, and on a small part of our Middle-earth, surrounded by the glimmer of limitless extensions in time and space.³⁹

Part of the attraction of The L. R. [*The Lord of the Rings*] is, I think, due to the glimpses of a large history in the background: an attraction like that of viewing far off an unvisited island, or seeing the towers of a distant city gleaming in a sunlit mist. To go there is to destroy the magic, unless new unattainable vistas are again revealed.⁴⁰

The "glimpses of a large history" that result in a "Frameless Picture" aid the illusion of completeness, and the feeling of the unexhausted, or better still, inexhaustible, landscape of the world keeps it fresh for exploration and speculation (a topic covered later in this chapter).

Apart from direct exposition, there are many ways of indicating the existence of a past history, from extended backstories to the inclusion of ruins and legends,

to more subtle things, like the condition of objects. When *Star Wars* (1977) was first released, it was noted for the way it portrayed a lived-in universe; vehicles and equipment had dirt, scratches, rust, and other grit that contributed to a “used” appearance with the wear-and-tear of a past history. Such silent evidence of a past can now be found in any visual medium, and has become an important part of building mood and atmosphere in the worlds in which it appears.

Completeness varies along with the effect the author desires; for example, some postmodern texts will revel in their incompleteness and foreground it. Whatever the case, the completeness of a secondary world determines in large part how believable a world will be, but the depth and detail added to a world must be done carefully if contradiction is to be avoided. A feeling of completeness will only be possible if the world also has an inner consistency that holds all of its many details together in agreement.

Consistency

Consistency is the degree to which world details are plausible, feasible, and without contradiction. This requires a careful integration of details and attention to the way everything is connected together. Lacking consistency, a world may begin to appear sloppily constructed, or even random and disconnected. Consistency may provide the most restraints for a subcreator, since it involves the interrelationship of the various parts of the world, and is one of the main ways that a secondary world attempts to resemble the Primary World.

The likelihood of inconsistencies occurring increases as a world grows in size and complexity, but it is also important to note *where* inconsistencies occur when they do, to determine how damaging to credibility they will be. Inconsistencies can occur in the main storyline, secondary storylines, background details, world infrastructure, or world mechanics. Inconsistencies in the storylines distract and disrupt the audience’s mental image of the story as they follow it, especially if they occur in the main storyline driving the work along; inconsistencies in secondary storylines may have a less harmful effect, but will still weaken the overall impression of the work. Background details that are not crucial to the story can tolerate more inconsistency, especially if they go relatively unnoticed, or if they are not actively used in any of the storylines. World infrastructure and world mechanics are even further in the background, and both are usually present in only partial representations; for instance, the economic system or ecological systems of the world and the way they function and operate (like the question of food and water on Tatooine). Inconsistencies in these areas are usually far less noticeable, as their constituent parts (the facts that are in conflict) may be spread out throughout the story or the world, and would need to be considered together for any contradiction to be noticeable.

Consistency is necessary for a world to be taken seriously, but of course, not all worlds ask to be taken seriously. Some, like Springfield, the town where *The Simpsons* (1989–present) is set, use inconsistencies as a source of humor, or merely place the desire for variety and humor above the need to be consistent.

Springfield's geography is always changing, as is the Simpson family's own history. In the episode "Lisa's First Word" from season 4, we learn that Lisa was born during the 1984 Summer Olympics, while the episode "That '90s Show" from season 19 features Homer and Marge when they were dating, without any kids, in the 1990s. And of course, the entire Simpson family has remained the same age for the 20+ years the show has been around. Likewise, super-spy James Bond has remained roughly the same age over more than four decades of films, while the world around him keeps pace with the times.

Nevertheless, consistency is often taken seriously, even as a world grows to an enormous size. Leland Chee, the continuity database administrator for Lucas Licensing, maintains a *Star Wars* database of over 30,000 entries on all the characters, places, weapons, vehicles, events, and relationships from the *Star Wars* universe. The database was not started until the late 1990s, after two decades worth of *Star Wars* material had been released, resulting in the organization of several levels of canonicity (see Chapter 7) in an attempt to deal with the inconsistencies. Since then, Chee's office has become the force behind *Star Wars* consistency, as movies, TV series, games, toys, and other merchandise can be compared with and integrated into the franchise's existing world information. The *Star Trek* universe, however, spread over an even longer time period beginning with the original series in 1966, has hundreds of television episodes, novels, games, an animated TV series, and more material to coordinate. Stylistic inconsistencies between The Original Series and the later series (of the 1980s, 1990s, and 2000s) are occasionally even noticed by characters within the *Star Trek* universe itself. For its time travel story, one episode of *Deep Space Nine*, season 5, "Trials and Tribble-ations", composites its characters into footage from The Original Series season 2 episode, "The Trouble with Tribbles", and was broadcast to coincide with *Star Trek*'s thirtieth anniversary. The DS9 characters dress in period costumes, comment on the difference of styles, and in one scene, the differences in the design of the Klingons' makeup are foregrounded. In The Original Series, Klingons looked much more like humans, with a minimum of makeup to suggest their foreignness, while in later series the Klingons' features, particular the forehead ridges, were much more pronounced. Since Worf, one of the time-traveling DS9 characters, was a Klingon of the later design, the differences were particularly noticeable. This was acknowledged when another DS9 character, the human O'Brien, sees the older style of Klingons and asks about the difference, to which Worf replies, "They *are* Klingons ... and it is a long story." When pressed, he adds, "We do not discuss it with outsiders." Years later, two episodes of *Star Trek: Enterprise* ("Affliction" and "Divergence") would explain the differences as the result of a virus, which caused the physical changes as well as a change in the Klingons' temperament and disposition.⁴¹

Discussions of canonicity and speculation as to how inconsistencies might be resolved can be found on various Internet forums for a variety of franchises.

What is interesting is the degree to which fan communities want to see inconsistencies resolved; although they would seem to threaten the believability of a world more than the lack of completeness or invention, inconsistencies are treated by these fans as though they are merely gaps in the data, unexplained phenomena that further research and speculation will sort out and clear up. In some cases they are, while other inconsistencies are too incongruous to explain and too damaging to be left alone. Sometimes gaps must be filled before the conflicting information surrounding them makes it impossible to fill them; at this point, someone authorized by the franchise must step in and figure out how to reconcile multiple sources and bring them into agreement. For example, *Star Wars* fans always wondered what the floor plan of the *Millennium Falcon* was, and the exact size of the spaceship. A ten-page article on the topic appeared on Starwars.com in 2008, which explained:

Despite repeated efforts by scholars, artists and fans, the interior of the *Millennium Falcon* eluded definitive mapping. Artists Chris Reiff and Chris Trevas finally cracked the puzzle that is the *Falcon* in the 2008 boxed set from DK Books, *Star Wars Blueprints: The Ultimate Collection*. ... Hindering attempts at defining the *Falcon's* true specs were the flexible requirements of filmmaking, which often favored cost-saving cheats rather than to-the-rivet accuracy in the ship's various depictions. Even the most basic question did not produce a simple answer: how big is the *Falcon*?

If one were to use the studio interior sets seen in Episode IV and Episode V as a foundation of scale, it became apparent that they simply could not fit comfortably within the *Falcon's* exterior dimensions as defined by the ILM models. If the cockpit indicated a certain size, then the hull height meant Han, and especially Chewie, would have to crouch to walk around the crew compartments. Furthermore, the full-sized *Falcon* exterior built for *The Empire Strikes Back* was, in actuality, about 75–80 percent of its intended true size, if one were to make an imaginary blow-up of the ILM miniature to the appropriate dimensions.

Years of expanded universe publishing used an estimate of 87.6 feet (26.7 meters) as the *Falcon's* official length, but Reiff and Trevas discovered that that would be an impossibility. Using a 1976 scale illustration by visual effects art director Joe Johnston as a foundation, and comparing the known lengths of X- and Y-wing fighters, they came up with a measurement of about 110 feet (33.5 meters). Unfortunately, Johnston's sketch was *too* sketchy for it to produce an accurate measurement.

Trevas and Reiff used their blueprints to further refine the Johnston-scaled *Falcon* and came up with a surprising number. "The first time we measured, it very nearly came out to 113.8 feet," says Reiff. "When I suggested we use that length, Lucasfilm thought it would sound like we

made it up." That measurement, you see, looks an awful lot like an Easter Egg reference to *THX 1138*. The artists instead rounded up to 114 feet.⁴²

The article goes on to relate how Rieff and Trevas used a variety of other sources to map the *Falcon*: images from freeze-framed HD copies of the films for interior and exterior layouts, control panel designs, maps of the underside lights, gun placements, hatches, doors, and landing gear; measurements of the sets built for the films; various scale models and props; the *Star Wars* Radio Drama (which described several escape pods); West End Games's 1987 *Star Wars Sourcebook* floor plans; Shane Johnston's drawings of the *Falcon*'s interior in *Starlog's Star Wars Technical Journal* published in 1993; Wizards of the Coast floor plans (which showed the location of the ship's bathroom); a 1997 cut-away poster illustration from SciPubTech; an expansive exploded view by Hans Jenssen in DK Books's *Star Wars: Incredible Cross Sections* (1997); a three-dimensional walkthrough from the CD-ROM *Behind the Magic* (1998); Timothy Zahn's novel *Allegiance* (2007); and the fact that a hyperdrive had to be included and fit into the overall design. At least in the case of *Star Wars*, the amount of effort put into answering such questions and restoring consistency can sometimes equal that of actual historical researchers establishing facts and revising earlier claims as new data conflicts with them.

Occasionally, franchise creators will even go back and alter earlier works to make them consistent with later ones, a process now referred to as "retroactive continuity" or "retcon" (see Chapter 4). Famous examples of retconning include J. R. R. Tolkien revising *The Hobbit* (1937) to bring it into alignment with *The Lord of the Rings* (since the Ring did not originally have many of the properties it was given later), or George Lucas's many alterations to the *Star Wars* re-releases. While controversial among fan communities, retcon is more common in superhero comic books, and sometimes attempts are made to explain it away through the use of time travel, alternate universes, dreams, and other questionable techniques. And one can find lighthearted approaches toward it as well; on the British TV show *Torchwood*, a drug used to erase memories is called "Retcon".⁴³

The death of an author who leaves works unfinished can also result in inconsistencies, which may or may not be reconcilable by those who carry on his work. While the Tolkien Estate does not approve of or allow new works set in Middle-earth to be written by other authors, it does allow Tolkien's own unpublished material to appear, including multiple drafts of his works, sometimes resulting in partial and even conflicting versions of stories. In the foreword to *The Silmarillion* (1977), Christopher Tolkien wrote:

On my father's death it fell to me to try to bring the work into publishable form. It became clear to me that to attempt to present, within the covers of a single book, the diversity of materials—to show *The Silmarillion* as in truth a continuing and evolving creation extending over more than half a

century—would in fact lead only to confusion and the submerging of what was essential. I set myself therefore to work out a single text, selecting and arranging in such a way as seemed to me to produce the most coherent and internally self-consistent narrative. ... A complete consistency (either within the compass of *The Silmarillion* itself or between *The Silmarillion* and other published writings of my father's) is not to be looked for, and could only be achieved, if at all, at heavy and needless cost.⁴⁴

Arda, Tolkien's subcreated world in which Middle-earth appears, is one of the largest and most detailed worlds ever made by a single author. It is amazing how consistent it is, given its expansiveness, fine level of detail, and span of more than 6,000 years. Yet, some inconsistencies still remain, though they are usually what we might call “aggregate inconsistencies”, things that are not readily noticeable unless one combines several facts which one would not normally consider together, and which would go unnoticed by casual readers. For example, in *The Hobbit*, there is the question of Bilbo and Gollum and their ability to understand each other when they meet under the mountain. Gollum, or Sméagol as he was known (as we later learn in *The Lord of the Rings*), originally came from a different variety of hobbits, the Stoors, who lived in another region of Middle-earth. As Tolkien explained in a draft of a letter to A. C. Nunn:

With the remigration of the Stoors back to Wilderland in TA 1356, all contact between this retrograde group and the ancestors of the Shire-folk was broken. More than 1,100 years elapsed before the Déagol-Sméagol incident (c. 2463). At the time of the Party in TA 3001, when the customs of the Shire-folk are cursorily alluded to insofar as they affect the story, the gap of time was nearly 1,650 years.

All hobbits were slow to change, but the remigrant Stoors were going back to a wilder and more primitive life of small and dwindling communities; while the Shire-folk in the 1,400 years of their occupation had developed a more settled and elaborate social life, in which the importance of kinship to their sentiment and customs was assisted by detailed traditions, written and oral.⁴⁵

Even though “hobbits were slow to change”, the two groups were on markedly different paths of development, and the passage of over 1,500 years would surely find them so different that it is hard to believe that their language would remain so unchanged that Bilbo and Gollum could communicate without any difficulty. Considering Tolkien's careful treatment of language (and language change) throughout his work, it is surprising that such a discrepancy exists; but to notice the inconsistency, one must integrate information from *The Hobbit*, *The Lord of the Rings*, and *The Letters of J. R. R. Tolkien*. If *The Hobbit* is considered alone, there appears to be no discrepancy.

As worlds grow in size and detail, aggregate inconsistencies become more likely, but in many cases, they are so spread out, requiring so many disparate facts to be considered together, that they are more likely to go unnoticed. Yet, fans are often very knowledgeable about their favorite franchises, and even enjoy catching such inconsistencies and trying to explain and reconcile them with their own theories.⁴⁶ And this kind of activity requires one to be thoroughly immersed in the world in question.

Immersion, Absorption, and Saturation

Much has been written about “immersion” in regard to a user’s experience with new media.⁴⁷ The term is typically used to describe three different types of experiences, which exist along a spectrum. On one end, there is the *physical* immersion of user, as in a theme park ride or walk-in video installation; the user is physically surrounded by the constructed experience, thus the analogy with immersion in water. Moving away from the surrounding of the entire body, there is the *sensual* immersion of the user, as in a virtual-reality-driven head-mounted display that covers the user’s eyes and ears. While the user’s entire body is not immersed, everything the user sees and hears is part of the controlled experience; another example, a step further down the spectrum, would be the watching of a movie in a darkened theater, or a video game with a three-dimensional space through which the player’s avatar moves; in such cases, the audience vicariously enters a world through a first-person point of view or an on-screen avatar. Finally, on the other end of the spectrum is *conceptual* immersion, which relies on the user’s imagination; for example, engaging books like *The Lord of the Rings* are considered “immersive” if they supply sufficient detail and description for the reader to vicariously enter the imagined world.

It is also interesting to note how certain media, like newspaper and radio, are usually *not* considered immersive, even though a newspaper, when opened in front of the reader, fills more peripheral vision than does a book or television screen, and music on the radio literally surrounds a listener physically with sound waves. Part of the reason these media are usually not considered immersive is that neither is likely to provide the kind of vivid experience of going elsewhere, into a different place, that one can find in other more “immersive” media.⁴⁸ Thus, it would seem that an imaginary world is an aid to conceptual immersion. The metaphor of “immersion”, the further it moves away from actual, physical immersion, becomes less of an analogy of what is happening, and only covers the first step of the experiencing of an imaginary world. In some of the examples of immersion described above, one might be “immersed”, but cease to be much more than that. A theme park ride will successfully physically immerse someone, but may still be uninvolved mentally and emotionally. A virtual space seen through a head-mounted display may likewise dominate a person’s sensory registers, but fail to interest a person beyond merely looking around.

On the other hand, for conceptual or emotional immersion to occur, the audience must be fully engaged with the work at hand; thus, to speak only of “immersion” is not enough, and an additional liquid metaphor is needed; that of *absorption*.⁴⁹

Absorption differs from immersion in that it is a two-way process. In one sense, the user’s attention and imagination is absorbed or “pulled into” the world; one willingly opens a book, watches a screen, interacts with a game world, and so forth. At the same time, however, the user also “absorbs” the imaginary world as well, bringing it into mind, learning or recalling its places, characters, events, and so on, constructing the world within the imagination the same way that that memory brings forth people, events, and objects when their names are mentioned. Thus, we are able to mentally leave (or block out) our physical surroundings, to some degree, because details of the secondary world displace those of the Primary World while we are engaged with it. As psychologist Norman Holland describes it:

We humans have a finite amount of attention or “psychic energy.” Attention is a way of focusing that limited energy on what matters. If we concentrate on one thing, an important thing, we pay less attention to other things. Those other things become unconscious (or, more accurately, “preconscious” in Freud’s term). If we use more energy and excitation in one prefrontal function, following the play or story, we have less energy available for other prefrontal functions, like paying attention to our bodies or to the [Primary] world around that play or story.⁵⁰

Since details of the secondary world displace those of the Primary World in the audience member’s attention, the more details the secondary world asks the audience to keep in mind (especially details important to the understanding and enjoyment of the story), the more “full” the audience’s mind is of the secondary world, and the more absorbing the experience of it becomes (the challenge of remembering and integrating a wealth of detail can make absorption similar to Mihaly Csíkszentmihályi’s notion of “flow”, another liquid metaphor).

Thus, we can add a third liquid metaphor to complete the process; that of *saturation*.⁵¹ When there are so many secondary world details to keep in mind that one struggles to remember them all while experiencing the world, to the point where secondary world details crowd out thoughts of the immediate Primary World, saturation occurs (as in the quote from Defontenay’s *Star* (1854) given at the start of this chapter). Saturation is the pleasurable goal of conceptual immersion; the occupying of the audience’s full attention and imagination, often with more detail than can be held in mind all at once. And some worlds do require a great deal of attention, concentration, and memory, if one is to appreciate all the nuances and subtleties that an author can offer. *The Silmarillion*, for example, includes an “Index of Names” listing 788 entries for all the characters, places, titles,

and terms used in the book.⁵² To make matters even more difficult, certain characters have multiple names (Túrin, for example, is also known as Neithan, Gorthol, Agarwaen, Mormegil, Thurin, Wildman of the Woods, and Turambar), and several names are shared by more than one character, place, or thing (for example, Celeborn, Elemmirë, Gelmir, Gorgoroth, Lórien, Minas Tirith, Míriel, and Nimloth all refer to more than one person or place). And Tolkien's names almost always carry meaning as well; after the "Index of Names" is an appendix entitled "Elements in Quenya and Sindarin Names" that lists 180 root words and their meanings, from which the majority of the 788 entries in the "Index of Names" are formed. Many of the book's characters are related in elaborate family trees, and these relationships often play an important role in the stories. Throughout the book, various events are alluded to long after they have occurred, or are foretold long before they occur, requiring the reader to remember a good deal in order to understand the events and motivations behind them. And *The Silmarillion*, in turn, acts as a backdrop and backstory for *The Lord of the Rings*, which frequently alludes to its material and, in a sense, is *The Silmarillion*'s climax and conclusion. For example, Aragorn is distantly related to Beren, whose romance with Lúthien mirrors Aragorn's romance with Arwen; and Aragorn is also the heir of Isildur, whose weakness and fate he hopes will not match his own. While one can read and enjoy *The Lord of the Rings* without having read *The Silmarillion*, knowledge of *The Silmarillion* adds to the story's depth and nuance, enhancing the reader's pleasure and understanding.

Saturation can affect one's experience of an imaginary world in other ways as well. In many video games, especially those of the adventure game genre, players must be able to remember a wealth of details about the game's imaginary world in order to put together its backstory and solve puzzles, both of which are often needed to win the game (as in *Riven* (1997)). The worlds of the largest massively multiplayer on-line role-playing games (MMORPGs), with their vast territories, millions of player-characters, and ongoing events, are too large for any player to know in their entirety, allowing even the most hardcore players to achieve saturation.

Worlds offering a high degree of saturation are usually too big to be experienced completely in a single sitting or session. The amount of detail and information must be great enough to overwhelm the audience, imitating the vast amount of Primary World information which cannot be mastered or held in mind all at once. This overflow, beyond the point of saturation, is necessary if the world is to be kept alive in the imagination. If the world is too small, the audience may feel that they know all there is to know, and consider the world exhausted, feeling there is nothing more to be obtained from it. A world with an overflow beyond saturation, however, can never be held in the mind in its entirety; something will always be left out. What remains in the audience's mind then, is always changing, as lower levels of detail are forgotten and later re-experienced and re-imagined when they are encountered again. For example, someone can

read Tolkien's works in grade school, high school, college, and later; and with each re-reading, the reader will notice new things, make new connections, and re-imagine events and characters due to the reader's own changed level of maturity and experience. While this can also occur with smaller works that do not reach the same levels of saturation or overflow, it is those that do that provide more interesting re-visioning, as forgotten details return in new imagined forms, and new configurations of detail and information inhabit the reader's mind. Even in the case of visual media like film and television, where images and sounds are concrete and fixed, the way we imagine the unseen parts of the world may change with each viewing. We may ask different questions and focus on different aspects that we had not previously considered, resulting in a different experience insofar as our speculation and imagination is concerned. These differences arise due to the way we complete narrative and world gestalten, which also depends on our own previous experience.

World Gestalten: Ellipsis, Logic, and Extrapolation

The reader makes implicit connections, fills in gaps, draws inferences and tests out hunches; and to do this means drawing on a tacit knowledge of the world in general and of literary conventions in particular. The text itself is really no more than a series of "cues" to the reader, invitations to construct a piece of language into meaning. ... Without this continuous active participation on the reader's part, there would be no literary work at all.

—Terry Eagleton, literary theorist⁵³

The automatic filling in of gaps by an observer was first noted in Gestalt psychology, which began in the early twentieth century and saw the whole as being more than the sum of its parts. In particular, the gestalt principles of emergence, reification, good continuity, closure, and *prägnanz* all have to do with how the human perceptual system organizes sensory input holistically, automatically filling in gaps, so that the whole contains percepts that are not present in the individual parts from which it is composed. While a few principles have been applied to sound, most Gestalt principles apply to vision, and the way one perceives and completes an image, adding details, connections, or forms that are not actually present.

As the Eagleton quote in the preceding text suggests, the idea of the gestalt can be usefully applied not just to the *perceptual* realm, but the *conceptual* realm as well. For example, in classical Hollywood film continuity, when we see a person drive off in a car in one scene and arrive at a different location in the next scene, we automatically assume they have driven from one place to another; a *narrative gestalt* occurs, as the departure and arrival together suggests a journey we have not seen. Like visual gestalten, narrative gestalten occur automatically and seemingly without much conscious effort on the part of the viewer, provided the viewer is familiar with the cinematic storytelling conventions being used.

Biographical films like *Gandhi* (1982) and *The Last Emperor* (1987) may cover several decades of someone's life in only a few hours, resulting in a staggering amount of omission and ellipsis, and yet such stories, if they are well constructed and include the right events, can seem complete and comprehensible.

Likewise, we can go one step further and suggest the idea of *world gestalten*, in which a structure or configuration of details together implies the existence of an imaginary world, and causes the audience to automatically fill in the missing pieces of that world, based on the details that are given. Psychologists have already considered how our imagination constructs our own internal version of the real world (as in Steven Lehar's book *The World in Your Head: A Gestalt View of the Mechanism of Conscious Experience* (2002)) but the same processes can, to a degree, be applied to our imagining of secondary worlds as well (as Norman Holland demonstrates in *Literature and the Brain*).⁵⁴

Naturally, the gaps existing in world information overlap considerably with gaps in the narrative. Narrative theory attempts to answer how narrative gaps work and how the audience tries to fill them. In *Narration and the Fiction Film* (1985), David Bordwell uses the Russian formalist notions of "fabula" (the story we construct from the causal, spatial, and temporal links that a narrative provides) and the "syuzhet" (how the film arranges and presents the fabula) when discussing how narrative gaps are filled:

The analysis of narration can begin with the syuzhet's tactics for presenting fabula information. We must grasp how the syuzhet manages its basic task—the presentation of story logic, time, and space—always recalling that in practice we never get ideally maximum access to the fabula. In general, the syuzhet shapes our perception of the fabula by controlling (1) the quantity of fabula information to which we have access; (2) the degree of pertinence we can attribute to the presented information; and (3) the formal correspondences between syuzhet presentation and fabula data.

Assume that an ideal syuzhet supplies information in the "correct" amount to permit coherent and steady construction of the fabula. Given this hypostatized reference point, we can distinguish a syuzhet which supplies too little information about the story and a syuzhet which supplies too much: in other words, a "rarefied" syuzhet versus an "overloaded" one.⁵⁵

If only narrative is considered, most subcreated worlds would be considered to have an overloaded syuzhet, since much of the world information supplied in a narrative may be considered excess beyond what is needed to tell the story. However, we can extend the notions of fabula and syuzhet to the world that is presented and the way it is constructed in the mind of the audience. If the world is considered instead of merely the narrative set in the world, the reference point for the ideal syuzhet must change; the ideal syuzhet would have to provide enough information for the audience to be able to feel that an independent world

appears to exist, and to have some sense of its infrastructure, cultures, geography, history, and so forth. Thus, what might appear to be “excess” from a narrative-oriented point of view, may prove to be necessary from a world-oriented point of view.

If, during fabula construction, a narrative is constructed from causal, spatial, and temporal linkages, from what is a world constructed? Similar systems of relationships hold a world’s elements together and define its structure; maps (spatial links), timelines (temporal links), histories and mythologies (causal links), and other systems such as genealogical relationships, and those involving nature, culture, language, and society (these structures are the topic of Chapter 3). When a large enough number of elements from these systems are combined in a consistent fashion, a kind of “world logic” starts to form, by which one can see how a world works and how its various systems are interrelated. This logic may cover everything from social customs to the laws governing magic or the limitations of technology, to even laws of physics that differ from those of the Primary World, which all help to establish the ontological rules of the secondary world. Following the Gestalt principle of “good continuation”, structures like maps and timelines may suggest how gaps are to be filled by laying out places or events that allow the audience to figure out what lies between them (for example, terrain that changes from rain forest to desert cannot do so abruptly; the landscape in between them must gradually transform). World events likewise can be elided with enough information given so that the gradual shift from one state to another can be reconstructed in the audience’s imagination, just as in a narrative we are given the turning points in a character’s life from which a character arc can be plotted. When Primary World defaults can be used to fill in such areas, the author can leave such information to be extrapolated by the audience; for example, cityscapes in alien worlds often rely on similarities with Primary World cityscapes in their structure and functioning, despite the fantastic architecture and grand scale that often set them apart from Primary World cities. Differences are highlighted while similarities are taken for granted, resulting in an emphasis on the uniqueness of the secondary world, while still keeping it relatable to an audience.

World logic, which itself is part of the world’s fabula, gives the audience the evidence and solid ground which enables them to speculate and extrapolate, filling in the gaps and completing the gestalten needed for the illusion of a secondary world. A world’s logic does not need to be so rigorous as to fill every gap definitively; there will always be room for ambiguity, especially in word-based media that leave visualization to its readers’ imagination. For example, Douglas A. Anderson’s book, *The Annotated Hobbit* (1986; revised edition, 2002) is replete with illustrations from translations of *The Hobbit* from around the world, which together form a wide gamut of illustration styles and character designs, all based on the same novel.⁵⁶

Once a world is developed enough, even its author can become beholden to a world’s logic and the rules that result from it. This is why one often hears that a story begins “writing itself” or that characters seem to take on lives of their own

and end up saying or doing things the author had not planned (while stuck during the writing of one of his Oz novels, L. Frank Baum once complained that characters would not do what he wanted them to do⁵⁷). At such a point, the world's logic has begun to shape and limit further additions to the world, occasionally even suggesting things the author had not considered previously. In a letter of 1956, Tolkien wrote that:

I have long ceased to *invent* (though even patronizing or sneering critics on the side praise my "invention"): I wait until I seem to know what really happened. Or till it writes itself. Thus, though I knew for years that Frodo would run into a tree-adventure somewhere far down the Great River, I have no recollection of inventing Ents. I came at last to the point, and wrote the "Treebeard" chapter without any recollection of previous thought: just as it now is. And then I saw that, of course, it had not happened to Frodo at all.⁵⁸

Such inventions can even work against an author's narrative goals, as world logic begins to drive the narrative. While working on *The Lord of the Rings* in 1944, Tolkien wrote his son Christopher about how a new, initially unwanted character was holding back his work:

A new character has come on the scene (I am sure that I did not invent him, I did not even want him, though I like him, but there he came walking into the woods of Ithilien): Faramir, the brother of Boromir—and he is holding up the "catastrophe" by a lot of stuff about the history of Gondor and Rohan (with some very sound reflections no doubt on martial glory and true glory): but if he goes on much more a lot of him will have to be removed to the appendices—where already some fascinating material on the hobbit Tobacco industry and the Languages of the West have gone.⁵⁹

Not only does Faramir appear as a character needed by the story, he also personifies the encyclopedic impulse, through his exposition regarding Gondor and Rohan. Tolkien's reaction, threatening to remove the exposition to the appendices, shows the potential tension between story and world concerns.

World data may slow narrative progress or halt it momentarily, but it also enriches narrative by giving it more of a context and background depth. Yet, no matter how much of a world is documented, there is never enough invented material to fill all the gaps that exist; nor is any world invented so completely that they could be. Where the world's own logic does not dictate specific answers, gaps are usually filled with Primary World defaults; in other words, unless we are told otherwise, we expect the laws of physics in a secondary world to be the same as those of the Primary World, and expect that the secondary world's social, political, or economic structures will operate in a similar fashion as those that exist (or used to exist) in the Primary World. For example, the Anglo-Saxons

serve as the model for Tolkien's Riders of Rohan, in their poetry, names, and customs. This makes them more believable and gives them an underlying logic that connects the various aspects of their culture. While the casual reader may not have any background in Anglo-Saxon history, their cultural logic remains, adding consistency and aiding in the filling of gaps.⁶⁰ Kendall Walton calls this gap-filling using Primary World defaults the "reality principle",⁶¹ while Marie-Laure Ryan calls it the "principle of minimal departure", writing:

We construe the world of fiction and of counterfactuals as being the closest possible to the reality we know. This means that we will project upon the world of the statement everything we know about the real world, and that we will make only those adjustments which we cannot avoid.⁶²

As mentioned earlier, this is one feature that makes some books, like *The Lord of the Rings*, so popular for re-reading; because at different stages of one's life, one's understanding of the world, and thus its defaults, may differ considerably, so that each time we read the book we fill in the gaps differently, creating a new experience of the world even though the book itself has not changed, but rather because the reader has changed since his or her last reading.

The more detail one is given about a world, the more gestalten can operate, since the gaps to be filled will be smaller and thus more easily closed by extrapolation. And the easier they are to close, the more automatically and unconsciously the audience will close them, resulting in a greater illusion of an independently existing world. Larger gaps can be closed too, but with a conscious effort on the part of the audience, who must actively consider how to close them; an activity that can be a pleasurable one if the audience feels that the author has already considered the gaps in question and accounted for them somehow. Even in the case of an apparent inconsistency, audience members may try to resolve a gap in order to defend the consistency of a world which they are fond of. Consider, for example, British theoretical astrophysicist Dr. Curtis Saxton's thoughtful explanation as to why we can hear the spaceships in *Star Wars* even though sound does not travel in space:

Sound does not propagate in space. ... Therefore it becomes difficult and important to explain how it is that the crews of starships and starfighters are apparently able to hear the movement of nearby vessels and beam weapons. Several qualities need to be accommodated:

1. Crew actually hear these phenomena; they behaviorally respond as if to audio stimuli.
2. Nearby weapon beams sound louder than distant ones.
3. A nearby starship sounds louder than a distant one.
4. The sound characterises the model of starship.
5. A passing starship exhibits a Doppler shift of pitch, according to relative velocity.

The most plausible explanation is that the sound is produced inside the cockpit of each starship for the benefit of crew. External radiation sensors of various kinds are linked to audio systems of the cockpit in order to provide the pilot with audible cues to the proximity of other starships and energetic phenomena, operating like a glorified Geiger-counter. A greater rate of particle detections occurs when the source is more powerful or closer; each of these contributes an audible click on internal speakers, millions of pulses received combine to give a sound which characterizes the emission spectrum of the passing starship.

This is an efficient use of the pilot's senses to convey vital information; the pilot's sight is likely to be preoccupied with controls and visual displays. As a technology, it also has the strength of appealing to basic human intuitions about how the physical world operates.

An alternative explanation for the sounds involves the starships' shields. All space vessels operating beyond the protection of the atmosphere and magnetosphere of a planet require at least some shielding to protect them from solar wind particles, etc. It therefore seems possible that disturbances to the shields could be indirectly but physically felt through the hull or the generators. The radiation from blaster shots or nearby sublight engines may cause resonant vibrations, heard inside the ship as sounds.

An important quote has been discovered in the *A New Hope* radio play that conclusively proves that the "sounds in space" really are just auditory sensor feedback provided to crew inside a ship. This does not rule out the possibility of some kinds of shield disturbances may have audible effects, but it does indicate that the sounds heard in the movies are primarily a product of sensor systems. As Han Solo explains to Luke Skywalker [ANHRD: 286–287]:

Your sensors'll give you an audio simulation for a rough idea of where those fighters are when they're not on your screen. It'll sound like they're right there in the turret with you.

From the evidence of the movies, it seems that major warships dispense with this effect, which is how the Executor, Home One, and star destroyer command bridges maintain such a pure and clinical atmosphere. Of course, the ships' gunners, helmsmen and other crew who are immediately and directly concerned with outside action may have auditory sensor data fed into their helmets and headsets.⁶³

This extended discussion, both serious and playful in nature, demonstrates the importance of consistency in the gap-filling process, and the degree of speculation it can involve.

Of course, the casual audience member who merely wishes to follow a narrative and discover its outcomes will probably never experience many of the world gestalts available to those for whom a vicarious experience of the world is as important (or more) as the understanding of the narrative. (Likewise, a single viewing or reading is usually enough for someone interested only in story, whereas someone interested in the world and its structures will probably return to a work multiple times in order to focus on details and the various links between world data.) However, for those who do care, the vicarious experience of a world is strengthened through transnarrative and transmedial references, all of which are unified by the world into an overarching experience (provided all the various details are in agreement, of course).

Even for the casual audience member, many world gaps are filled unconsciously (like the gaps of perceptual psychology), giving the feeling of a fully-rendered complete world with little effort on the part of the audience; for example, in movies when locations are seen from multiple angles, a viewer will typically automatically combine the images into a three-dimensional composite structure, even though the images may actually be a combination of live-action sets, models, and computer-generated imagery (this process is similar to what Irvin Rock refers to as "unconscious inference" in *The Logic of Perception* (1983)⁶⁴ and can also be seen as an extension of the Gestalt principle of *invariance*). While unconscious inferences of this kind may be enough to give the casual viewer enough of a sense of a world's completeness to keep him or her from being distracted from following the narrative, viewers more interested in the vicarious experience of the world may further question a world's feasibility and look to data beyond what is needed by the narrative, where larger gaps need to be filled in with conscious effort (as in the earlier example regarding food and water on Tatooine).

Apart from the visual and auditory gestalten that occur when a story or world is presented in audiovisual media, extrapolation can be divided into three types: the completion of narrative gestalts, gap-filling using Primary World defaults, and gap-filling using secondary world defaults. The first two of these we have already examined, and both are general processes used across all fictional worlds. The third, however, involves the particular defaults of a specific secondary world, which the audience must learn in order to fill in gaps. This includes such things as customs, design styles, languages, and so on, that are often introduced without explanation and left for the audience to figure out either directly, from the information given, or indirectly, from the context formed by events as the world unfolds (for example, avid *Star Trek* viewers are familiar with starship layouts and their interior design styles, allowing them to imagine ship interiors even when they are not shown). Thus, while Primary World defaults and narrative gestalts can function right from the beginning of the audience's encounter with a world, the defaults of a secondary world must be learned over time through exposure to, and experience of, a secondary world, occasionally with conscious effort on the audience's part (in some cases, sources like glossaries and appendices can provide direct explanations and details).

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This leads to the question of what details need to appear and what can be left to the imagination. Secondary world defaults are what define a secondary world and delineate its difference from the Primary World, so they form the foundation of what must be included. Once enough of them have been given to establish the world's logic, the author may begin to leave things to be extended, inferred, or extrapolated by the audience, so that detail appears to continue beyond what has actually been given; as Tolkien puts it, "a Frameless Picture: a searchlight, as it were, on a brief episode in History ... surrounded by the glimmer of limitless extensions in time and space."⁶⁵ The necessary details, then, are those that form the very structures by which subcreated worlds are held together (and which are the subject of Chapter 3). Beyond these, an author may add additional details to fill out and embellish the world, suggest unexplored horizons, and engage the imagination. In audiovisual media, these may be small details in the background that reward the observant spectator with additional world data (see Figure 1.3).

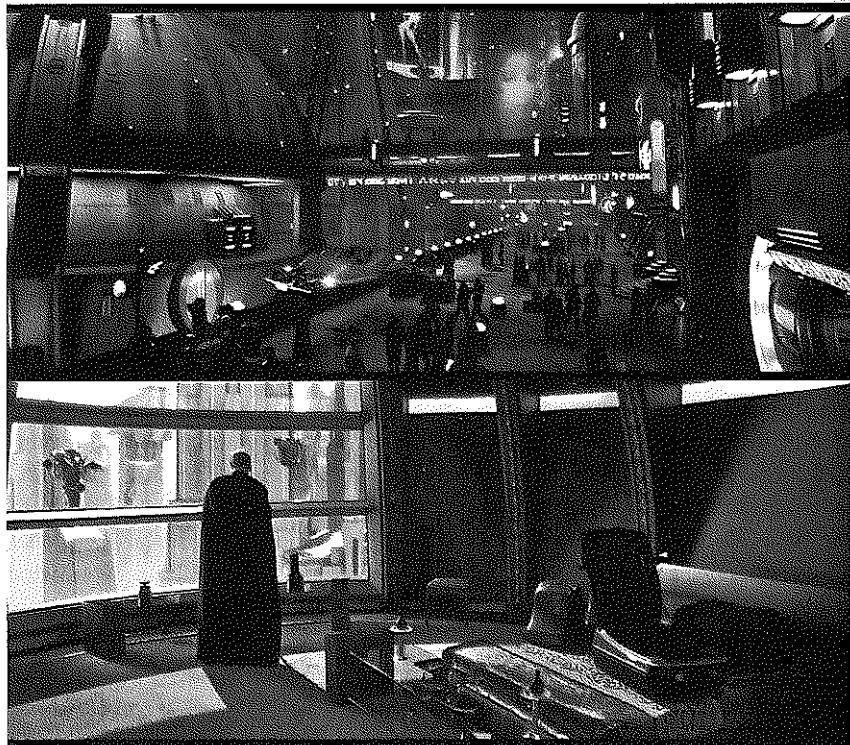


FIGURE 1.3 World details in *Star Wars Episode II: Attack of the Clones* (20th Century Fox, 2002). Staging in depth results in suggestive glimpses of distance objects and locations (top), while background details and events reveal further consequences of story events, like the flying droids seen outside Padmé's apartment that replace the window which was broken during the attack of the night before (bottom).

Such details would have to be described in a novel rather than simply remaining in the background; audiovisual media such as movies, then, have an advantage when it comes to world-building insofar as they can depict things in the background without calling attention to them, letting viewers find them during subsequent viewings after the narrative has been exhausted.

Secondary world defaults can be rigidly defined, or room can be left for audience interpretation. There is a tendency, especially in word-based media that leave visualization of a world to the audience's imagination, for Primary World defaults to "normalize" secondary world defaults to some degree. Two examples of this "normalizing tendency" can be found in Tolkien's work. When Gandalf is first introduced in *The Hobbit*, he is described as having "long bushy eyebrows that stuck out farther than the brim of his shady hat."⁶⁶ And in *The Lord of the Rings*, Frodo leaves Hobbiton with the Ring a day after his fiftieth birthday. Despite these facts, Gandalf, when he is visualized (either in illustrations or in films) is rarely depicted with eyebrows extending so far out, nor is Frodo depicted as looking 50 years old. While the Ring is partly responsible for Frodo's youthful appearance,⁶⁷ the other hobbits of the Fellowship are also typically portrayed to be younger (perhaps all in their twenties, like the four actors portraying them in Peter Jackson's film adaptations), even though when the four hobbits begin their journey Sam is 35, Merry is 36, and Pippin is 28. Thus, while the description of Gandalf's eyebrows create a certain feeling about him when he is introduced, to actually depict (or constantly imagine) Gandalf to have eyebrows of that size would make him seem comic, so the initial description is more likely to be treated as hyperbole as opposed to a literal description. Likewise, the hobbits' initial innocence and relative inexperience, along with their short height, make them seem more youthful than they actually are, since these aspects are more strongly emphasized by the narrative than their ages are. Primary World defaults, then, can temper strange or unusual details and subtly adjust one's image of the secondary world to be more in line with what may be considered more "realistic".

A world's inventions and changed defaults can be revealed suddenly or gradually, and can be explained directly, deliberately left unexplained, or left to the audience to figure out through context. An example of meaning given through context can be found on the first page of Frank Herbert's *Dune*, when an old crone comes to see Paul Atreides and it is said of her that, "Her voice wheezed and twanged like an untuned baliset." Without defining "baliset", the audience can infer it is a musical instrument, because it can be tuned. In addition, the analogy also describes the sound from what may be the character's point of view (Paul may think her voice sounds like a baliset) which in turn reveals that music is a part of the world's culture, and perhaps also among the character's interests.

Inferences can also be very subtle and require the connecting of small details. For example, it is never stated directly that Tolkien's Elves have pointed ears,

but the similarity between the Quenya words for “leaf” and “ear” suggest such a shape. As Douglas A. Anderson writes:

In his notes on the stem LAS[1] from *lasse = “leaf” and LAS[2] “listen” (*lasse = “ear”), Tolkien noted the possible relationship between the two in that Elven “ears were more pointed and leaf-shaped” than human ones.⁶⁸

Although some questions can be answered by information in ancillary materials, much room is left for speculation. While incompleteness is not desirable in certain areas necessary for comprehension of the story or the world, room for speculation in other areas is a valuable asset to an imaginary world, as this is where the audience’s imagination is encouraged and engaged.

Catalysts of Speculation

I've put in so many enigmas and puzzles that it will keep the professors busy for centuries arguing over what I meant, and that's the only way of insuring one's immortality.

—James Joyce, on his novel *Ulysses*⁶⁹

As Joyce realized, a work’s immortality depends on whether or not it remains discussed by others. For a world, this can mean speculation in the areas where extrapolation attempts to reach: mysterious aspects and open-ended questions (not without clues, perhaps) that allow speculation to continue after the works are consumed. Deliberate gaps, enigmas, and unexplained references help keep a work alive in the imagination of its audience, because it is precisely in these areas where audience participation, in the form of speculation, is most encouraged. Some of the most successful world-builders have realized this. In a letter of 1954, Tolkien wrote:

As a story, I think it is good that there should be a lot of things unexplained (especially if an explanation actually exists); and I have perhaps from this point of view erred in trying to explain too much, and give too much past history. Many readers have, for instance, rather stuck at the Council of Elrond. And even in a mythical Age there must be some enigmas, as there always are. Tom Bombadil is one (intentionally).⁷⁰

And in another letter of 1965, referring to Gandalf’s departure from the Grey Havens at the end of the book, Tolkien wrote:

I think Shadowfax certainly went with Gandalf, though this is not stated. I feel it is better not to state everything (and indeed it is more realistic, since

in chronicles and accounts of “real” history, many facts that some enquirer would like to know are omitted, and the truth has to be discovered from such evidence as there is.⁷¹

The same is apparently felt by George Lucas:

The careful tending of the *Star Wars* continuity has yielded great wealth, but the key to a productive farm is to leave some fields fallow. A complete Holocron would leave little room for fantasy—for fans who, as [Henry] Jenkins says, “love unmapped nooks and crannies, the dark shadows we can fill in with our imagination.”

That’s something that GWL [George Walton Lucas] understands. For instance, the origins of the Jedi master Yoda, his species, and his home planet are off-limits. The backstory isn’t even in the Holocron. “It doesn’t exist, except maybe in George’s mind,” [Leland] Chee says. “He feels like, ‘You don’t have to explain everything all the time. Let’s keep some mystery.’”⁷²

Of course, every subcreated world has gaps, so speculation is always possible; but the difference here is that a successful secondary world is one an audience *wants* to extrapolate. Before speculation occurs, curiosity must be aroused, and it will only be aroused if there is the possibility that a correct, or at least plausible, answer is thought to exist somewhere. While completeness can never be achieved, a *sense of completeness* can, which gives the impression that all questions could, in theory, be answered, even though they are not. For the areas of a world in which speculation is encouraged, the ideal balance of information is one in which enough information is provided to support multiple theories, but not enough to prove any one theory definitively. The ability to debate and find new ways to answer questions can keep a world fresh, especially if it is a “closed” world for which authorized additions are no longer being made (see Chapter 7). For “open” worlds which are still being built, speculation may lead to new works that attempt to answer questions in more detail, either by the world’s originator, by those authorized to add to it, or even by unauthorized fan additions.

Another catalyst for speculation occurs when a world’s originator dies leaving unfinished work. Much of Tolkien’s work was unpublished at the time of his death, and has appeared posthumously in *The Silmarillion* (1977), *Unfinished Tales* (1980), the 12-volume *History of Middle-earth* series (1983–1996), and *The Children of Húrin* (2007), all edited by his son Christopher Tolkien. Frank Herbert left the seventh and final novel of his *Dune* series unfinished in outline form when he died in 1986, and his son Brian (along with Kevin J. Anderson) used this outline to produce two more *Dune* novels, *Hunters of Dune* (2006) and *Sandworms of Dune* (2007), as well as a number of prequel novels. Thus, the desire to see gaps filled and unfinished material published can help stimulate the circles of authorship that can extend out from around a world’s originator (see Chapter 7).

As suggested in the second Tolkien quote, regarding Shadowfax, deliberate gaps, enigmas, and unexplained references add to a world's verisimilitude by making it more like the Primary World, where ambiguity and missing pieces often remain in the search for knowledge, requiring what poet John Keats called "Negative Capability"; that is, "when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason".⁷³ Negative Capability is almost always a necessity in the enjoyment of subcreated worlds, since much of a world typically remains unrevealed, unexplained, or ambiguous (like whether balrogs have wings or not).⁷⁴ The more information that an author gives of a secondary world, the more that can be ellipsized, or left vague. Speculation is more likely to occur in a near-complete world than a very incomplete one, because the possibility of completion seems much closer and attainable; smaller gaps are more likely to be bridged than larger ones. Authors, then, cannot rely on speculation occurring unless their worlds are substantial enough to generate theories for their completion.

Yet, despite all the elaborate details that can be included in a world, one important detail—its exact location—is often left purposely vague, although at the same time, there is usually some link connecting the secondary world back to the Primary World.

Connecting the Secondary World to the Primary World

The boundaries between a secondary world and the Primary World are usually very distinct (so long as the former does not already contain the latter, as in *Star Trek*), and they are important, as they determine who comes and goes into the secondary world. Getting to a secondary world often takes some effort, and many secondary worlds have a kind of "no-man's-land" or area⁷⁵ surrounding them which further separates the secondary world from the Primary World, including oceans (around islands), deserts, mountains, and other unoccupied lands that serve as a buffer zone, helping to hide the location (secondary worlds are often hard to find and enter). This buffer zone could also be outer space itself, or the layers of earth covering an underground realm. The buffer zone surrounding a secondary world may also help explain why it is as isolated as it is, and how it has remained separate from the Primary World, and why it is different from it. A buffer zone can also make it difficult for someone to leave the secondary world as well, either because crossing it requires a vehicle of some sort that the character does not have, because an exit cannot be found, or because the world's inhabitants will not permit visitors to leave once they have entered the secondary world. In any event, the connection to the Primary World, when it exists, is one that is carefully considered and controlled.

All secondary worlds reflect or resemble the Primary World in some way; otherwise, we would not be able to relate to them. As Tolkien puts it, "Fantasy does not blur the sharp outlines of the real world; for it depends on them."⁷⁶