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LITERATURE, LINGUISTICS & CRITICISM | RESEARCH ARTICLE

Atmospheres and science fiction

Steen Ledet Christiansen^{1*}

Abstract: This article proposes to read science fiction through the lens of atmosphere. Atmospheres, of course, have gained increased critical interest in recent years, most noticeably in Hans Ulrich Gumbrecht's monograph *Atmosphere, Mood, Stimmung*, but also cognitivists like Peter Stockwell has discussed the use of atmosphere in literary studies. By turning to mood and atmosphere as ways of understanding and analyzing how science fiction worlds are realized, I am interested in the way that readers realize worlds on the basis of what Robert Sinnerbrink calls the "qualitative characteristics" of a world. The interest comes from a desire to shift away from sequential cognitive cues and into a far more environmentally oriented notion of how aesthetic worlds are produced and received. I discuss how aesthetic worlds are produced through an analysis of Warren Ellis, Declan Shalvey and Jordie Bellaire's *Injection*.

Subjects: Popular Culture; Literature & Philosophy; Literary/Critical Theory

Keywords: atmospheres; comics; background feeling; cognition

Injection, a weird science fiction comic book, opens on a low-angle, wide shot panel of an imposing British manor house of brown brick. The next panel zooms in on the name of the building—Sawling Hospital—and then switches to a close-up of a pair of eyes, the irises an unpleasant brownish yellow. The last panel of the page is the same person seen from behind looking out the window of a dilapidated room, brackish-green wallpaper peeling, a fire alarm and unreadable rules posted on the wall suggestive of a rundown institution. A yellowish color tint evokes a slightly sickly atmosphere to the entire page, as if it is not only the person who is sick, but somehow the hospital or maybe even the entire world is sick. More than anything the color is what cues the reader to this feeling—there are no natural colors here, everything looks "off."

What fascinates me about this opening page is precisely the way that color is used to suggest this feeling that something is not right in the (story)world. While the page layout and the panels themselves contribute to this feeling, I find that it is the lack of natural colors that most strongly evoke this unpleasant feeling. In other words, the color is a vital part in producing a distinctive atmosphere for the opening page, an atmosphere that is crucial for the experience of the entire

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PUBLIC INTEREST STATEMENT

The primary way we engage with fiction is through story and feeling. While theories of stories abound, little has been done in terms of investigating how stories produce feelings—what I call atmospheres in this essay. Atmospheres describe the feelings and moods that permeate a fictional world. Through an analysis of Warren Ellis' weird SF comicbook *Injection*, I analyze how we may use the idea of atmosphere to better understand the genre that a work fits into.

comic. Atmosphere, then, as my primary interest in this article, is a way of elucidating some of the less readily apparent aesthetic qualities of *Injection* in particular but I am also interested in the more general question of how atmospheres work in comics (as a visual medium) and how atmosphere works as an alternative approach to sf's discontinuity with our actual world.

My article therefore falls into two parts. The first part is a discussion of how sf produces atmospheres, particularly in terms of how this relates to two crucial aspects of sf theory: the novum and cognitive estrangement. I will also discuss how atmospheres fit within a larger discussion of cognitive environments. The second part analyzes Warren Ellis, Declan Shalvey and Jordie Bellaire's *Injection* (2015) in terms of how atmosphere is produced and how this impacts the reading experience. This ongoing comic book series presents a mix of technology and mythology, magic and science, that is quite unusual. The premise of the series is that magic and technology are parallel ways of manipulating reality—one "hacks" reality, as it were, whether one does it through ritual or computer code. Making the rain not fall on you (Ellis et al., 2015, p. 97) or teleporting (Ellis, Shalvey, & Bellaire, 2017, pp. 19–20) are manipulations of reality and so are similar, although in my first example, the effect is achieved through magic and in the second through technology. The structure of the series follows a group of specialists in technology and magic (collectively termed the Cultural Cross-Contamination Unit) that by accident sets loose an artificial intelligence. This AI is referred to as the Injection and it proceeds to wreak havoc on Earth, the Unit now attempting to stop it.

1. Atmospheres

The idea of atmospheres has gained increased critical interest in recent years, most notably perhaps in Hans Ulrich Gumbrecht's monograph *Atmosphere, Mood, Stimmung* (2012), but also cognitivists like Peter Stockwell have discussed the use of atmosphere in literary studies. In visual studies, particularly in cinema and film studies, moods and atmospheres have seen rich development as well. In comics studies explicitly, atmospheres have not yet been dealt with much, although notions of background texture share ideas that I am interested in (Hwang, Lee, Chun, Ryu, & Cho, 2006).

The most prominent definition of atmosphere as an aesthetic term originates with Gernot Böhme, for whom atmosphere is a crucial in-between term to characterize "manifestations of the co-presence of subject and object." (Böhme, 2017, p. 26) What matters most about an atmosphere is that it must be *felt* or *experienced*, because "aesthetics of atmospheres shifts attention away from the 'what' something represents, to the 'how' something is present." (Böhme, 2017, p. 26) This focus on presence is what Gumbrecht also emphasizes in his discussion of atmospheres as something that "affect the 'inner feelings' of readers in the way that weather and music do." (Gumbrecht, 2012, p. 5) Gumbrecht's parallelism between atmospheres, weather, and music is telling because it also bridges a distinction between internal and external aspects of atmospheres. Atmospheres are environmental and this environmental nature produces what Robert Sinnerbrink calls the "qualitative characteristics" of a world (Sinnerbrink, 2012, p. 163). An entire aesthetic environment is evoked and made present for the reader.

In this respect, atmospheres work alongside what Terence Cave has referred to as the affordances of literature (Cave, 2016). Whereas affordances comprise the predominant elements of a fictional narrative, atmospheres work as what Tonino Griffero terms the "cognitive unconscious" that readers do not enact so much as attune to (Griffero, 2010, p. 48). Importantly, however, affordances and atmospheres are not meant to be distinguished as two different types of fictional armatures; they are complementary ideas about reader perception and experience.

There are many different terms currently used that cluster around this idea of atmosphere: mood, ambience, *stimmung*, resonance, and background feeling. A brief look at these different terms indicates that they all attempt to point towards the non-intentional, non-immediate aspects of experience. Gumbrecht argues that reading for atmosphere means "discovering sources of energy in artifacts and giving oneself over to them affectively and bodily—yielding to them and

gesturing toward them.” (2012, p. 18) Peter Stockwell somewhat similarly develops a notion of textual energy in his article “Atmosphere and Tone,” where he understands atmosphere as “the perceived quality of the literary world from a readerly perspective” (2014, p. 362). Atmospheres precisely break down the distinction between work and reading experience; it is bilocated in both (see also Tangerås and Skjerdningstad in this Special Issue).

In an earlier work, Stockwell develops the notion of resonance which “focuses on the dual properties of a *prolonged response* and an *aura of significance*.” (Stockwell, 2009, p. 18. Emphasis in original.) Resonance can be directly produced through attractors that grab readers’ attention (p. 20), whereas neglect (as the opposite of attractors) indicates elements that are “out of focus.” (p. 21). Stockwell’s use of the key term attractor is parallel to Terence Cave’s use of literary affordances. Both are dynamic, adaptive, end-oriented, and intentional (Cave, 2016, p. 53). They are the ways in which a literary work explicitly attempts to guide a reader. Atmosphere would point to the implicit aspects that inform the reader. The way to think about this can be done with reference to enactive cognition. “Enactive cognition,” in Merja Polvinen’s words,

was originally conceived as an embodied and phenomenologically aware alternative to mainstream cognitive science. It presents cognition as a process of sense-making, built on the idea of autopoiesis: as a dynamic relationship between a life-form and its environment. (Polvinen, 2018, p. 68)

On the face of it, enactive perception is focused on immediacy, our immediate environment and the affordances within it. However, we should note that cognition is described as a process of sense-making by Polvinen. This is crucial because sense-making is broad enough to include both meaning and feeling. Meaning is often foregrounded, whereas feeling is backgrounded. To put it another way, meaning is something that is immediately given to our experience, whereas feeling is vague and instead something from which experience arises. Giovanna Colombetti (2014, pp. 79–82) distinguishes between emotions and moods via reference to their intentionality, that is, to their ability to be about some specific object in the world. Emotions are often seen as intentional, whereas moods are not (Colombetti, 2014, p. 79). Instead, moods facilitate emotions and so produce intentional states; moods are vague, emotions are part of our experience. This is what Alfred N. Whitehead calls the mixed mode of symbolic reference. This mixed mode consists of two “pure” modes of perception. The first is the mode of presentational immediacy, which is Alva Noë’s (2004) enactive perception and Colombetti’s emotions. Present-oriented, we seek out what we can do right now, in this very moment, in this very place. There is, however, also a background perception that makes enactive perception possible—or, better, from which enactive perception arises. Whitehead terms this perception the mode of causal efficacy. It is this mode of perception that I will associate atmospheres with. Atmosphere arises not from the action-directed narrative organization but instead functions as a kind of orientation that emerges from habit and memory. This mode of perception blurs the boundaries between body schema and environment, in what W. Terence Rockwell (2005) has termed the brain-body-world nexus.

Colombetti’s moods also differ from emotions by their longer duration, and they are quite similar to Robert Sinnerbrink’s presentation of moods in cinema as “forms of background attunement that disclose or express cinematic worlds” (p. 155). Sinnerbrink produces a taxonomy (although open-ended) of cinematic moods. He begins with episodic moods, “sequences that are repeated, in a recurring or episodic manner, in order to replenish or sustain particular moods” (2012, p. 157). Disclosive moods open the storyworld (p. 156), transitional moods shift the narrative development (p. 157), and autonomous moods “take on an aesthetic life of their own.” (p. 161) These moods, for Sinnerbrink, all function as ways of evoking the storyworld, especially in ways that are exactly non-intentional. This is why I regard Sinnerbrink’s moods (and Colombetti’s) as atmospheres under a different name.

Atmospheres are what provide the background feeling of any given storyworld, what allows stronger feelings to emerge from that atmospheric background, the aesthetic pattern that is our enjoyment of art, as Whitehead would say (Whitehead & Price, 2001, p. 229). As an aesthetic term,

atmosphere functions as a way to bring to the fore the sensory experience of works of art as something that permeates the entire work. Atmospheres both saturate the reading experience and allow for sudden eruptions. For this reason, atmosphere is a promising way of investigating the discontinuity of sf storyworlds. Atmospheres allow us to analyze how a storyworld may be both discontinuous, become familiar, and suddenly become noticeable again.

2. Discontinuous worlds

That sf worlds are discontinuous from our world is axiomatic; the question is *how* these worlds are different. There is a long tradition in sf studies that locates the discontinuity with our world in the (primarily technological) *novum*—the novelty or innovation that marks this discontinuity and is “validated by cognitive logic.” (Suvin, 1979, p. 63) Darko Suvin’s argument has been the ground-breaking logic of sf studies and has produced sf as “the literature of cognitive estrangement.” (1979, p. 4) Sf depends, the argument goes, on appeals to science and knowledge, and sets up a tension between cognition and estrangement as a tension within the “author’s empirical environment.” (Suvin, 1979, p. 8) Sf stipulates a different world and it often does so through introducing new innovations into the storyworld, in what is conventionally regarded as an aesthetics of cognitive estrangement.

However, as influential as Suvin’s work has been, the idea of cognitive estrangement has also been met with resistance. There are two primary criticisms that inevitably tie together. The first is that the *novum* supposedly validated by cognitive logic is often faulty: sf deals with things that science and physics have deemed entirely impossible (Miéville, 2009, p. 234). Several critics have tried to recuperate cognitive estrangement, most significantly Carl Freedman who proposes a “cognition effect” that describes the work’s attitude towards the plausibility of its world as discursive rather as ontological (Freedman, 2000, p. 18). Yet this recuperation is insufficient, since, as Miéville points out, it would exclude too many canonical sf writers (Miéville, 2009, p. 237). The other criticism is more serious, because it points out that Suvin misreads sf. Sf works do not attempt to estrange the reader but instead to “domesticate an impossibility” (Miéville, 2009, p. 236) which “*makes the strange familiar*.” (Spiegel, 2008, p. 372. Emphasis in original.) We can argue that sf works with a diegetic estrangement, rather than formal estrangement. Sf produces a discontinuity (or more) between the fictional storyworld and our world and then proceeds to naturalize the sf storyworld. That is to say, sf wants to engross the reader in the storyworld, which is not estrangement in the conventional sense.¹ The crucial turning point here is what Marie-Laure Ryan terms “the principle of minimal departure,” where the storyworld is assumed to be similar to the reader’s actual world, unless otherwise specified by the work (Ryan, 1991, p. 51; see also Polvinen & Sklar in this Special Issue). I would argue instead that the aesthetics of estrangement is more readily apparent in speculative fiction, because these atmospheres are by necessity different from storyworlds with only minimal departures (and therefore atmospheres that similarly depart minimally). Atmospheres are part of all storyworlds but are often more readily apparent in worldbuilding literature, such as fantasy and science fiction. Precisely for this reason, sf is typical of all literature in the way that Brian McHale claims, because it does explicitly what most literature only does implicitly (McHale, 2018, p. 329).

All fictions of all genres build worlds, it goes without saying—it is part of the very definition of fictionality—but most kinds of fiction can rely more or less completely on the given world, the world of external reference, for the bulk of their world-building. (McHale, 2018, p. 327)

The shift away from a predominantly technologically oriented *novum* and the cognitive logic of earlier sf theory to the study of the qualities of worldbuilding (and, I suggest, to atmospheres) is useful for my analysis of *Injection* because its creative team of Ellis, Shalvey, and Bellaire do not follow sf conventions in the story but rather weird those conventions. While the sf atmosphere is often accomplished through an aesthetics of technology, *Injection* weirs sf by literalizing the so-called Clarke’s Third Law: Any sufficiently advanced technology is indistinguishable from magic.² In *Injection*, this law is followed to the letter, as similar effects are achieved by both magical and

technological means. *Injection* produces its discontinuity by suggesting that reality is nothing but code and can be manipulated as such. Whether this is done by ritual, computer programming, or something else is irrelevant. The notion of reality as code permeates contemporary ideas of how the world works and so also inflects our reading framework. The leap that we might program the rain to not hit us is what produces an estranging effect. Yet, first of all, there is little investigation of exactly *how* magic ritual, pure will, and computer programming may all perform the same functions. Nor does the work exhibit any scientific attitude towards this major discontinuity. *Injection* instead exhibits all the major indicators of being a weird sf work.

What is the weird? According to Roger Luckhurst, weird fiction is “an effect of ‘atmosphere’, a ‘vivid depiction of a certain type of human mood’” (Luckhurst, 2017, p. 1044; citing H.P. Lovecraft). Weird fiction, then, may be identifiable as working through atmosphere more than specific generic traits, devices, or conventions—what Cave redescribed as affordances (2016, p. 57). The weird being contingent on atmosphere does not mean, however, that there is no connection to the larger genre archive of sf. In that respect, literalization is still a significant aspect of weird sf; weird sf still does what sf does so much—literalizes metaphor and lets a fiction grow from that metaphor (Polvinen, 2018, p. 67–68). *Injection* literalizes the idea of atmosphere through the presence of the entity known only as the Injection. The discontinuity of the storyworld literally *is* the atmosphere—pervasive, omnipresent, and saturates the entire reading experience. In the second half of my article, I will turn to three features of atmospheres: enworlding, habituation, and eruptions. Together, they provide a sense of how the reading experience molds to the discontinuities of a weird sf storyworld.

3. Enworlding

The primary discontinuity in *Injection* comes from the intrusion of a mythic “other world” accessible both by mystical means (as in magic) but also through computers, Wi-Fi, and the internet (the comic is unclear on precisely how). This other world is filled with strange creatures and later also becomes home to the nonhuman entity referred to as the Injection, because the protagonists inject it into that world. So far, so conventional. Such discontinuities are exactly the ones we expect from sf’s genre schemata and function as a discontinuity to an otherwise recognizable more-or-less twenty-first century with a few advanced technologies thrown in as is usual for today’s techno-thrillers. At the same time, then, these discontinuities are part of the world’s “qualitative characteristics” (Sinnerbrink, 2012, p. 163) and “quality of the literary world.” (Stockwell, 2014, p. 362) These moments are what stick out and make the work unique, and surely also what we would retain as readers on our first reading.

Many panels of the comic evoke the discontinuous nature of *Injection*’s storyworld. An early example is when Maria Kilbride walks through a door that leads into a strange, barren landscape with fluorescent fungi. In a full-page panel, a jagged lightning strikes the ground from the sky. Even though we believe Kilbride to be inside a building, clearly she has somehow moved outside—which is to say inside the other world, where there is no building. The full page spread evokes this estranging quality quite clearly. Furthermore, time is both condensed and expanded in the full page spread: the presence of the lightning bolt suggests a brief moment, but absorbing all the detail of the full-page panel expands the reading time. Panels such as these repeat in one way or another throughout the entire series and are a major contributor to its atmosphere.

In addition to explicit discontinuities, *Injection* also includes parallel structures, such as on page 13 of the first *Injection* collection, where Robin Morel surveys the English landscape and contemplates its old energies, such as the Uffington White Horse, while captions anchor the scene in the thematic issues of deep time. Only six pages later, a similar page layout (what Thierry Groensteen, 2009 and others call *mise-en-page* in comics studies) suggests a different kind of temporal theme. The top panel that also frames the three other panels is almost identical to the earlier panel, except that instead of the Uffington White Horse, we see a covered, white radar installation. This page works almost like a response to the earlier page, except here the temporal frame is

suggestive of future technologies, the FPI (Finest Production Industries), and the government agency at work behind them. In this subtle way, the confluence of deep time and future projection are paralleled, and form the ground from which a broader storyworld atmosphere emanates. Myth, deep time, future technologies are all part of the ways in which *Injection's* storyworld functions and how it expresses its unique atmosphere.

This kind of composition works to produce atmosphere because it is clearly a backgrounded device that is not “about” anything in a narrative sense, but rather a means to evoke a cognitively unconscious recognition of a visual parallelism. This parallelism is in no way marked narratively or otherwise emphasized. Clearly, the repetition is there but meant to be subtle, picked up more unconsciously than the narrative drive of the story. The visual parallelism is therefore part of the background that makes the thematic elements stand out the clearer. Silke Horstkotte has pointed out the importance of frames in comics, arguing that by “setting the mood of a panel, the frame directs the reader’s affective and empathetic engagement with the scene” (Horstkotte, 2013, p. 39). By repeating frame compositions across episodes, readers are subtly directed to find similarities that then form a background feeling.

There are a number of other moments that in similar ways provide an atmospheric background feeling of the world of *Injection*. Several panels produce a visual parallel between mythic and technological dimensions of the story-world, panels where this is not pushed to the foreground but serves as what I will call an *enworlding*. Enworlding falls in line with Sinnerbrink’s list and expands it to include stylistic cues that specifically express the storyworld. An enworlding atmosphere is non-narrative in that it facilitates that Marie-Laure Ryan has called “epistemic immersion” rather than narrative momentum (2009, p. 55). In fact, we can regard enworlding atmospheres as participating in what Mark J.P. Wolf calls world design (2017, p. 67). While for Wolf, world design is about scope, invention, completeness, and more, enworlding provides a *feel* for the world that provides a background for what kind of storyworld this is. Atmospheres directly indicate an environment and a (story)world.

To be clear, in *Injection* the FPI, the government agency called the Breakers Yard, and the *Injection* itself are all examples of innovations that have a degree of completeness and consistency and a certain scope. The Uffington White Horse is not an invention but still part of the world design because of the relevance of myth to the storylines. The visual parallelism does not create the storyworld, per se, since these examples belong to the level of plot. The visual parallelism suggests that myth and technology exist on the same spectrum. The atmosphere expresses this aspect of the storyworld. Whatever subjective form this atmosphere takes, the work expresses this relation as part of its storyworld background feeling.

A note on form and subjective perception is relevant here. I take form to be the way in which a given work’s expressive form is realized by a given reader.³ However, we should keep in mind that works are not just actualized, they are also enacted. Reading is not a purely mental activity but also a skillful, bodily activity; and just as importantly, something we do—“we *enact* our perceptual experience; we act it out.” (Noë, 2004, p. 1. Emphasis in original.) The expressive form of the work is thus an affordance that guides us towards immediate action within the environment, as suggested by Cave’s (2016) adaptation of Gibson’s ecological perception into literature (see also Polvinen & Sklar in this Special Issue).

Visual and narrative design, most immediately in the form of character action, organize this perception in terms of movement and allow these movements to incorporate into our body schema.⁴ For instance, take pages 23 and 24, the last two pages of the first issue of *Injection*. Their narrative function is to introduce the character Brigid and to end with a cliffhanger. The mise-en-page of the first page has five horizontal panels, the first with Brigid in her car. The fifth panel has Brigid and a government official in the foreground with a door at the far end of a hallway. This panel design urges the reader to turn the page to discover what is behind the door. The next page, the last of the issue, has three panels—two small ones and one large, middle one that dominates the page. The first panel shows Brigid looking at

something in apprehension, with the door now visible behind her: she is looking at something within the room behind the previously closed door. The second, major, panel is the grotesque body of a computer operator, body skinned and a cable running from a computer into his abdomen. The last panel has Brigid turning to the government agents, tersely saying “Have you tried turning it off and turning it on again?” The grim joke both serves a contrast and as a shocking end to the issue, urging the reader to reach for the next issue (or impatiently wait for the next issue to be released).

As is evident, the visual and narrative forms drive the reader’s attention and action. We are guided to enact suspense, curiosity, disgust, and grim shock by the way the panels are laid out. The standard gridding of page 23 condenses Brigid’s journey while also clearly signaling the geography (urban area). We understand that temporally this journey has taken some significant amount of narratively unimportant time. Spatially, we move from inside Brigid’s car to outside and back inside a government building. Page 24, on the other hand, has only three panels, the middle panel taking up most of the page layout. Here, time slows down to almost to a standstill: Brigid looking, we seeing what Brigid sees, reaction panel of what Brigid does. While time on page 23 is counted in minutes, time on page 24 is counted in seconds. This pacing is narratively significant because it first provides curiosity—where is Brigid going, why is she going there, why was she asked for by name?—to flip to surprise in the short but visually extended moment of the last page.

Enworlding atmospheres are thus less an affordance for action and more a background feeling of the storyworld, an atmosphere that envelops us but that we rarely notice directly. Human perception is always mixed and cannot be separated in experience but can be abstracted in analysis—what Whitehead terms separable but never separate. Consider the last two pages again. The panels have large, white gutters on the first page and are mostly wide panels of Brigid making her way to the building. As I will discuss in more detail later, the drawings are minimalist with flat blocks of color, low contrast, and generally slow-moving pacing. Precisely for this reason does the skinned computer programmer stand out as a shock, as the climactic conclusion, both narratively and visually. Without this use of whitespace, something that dominates *Injection* as a whole, the contrast would have been smaller, and the shock lessened. Atmosphere is what allows the narrative to take center stage. In Colombetti’s terms, the atmosphere and its long durational priming of the reader is what facilitates the emotional shock.

4. Habituation

The confluence of past and future, of myth and technology becomes a motif for all of *Injection*’s run so far (15 issues in total). Each of the three main narrative arcs, collected as trade paperbacks, has its own *novum* that blends myth and technology. While these elements are *novums*, they are far less estranging than one might assume *because of their generic repetition*. The genre schemata of sf work to reduce estrangement, which would suggest that the more familiar with sf we become, the less science fictional each sf work becomes. This is what Spiegel (2008) argues in terms of naturalization: that sf introduces a discontinuity only then to naturalize it.

This naturalization may be even more pronounced in serial works, where the basic premise is repeated over and over. Thus, without implying any criticism of the stories, by the second arc of *Injection*, we expect its characteristic blend of myth and technology. Of course, we want to remove this logical fallacy that a work will become less science fictional the more familiar a reader is with the genre or with the work itself. A shift from formal property to atmosphere allows us to explain this movement. At its most basic, what we find in sf is a kind of *desensitization*, if we restrict our understanding of desensitization strictly to a learning process, where “at the cognitive level, the mind actively tunes out constants in the environment, like a background noise or a smell. We become inured to it.” (Eitzen, 2014, p. 170) I suggest that we understand atmospheres as part of a larger mechanism of priming, understood as “the basic function of the nervous system, which exists to guide the body’s interactions with the environment. The brain does not just register and interpret stimuli from the environment; it prepares the body and mind for potential action.” (Eitzen, 2014, p. 162) We can also refer to this form of desensitization as *habituation*, to align with a formalist vocabulary but also to maintain contact with the idea of a habitat. We learn to

navigate an environment precisely through habitat, by making that habitat ours, so to speak. The cognitivist angle simply solidifies habituation as a cognitive mechanism that helps process information and reduce noise.

What this also shows us is how atmospheres work through slow emergence. What starts out as a distinctive feature may become part of a work's atmosphere, something that no longer produces a reaction in the reader strong enough to be considered estranging but still present as a background feeling. Once again, I take the habitat or environment as both the individual work and the larger archive of the genre. Both the genre schema and the work's specific devices work together to produce atmospheres from which specific intensities or emotions arise. Atmospheres allow us to bridge the distinction between a work's formal properties and its readerly potential. In a genre context, we could argue that constant estranging effects are slowly tuned into parts of the genre world—they become part of the storyworld atmosphere.

Returning to *Injection*, there are two further effects that warrant further discussion in relation to the production of atmosphere within the genre archive: the first arc's parallel narration and the moment of peripeteia when the true source of the captions is revealed. The narrative structure in the first arc, also the first trade paperback, moves between present time and past events in flashback. The flashbacks are clearly marked visually by having faded colors and they serve to provide background information about each of the characters and the entire premise of the world. The present storyline is the primary one, with extra story information provided through the captions that serve mostly as access to character thoughts and motivations.

This parallel narration serves to produce both curiosity and suspense at the same time, while withholding the fact that the ominous enemy referred to only as the Injection is in fact a virus (for lack of a better word) that has been summoned (for lack of a better word) and unleashed into the world, to "let new potential futures leak through," as Robin puts it (Ellis et al., 2015, p. 97). Learning about the Injection as a virus that has been released by the protagonists is not only a surprising turn in the plot but also shocking, since it momentarily produces a tension in terms of readers' engagement with the characters.

However, this narrative figure only emerges as a result of the narrative ground: the parallel narration. The withholding (or retardation) of story information is precisely what allows for the reversal to manifest as shock. Had the plot been chronological there would have been no shock. The parallel narration therefore produces a specific atmosphere of obscured knowledge that we can tell the characters have access to but we do not—certainly an example of "the perceived quality of the literary world from a readerly perspective" (Stockwell, 2014, p. 362). Thus the *sf novum* of the series—the idea that reality runs on code that can be manipulated by both technology and magic—is estranging, but it only emerges because of the work's atmosphere: we slowly begin to accept the logic of the storyworld as the *novum* is naturalized. Fading into a pervasive background feeling does not mean that it vanishes, only that readers are habituated.

5. Eruptions

This brings us to the third example of atmosphere, which comes from the captions that I have previously pointed out provide access to the characters' thoughts. In other words, these captions are immediately recognizable as the non-diegetic comments of an omniscient narrator. Only at the end of the first trade paperback, essentially in parallel with the revelation that the Injection is made by the main protagonists, do we realize that the captions are actually the diegetic comments of the Injection, speaking directly to Maria. This revelation is in some ways as shocking as the self-inflicted creation of the Injection.

This intrusion of a background element, of a quality of the narrative that has thus far had an enworlding function, forces a reevaluation of our experience. The realization emerges slowly as the caption text suddenly begins to address Maria directly ("What do you do Maria?") to Maria

responding to the caption text (“I can hear you. Who is that?”) (Ellis et al., 2015, p. 104–105). But there is also a subtle atmospheric change that indicates this turn in the plot. The scene with Maria dealing with the spriggans created by the Injection is kept in a fairly standard four-panel grid with whitespace separating each panel. However, the panel where Maria finally hears the Injection has no whitespace but expands to the edges of the page. As Horstkotte points out, “switches in background color or frame within the same page [...] are frequently used to indicate a sudden change of atmosphere or a shift in the ontological order (reality vs. dreamworld)” (Horstkotte, 2013, p. 34). The full bleed of the panel is just the kind of shift that literalizes the pervasive nature of the Injection—it literally is everywhere, even swamping the page as its full presence is revealed.

Such a startling shift in narrative form I will call an *eruption*. Something that has enworlded us and guided our perception turns into something different. The enactive perception shifts and our body schema is impacted by this unexpected turn. In making itself more manifest, the atmosphere becomes cognitively noticeable, something that requires a reorientation and different understanding of what has previously been a backgrounded feeling. When background becomes foreground the aesthetic elements take on a different meaning. This is the shock of the captions shifting from a depersonalized to personalized narrator. This intrusion is literally an eruption because our position as readers shifts. No longer is the caption narration a depersonalized, neutral view of events but rather a highly personalized opinion of a non-human entity that has a central role in the storyworld events.

We should, however, tread carefully when calling a narrator non-human, since all narrators are non-human, as they are made up of words (and images, in the case of comics). That we as readers often identify narrators as human is due to cognitive schemata and interpretative models. These processes and patterns may themselves become strange in our engagement with them, as Marco Caracciolo has pointed out (2016, p. 1; see also van Ooijen in this Special Issue). More important for my investigation here is Caracciolo’s point that “readers do not empathize with the narrator by simulating a particular mental state but rather by ‘picking up’ on a text’s mood or atmosphere and reading it as a stand-in for a character’s existential predicament.” (p. 138). That is why the sudden shift in the narrator’s position is an eruption and a shocking one at that. The assumption that this narrator provides emotional insight into Maria’s situation is destroyed in the perspectival shift. In this respect, what also changes is the nature of the narrator, from what we have assumed is human insight into Maria into a not-human mocking of Maria.

There are also instances of the opposite of eruption, which we can call fading, following Stockwell’s resonance vocabulary. One such instance is in volume two of *Injection*. Generally speaking, the mise-en-page of the entire series is quite uniform, mostly consisting of four to nine panels laid out in a geometrical grid, and the visual style is quite minimalist. Often there is a white background and gutter. The coloring is kept in muted, block colors with little shading. Rarely do panels have background objects and detail, instead being filled with neutral greys, beiges, and creams. Declan Shalvey’s drawing style also consists of clear lines, little shading, and low amount of detail. Such a minimalist style stands in contrast to the far more complicated worldbuilding aspects and so serves as a good foundation for easing us into a weird and unusual storyworld.

There are times, however, where the mise-en-page breaks up and the visual style changes. When we see Brigid’s computer cave for the first time, it is presented in a double page spread. Brigid is on the far right of the panel with Simeon to the far left. The panel is filled with details of the computer cave—glowing screens, keyboards, cables, laptops, strange machineries, and weird crackling electricity arcing from orb to orb. As a shift from the minimalist styles of the earlier pages, this is in itself an eruption that slows down reading, as we pause to take in all these sudden details. There are a few double page spreads throughout each volume, and these correlate with intense worldbuilding moments and narrative peaks. We can see how this visual strategy also functions as an affordance, because it allows the reader to immerse themselves more easily into the storyworld. These are the passages where the *novum* protrudes the most and where readers are both visually and narratively estranged the most.

Having said that, there is also a form of generic and narrative repetition that begins to set in. A rhythm emerges, most clearly evident across the volumes. Various grids layouts are used to provide narrative movement and then every so often there are double page layouts that provide storyworld immersive moments. This rhythm can be understood in terms of narrative affordances—that the page layouts guide our narrative comprehension and build up curiosity and suspense, and that certain storyworld elements suddenly protrude and take on narrative meaning. Yet as this rhythm is identified by the reader, we are put in a position of being less overwhelmed by these eruptions, less estranged. While there is still storyworld immersion, the rhythm of the narration eases the reader into a smoother reading experience and storyworld comprehension. In other words, the estranging elements slowly move to the background and become part of how the *Injection* storyworld works.

6. Conclusion

Taken together, affordances as oriented towards foregrounded enactive perception and atmosphere as oriented towards the storyworld provide us with a flexible way of understanding immersion and reader engagement. While our enactive perception looks for affordances to help guide our narrative comprehension, the perception in the mode of causal efficacy orients that narrative comprehension in relation to a particular storyworld and its feeling tones. Atmospheres are often not present to our immediate awareness or deliberate action—they are non-intentional in Colombetti's (2014) sense, and function as the background topology out of which specific object-directed salience arises. They are present, however, in terms of saturating the reading experience. Both affordances and atmospheres are expressive forms whose functions are to engage readers and direct attention and perception as means to elicit subjective forms. Affordances are predominantly narratively oriented—they produce actions in the reader—while atmospheres are predominantly world oriented—they immerse readers. These two functions should not be regarded as separate and distinct functions in experience but rather complementary and supplementary ways of luring the reader into the experience that is the work.

Atmospheres are a way to better grasp the realization of storyworlds. This is particularly pertinent for fantastic fictions because of these storyworlds' discontinuity with our own primary world. No work of literature can ever fully describe the world in which it takes place. Atmosphere, as a term that designates something enveloping and permeating, goes a long way towards explaining why storyworlds are not deficient just because they are discontinuous with our primary world nor because they are not fully described (or describable). Atmosphere describes the way that the literary work *satisfies* our immersion into the storyworld as a complete whole.⁵

A genre, any genre, is an archive of atmospheres that taken together produce a distinctive cognitive environment, a particular way of thinking with literature (but happily across media). Just as the weather changes, so does this cognitive environment change, while simultaneously holding the potential for all forms at any moment. A genre is clearly an archive, a collection of works that resemble each other, even across media. However, by looking at atmospheres and the background feelings evoked by these works, we begin to get a clearer sense that there are many family resemblances and that many of these resemblances go beyond collections of formal traits and devices. Aesthetic forms are clearly part of a genre archive but so are atmospheres and their related feelings. Some genres, such as for instance the weird sf of *Injection*, are often better captured through atmospheres. Works that employ radically different aesthetic devices might still evoke the same atmospheres and same subjective forms.

Clearly, such discussions can never be fully achieved through the study of a single work, but in terms of method I have begun to show how looking at the background becomes a useful way to analyze the atmospheres and their relevance. Such an emphasis on the background of a work is relatively unusual and may at first seem slightly odd, as most readers will be drawn to the more immediate aspects of the foregrounded narrative affordances, yet as I have shown there is a great deal of non-intentional attraction (in Stockwell's sense) inherent in the atmospheric buildup of any

work's background. At the same time, we should also always be attentive to how the foreground can retreat into the background as we get more habituated to the foreground and how the background may erupt into the foreground.

As we can see, we can still understand *Injection* within a genre context and the archive of sf, and the Suvinian notions of *novum* and estrangement are not rendered useless. However, they do take on a different function, where we recognize them as being distinct figures that are contingent on a broader ground, which helps produce the environment within which the estranging moments take place. Rather than invalidate Suvin's finds, my supplement of atmosphere provides a way of understanding how estrangement works in sf, both by way of becoming naturalized but also by emerging from a distinct atmosphere produced by the work itself, rather than a more vague horizon of expectations from the reader's perspective.

Also, the focus on atmosphere allows for a better sense of the role of the storyworld and not just the narrative structure and effects of narration; only through the ground of the world itself do the narrative figures emerge. We get a better sense of how the intense moments of the figures are embodied in relation to the work's more general atmosphere. We are primed for certain moments and events within the storyworld, often while being unaware of such priming. Literary works are saturated with feelings and sensory experiences which is what produces a given atmosphere. In this way, literature reaches the world through the production of its own storyworlds and the feelings elicited by these storyworlds' atmospheres.

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Notes

1. Spiegel's argument draws primarily on Suvin's (some-what confusing) understanding of estrangement as an aesthetic term attempting to alienate the reader for political ends, a sense which originates with Bertolt Brecht rather than the Russian formalist Viktor Shklovsky. Although accurate, this is not an avenue I pursue here.
2. Arthur Clarke (2013). *Profiles of the Future: An Inquiry into the Limits of the Possible*. London: Gollancz.
3. To a large extent, this is a reformulation of Wolfgang Iser's (1987) implied reader.
4. For more on body schema and comics narration, see Kukkonen (2013, pp. 9ff).
5. That is to say, in theory. While I do not believe that storyworlds are by necessity deficient, I do believe that a work can be. When we find incongruity and discrepancy in a storyworld, that does not suggest that the storyworld as a form is deficient, only that this actual storyworld is.

References

Böhme, G. (2017). *The aesthetics of atmospheres*. (J.-P. Thibaud, Edited by). London: Routledge.

- Caracciolo, M. (2016). *Strange narrators in contemporary fiction: Explorations in readers' engagement with characters*. Lincoln: University of Nebraska Press.
- Cave, T. (2016). *Thinking with literature: Towards a cognitive criticism*. Oxford: Oxford University Press.
- Clarke, A. (2013). *Profiles of the future: An inquiry into the limits of the possible*. London: Gollancz.
- Colombetti, G. (2014). *The feeling body: Affective science meets the enactive mind*. Cambridge, MA: The MIT Press.
- Eitzen, D. (2014). Effects of entertaining violence: A critical overview of the general aggression model. In T. Nannicelli & P. Taberham (Eds.), *Cognitive media theory* (pp. pp. 158–176). New York, NY: Routledge.
- Ellis, W., Shalvey, D., & Bellaire, J. (2015). *Injection — Volume one*. New York, NY: Image Comics.
- Ellis, W., Shalvey, D., & Bellaire, J. (2016). *Injection — volume two*. New York, NY: Image Comics.
- Ellis, W., Shalvey, D., & Bellaire, J. (2017). *Injection — volume three*. New York, NY: Image Comics.
- Freedman, C. (2000). *Critical theory and science fiction*. Middletown, CN: Wesleyan University Press.
- Griffero, T. (2010). *Atmospheres: Aesthetics of emotional spaces*. London: Routledge.
- Groensteen, T. (2009). *The system of comics*. (B. Beatty & N. Nguyen, Trans.). Jackson, MI: University Press of Mississippi.
- Gumbrecht, H. U. (2012). *Atmosphere, mood, stimmung: On a hidden potential of literature*. Stanford: Stanford University Press.
- Horstkotte, S. (2013). Zooming in and out: Panels, frames, sequences, and the building of graphic storyworlds. In S. Daniel & J.-N. Thon (Eds.), *From comic strips to graphic novels: Contributions to the theory and history of graphic narrative* (pp. 27–48). Berlin: De Gruyter.
- Hwang, W. I., Lee, P. J., Chun, B. K., Ryu, D. S., & Cho, H. G. (2006). Cinema comics: Cartoon generation from video stream. *GRAPP*, 6, 299–304.
- Iser, W. (1987). *The implied reader: Patterns of communication in prose fiction from Bunyan to Beckett*. Baltimore: Johns Hopkins University Press.
- Kukkonen, K. (2013). *Studying comics and graphic novels*. Chichester: Wiley Blackwell.

- Luckhurst, R. (2017). The weird: A Dis/orientation. *Textual Practice*, 31(6), 1041–1061. doi:10.1080/0950236X.2017.1358690.
- McHale, B. (2018). Speculative fiction, or, literal narratology. In Z. Dinnen & R. R. Warhol (Eds.), *The Edinburgh companion to contemporary narrative theories*, (pp. 317–331). Edinburgh: Edinburgh University Press.
- Miéville, C. (2009). Cognition as ideology: A dialectic of SF theory. In M. Bould, & C. Miéville. (Eds.), *Red Planets: Marxism and Science Fiction*. Middletown: Wesleyan Press.
- Noë, A. (2004). *Action in perception*. Cambridge, MA: MIT Press.
- Polvinen, M. (2018). Sense-making and wonder: An enactive approach to narrative form in speculative fiction. In Z. Dinnen & R. R. Warhol (Eds.), *The Edinburgh companion to contemporary narrative theories*, (pp. 67–80). Edinburgh: Edinburgh University Press.
- Rockwell, W. T. (2005). *Neither Brain Nor Ghost: A nondualist alternative to the mind-brain identity theory*. Cambridge, MA: MIT Press.
- Ryan, M.-J. (1991). *Possible worlds, artificial intelligence, and narrative theory*. Bloomington: Indiana University Press.
- Ryan, M.-L. (2009). From narrative games to playable stories: Toward a poetics of interactive narrative. *Storyworlds*, 1, 1–10.
- Sinnerbrink, R. (2012). *Stimmung*: Exploring the aesthetics of mood. *Screen*, 53(2), 148–163. doi:10.1093/screen/hjs007.
- Spiegel, S. (2008). Things made strange. *Science Fiction Studies*, 35, 369–385. doi:10.2307/25475174.
- Stockwell, P. (2000). *The poetics of science fiction*. London: Longman.
- Stockwell, P. (2005). *Cognitive poetics*. New York: Routledge.
- Stockwell, P. (2009). *Texture: A cognitive aesthetics of reading*. Edinburgh: Edinburgh University Press.
- Stockwell, P. (2014). Atmosphere and tone. In P. Stockwell & S. Whiteley (Eds.), *The Cambridge handbook of stylistics*, (pp. 360–374). Cambridge: Cambridge University Press.
- Suvin, D. (1979). *Metamorphoses of science fiction*. New Haven: Yale University Press.
- Whitehead, A. N., & Price, L. (2001). *Dialogues of alfred North Whitehead*. Jaffrey, NH: David R. Godine Publisher.
- Wolf, M. J. P. (2017). World Design. In J. P. W. Mark (Ed.), *The routledge companion to imaginary worlds*, (pp. 67–73). New York: Routledge.



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