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Amazing Stories: Science Fiction's Inception in Interwar Pulp Magazines

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The approach to the imaginary locality, or localized daydream, practiced by the genre of [Science Fiction] is a supposedly factual one. Columbus' (technically or genealogically non-fictional) letter on the Eden he glimpsed beyond the Orinoco mouth, and Swift's (technically non-factual) voyage to 'Laputa, Balnibarbi, Glubbdubdrib, Luggnagg and Japan,' stand at the opposite ends of a ban between imaginary and factual possibilities. Thus, SF takes off from a fictional ('Literary') hypothesis and develops it with extrapolating and totalizing ('scientific') rigor— in genre, Columbus and Swift are more alike than different.

—Darko Suvin, “On the Poetics of the Science Fiction Genre”

Science Fiction is not about the future; it uses the future as a narrative convention to present significant distortions of the present. And both the significance of the distortion and the appropriateness of the convention lie precisely in that what we know of present science does not deny the possibility of these distortions eventually coming to pass. Science fiction is about the current world- the given world shared by writer and reader.

—Samuel R. Delany, *Starboard Wine*

Science fiction has proliferated in contemporary culture alongside the influx of technology. New and rebooted television shows and movies provide visual interpretations to classic science fiction texts as well as new ones. The genre elevates experimental thought to the level of social protest through imaginative intellectual exercises in possible futures. The future-oriented approach of science fiction allows it to access an array of topics, possibilities, and discoveries. Even with its diversity Science fiction has foundational aspects that unify the field: most prominently, the use of a new and unusual future to stage the story. As Delany states in the above epigraph, “science fiction is not about the future” (26). Futurity, he argues, creates “significant distortions of the present” that serve as a critical lens for present-day society. The

future, in science fiction, is used as a convention to mediate between imaginary and factual possibilities. The futures created are targeted, distorted facets of present realities.

The combination of imagined future and factual present allows the science fiction text to *estrangle* the present. In the first epigraph above, Suvin extends and historicizes these arguments by showing the ways in which nonfiction and fictional writings can merge. Columbus wrote of finding the mystical Eden, while Jonathan Swift added new locations within a typical travel narrative. Both of these authors blend the fictitious with reality, but the science fiction writer takes a fictional concept and places it within a scientific and realistic framework, binding it to the scientific process.

The future-oriented plot characteristic of science fiction serves as a narrative device that creates a distortion and/or estrangement of the present. To see how this estrangement fosters critical consciousness in readers, consider the opening of *Ubik* by Philip K. Dick. *Ubik* portrays a protagonist, Joe Chip, who is seen shuffling for coins to pay for his shower, shave, and entry/exit from the bathroom as well as his apartment. The idea of paying for commodities is obviously quite familiar to readers, but the fact that he must pay for using his own domestic objects such as the door of his apartment, followed by verbal arguments with those elements of the built environment, forces the reader to confront an entirely different form of economic life, if one faintly echoed in our own world's ongoing commoditization. One doesn't physically have to pay for his/her door to open to go to work; one does so abstractly, through paying utilities and rent. Dick turns this abstraction into a set of literal interactions, an implicit critique of the present that requires readers to learn the world only through what the writer tells them, since their own knowledge of reality does not fully conform to this new world. A novel set in ancient Rome or in Victorian England is removed from the reader's lifestyle, but that world can be learned from

research to supplement what the writer describes. In contrast, the science fiction text is based on elements the reader faintly recognizes alongside the entirely un-experienced new. This synthetic reality mounts an analysis of present-day issues.

Science fiction is inherently involved in the proliferation of science and new ideas through its ability to intertwine science and fiction. Due to its vast diversity science fiction is difficult to define simply and comprehensively. Robert A. Heinlein speaks to this problem in his 1959 essay, “Science Fiction: Its Nature, Faults, and Virtues”: “A handy short definition of almost all science fiction might read: realistic speculation about possible future events, based solidly on adequate knowledge of the real world, past and present, and on a thorough understanding of the nature and significance of the scientific method” (17). His definition aligns science fiction with the scientific method, which uses logic and an empirical approach to test speculative hypotheses. The text, then, becomes a scientific and social experiment grounded in the scientific method. As Delany and Suvin argue, the genre is structured around a combination of scientific fact and speculative distortion. These distortions can be seen as, in Suvin’s term, *hypotheses*, with the text exploring their limitations and possible arcs.

According to Frederic Jameson, other fictional subgenres like realism and modernism have become trapped within the social dominant discourse, losing their capacity to criticize the status quo meaningfully. Science fiction, despite its stigma as “genre fiction,” thus takes up the mantle of viewing the present moment in a critical light. While agreeing with Jameson on science fiction’s basic function as a genre, I note that he, like Suvin and most other critics, focuses on the postwar emergence of science fiction novelists, like Asimov, Dick, and Delaney. Such an approach neglects the crucial period of science fiction’s emergence in the interwar period. I will focus on the dynamic “primordial soup” of periodical culture in which science

fiction emerged, focusing on the first and most prominent of these publications, *Amazing Stories*. These unassuming “pulp” periodicals established communities of readers who imagined participating in the construction of the future in a radically democratic way. This is a critical moment, where science fiction’s narratives are less philosophical and grand yet more accessible, allowing a mass readership to imagine itself as involved in the production of a common future. Science pulps like *Amazing Stories* invited readers to become proto-scientists, inventors, and soothsayers of the future.

Science Fiction as Critical “Estrangement”

Let’s look at the telling distinction between science fiction and the realist novel. The dominant mode of realist novels lulls the reader into absorption of familiar settings and typical characters that are indexed to a place and time recognized by readers. The science fiction text is also interested in providing a view into a particular lifestyle, culture, or situation, but rather than the plausible everyday reality of the realist novel, it uses extravagance and strangeness to construct plausible *possibilities*. These possibilities are, however, not boundless but woven together from existing history, social constructs, and evolving technological forms. Thus, the science fiction text refracts rather than reflects the given social reality, and herein lies the kinship with the realist novel as well as the main difference. The entire construction of a science fiction narrative requires it to constantly be aware of what it is attempting to accomplish.

Science fiction’s main concern is the difference its possible futures create. As mentioned earlier, this focus causes the dissociative moment where the reader must conceptualize this new world. It is essential to see that science fiction uses its present surroundings as a foundation to launch a critical inquiry. It does this through the abstraction of the stories themselves. In doing

this, an estrangement of the given social reality is portrayed, allowing a breakdown of familiarity to take place. Dick describes this mechanism thus:

This is the essence of science fiction, the conceptual dislocation within the society so that as a result a new society is generated in the author's mind, transferred to paper, and from paper it occurs as a convulsive shock in the reader's mind, the *shock of dysrecognition*.

He knows that it is not his actual world that he is reading about. (99)

As Dick suggests, a vital aspect of science fiction is its disconnection between the actual world and the fabricated world of the story. While this science fiction world is built upon our actual world, its differences complicate its reading. It is within this difference, and the shock that it creates within the reader, that the power of the science fiction novel can be found. Dick states earlier in that essay that the science fiction world is “dislocated by some kind of mental effort on the part of the author, our world transformed into that which it is not or not yet” (99). Not only is this a mental effort for the writer, but also for readers. They must determine how to approach this new environment, discern its strange, often complex features, and determine how this environment relates to the “real world.”

Suvin dives deeper into these issues in his book, *In Metamorphoses of Science Fiction*. There he presents his own definition of science fiction as a “literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment” (8-9). Suvin is making a structuralist attempt to distinguish the exact difference science fiction has from other genres. Both Dick and Suvin, publishing eight years apart, speak to the significance of estrangement within the text. Suvin introduces a more precise terminology into the conversation. To Suvin the involvement of the reader, through estrangement and

cognition, is a vital part of the genre itself. By imagining a new future, science fiction stands in stark contrast to the empirical world surrounding readers, a contrast Suvin calls “cognitive estrangement.”

Estrangement is not a new concept. Established by Viktor Shlovsky in his 1917 essay “Art as Technique,” it was an important aspect of Russian Formalist thought. In turn, this evolving term inspired Suvin’s own thoughts on science fiction. Suvin recognizes it broadly at work in the devices used in myth with its ritual and religious lens beneath the empirical surface. But there is a distinctive use he associates with science fiction: “SF sees the norms of any age, including emphatically its own, as unique, changeable, and therefore subject to *cognitive glance*” (375). Here Suvin speaks to science fiction’s self-reflexive aspect, along with the way it imaginatively alters the given world. The reading of a science fiction text is a cognitive process where readers must, through what is given to them, experience this alternate or possible world. Not only does it create a new experience; it also changes and ultimately questions the readers’ actual experiences. Suvin develops these thoughts on science fiction through Ernst Bloch’s concept of the *Novum*.

Bloch elaborates the concept of the *Novum* and utopianism in Volume One of his *Principle of Hope*. He studies the way utopian impulses are present in various forms of cultural expression such as literature or religion. These impulses are developed through the unrealized dreams of the past and unfulfilled potential of the present. The act of wishing for these possibilities to become fulfilled is, in effect, a critique of the present reality. Here we come to *Novum*. Bloch’s definition is that the “*Novum* [genuinely new thing is] no longer alien in material terms” (Bloch, *Principle of Hope* 146). Since it can be imagined, and then transported into a form of artistic or intellectual expression, it can be thought of in material terms.

Recent work has tied Bloch's concept of the Novum to science fiction's mediation of the speculative and ideal on the one hand and the actual and material on the other. Freedman, along with Suvin, sees how Bloch's concept of Novum provides strength and differentiation to the science fiction text. "It depends on what Bloch calls the Novum, that is, the *radically* (though not purely) new, which by definition cannot be exhaustively or definitively mapped" (Freedman 64). To bring together our two keywords and bind them to the genre, science fiction constructs "Nova" in order to estrange present-day realities, robbing them of their aura of inevitability and fueling utopian desires.

Bloch's Novum can manifest itself in an array of ways within a given science fiction text—for example, as an alternate world, a unique and new gender, or a device capable of abilities unseen or unheard of currently, such as time travel or warp drives. The Novum allows the text to bring the reader into the unknown, removing readers from their own expectations, augmenting the estrangement presented by the Novum. Suvin explores this idea in an interview with Takayuki Tatsumi, using the sun as an example. If the writer makes the sun blue, there cannot be a yellow sun: "The reader will translate this; for us yellow is normal and we translate it as 'blue, but not yellow.' Therefore, we are not in the Solar System" (Suvin, "Interview" 203). The choice of a blue sun has significance in how it further alters the world's climate, geology, and more. Suvin goes on to say that these mechanics "begin to serve as a delineation of a possible world" (203). These moments describe precise aspects of this new world, while also differentiating it from the current world. As we shall see, in the emergent science fiction texts of the interwar period, the Nova are perhaps less extravagant and carefully elaborated as in the classic postwar novels that most critics have emphasized in work on the genre. Nonetheless, within these earlier

works of pulp fiction, one finds a scientific and educational focus that ties explicitly with the genre's future as a site of critical theory.

The Origins of Science Fiction

The question of science fiction's origin has been a source of lively debate among critics.¹ What is not arguable, and what this essay will focus on, is the creative and editorial work of Hugo Gernsback, who coined the term *scientification* for the early science fiction he was publishing in his magazine *Amazing Stories* beginning in 1926. Gernsback's term was the first to categorize what we now call science fiction; he was interested in the way in which the genre could promote scientific, imaginative thinking and create a community where everyday people could converse, create, and inspire new technologies and ways of life. As an amateur inventor and writer himself, he took on the role as editor and publisher of new and older science fiction texts. His legacy lives on in an award titled after him, the "Hugos."

Suvin, Freeman, and other prominent theorists typically focus on science fiction writers active in the postwar era, primarily those working in the novel genre. Gernsback's contribution to the genre is, accordingly, often swept to the side as mere "inspiration." This reflexive gesture devalues his position within the developmental narrative of science fiction, underplaying Gernsback's role as genre creator and as constructor of a new readership, what we would now call a "fandom."

The interwoven nature of critical theory and science fiction is vital to understanding the genre as a whole. The self-awareness of the early twentieth-century pulp magazine only improves one's understanding of the genre's relationship with estrangement, its interconnection

¹ The initial inception of science fiction has been debated. The genre had already started to emerge before the development of its terminology and community by Gernsback. Some critics place Mary Shelley's *Frankenstein*, published in 1818, as the beginning of the genre. Roberts locates the emergence somewhat later, at the end of the nineteenth century with the work of Verne and Wells.

with scientific progress, and its development from a dialogue between experts and ordinary (but curious) readers. As a new periodical based on an emerging genre, *Amazing Stories* was not able to tap into a long list of well-developed writers or forms of scientific narrative. It strikes us today as a dynamic but immature publication, drawing on the few past writers of speculative fiction as models and sources (H. G. Wells appeared in an early issue) with a focus on the creation and cultivation of a new literary community.

In order to contextualize the emergence of *Amazing Stories* and similar publications, we should consider the ecosystem of interwar periodical publication more broadly. “Pulp” magazines started to emerge in the 1880s, so named due to advances in publishing that allowed “the manufacture of paper out of wood-pulp” (Roberts 67). This technical advance fostered the growth of new forms of literature, especially those not sanctioned by cultural gatekeepers, since “pulp” didn’t require large capital outlays or the help of established publishing firms. These magazines were seen as “lowbrow,” such that science fiction was lumped in with the “sex pulps,” cheap detective stories, and other literary entertainments that graced the shelves of newspaper stands. “It cannot be denied that the ‘Pulps’ have a reputation for a very different sort of fiction: for kinetic, fast-paced and exciting tales that are also clumsily written, hurried in conception, and morally crude” (Roberts 68). Gernsback was interested in creating a new genre that was able to transcend this preconceived notion of pulp magazines.

Although Gernsback surely yearned for a higher cultural profile (and the republication of Wells’s *War of the Worlds* can be read as a plea for legitimacy), the location of *Amazing Stories* amid the pulps lent a fluidity to the inception of the genre, making the publication accessible to a wide spectrum of readers that included the working classes. The interaction between readers and writers through letters, editorials, and scattered commentary provided by both editors and authors

established a dynamic conversation that was pivotal in the expansion and formation of the genre. In the move from the novel to the pulp periodical, the genre grew out of a communitarian matrix that was created and mediated by Gernsback within *Amazing Stories*.

It is Gernsback's *Amazing*, the first to appear among a wide range of interwar science fiction pulps, that creates a forum dedicated to the discussion of science fiction. Here its historical narrative started to be imagined, its relationship to science and progress established, and a collective of fans/readers, writers, and editors formed. *Amazing* provided a medium to debate, develop, and expand the genre. Here is a moment of important differentiation from Jameson and other later critics. As seen, they focus on the literary form and ideology critique within science fiction works, without considering the audience reading these texts. By zooming in on the initial inception of science fiction authorship and readers we can see the way these specific discourse communities reacted to very unique texts during a difficult and eventful moment in history.

This collective emphasis can be seen throughout the magazines' explicit engagement with readers. *Amazing* invested its readers with agency, engaging scientific and technological issues and speculations on equal footing with experts. As John Cheng notes, Gernsback created a legacy that inspired scientists and writers who would carry forth both science fiction and science itself to new heights:

But for his several attempts to create magazines, science fiction may not have emerged in the interwar era as a recognizable genre or may have found another form. Because of his innovation, popular science enthusiasts found its welcoming social sensibility, and from its inspiration they made science fiction more than a category of fiction and culture. (309)

By focusing only on the postwar generation of science fiction novelists, critics tend to miss this “welcoming social sensibility,” one that engaged readers in a more intimate and democratic way than the more distanced and abstract relationship between authors and readers that pertained in postwar science fiction.

Science Fiction and Interwar Politics:

Suvin and Jameson frame their analysis of science fiction solely around anxiety and critical negation of the present. The inception of science fiction under Gernsback’s guidance was less absorbed in negativity. While there was a strong understanding of the possibility for science’s misuse, ultimately there was an optimistic view of science’s progression. This balance of optimism and awareness is a product of the interwar period in which science fiction began.

Previously science was typically promoted at an individual level, through private patronage, with the federal government playing a modest role. As science began to take on an ever-increasing role in national priorities and public imagination, more control was established at the national level: “Initially allowing federalism and the free market to decide issues of common concern such as technological standards, in the twentieth century, particularly after World War I, the Federal Government, through the newly created National Research Council and other agencies, increasingly advanced scientific research in the national interest” (Cheng 106). The purpose of research, and the national fear of becoming outdated by rivals, altered the national, public, and academic priorities with regard to technological and scientific innovation. While scientific and technological knowledge was rapidly increasing due to these additional resources, that very spread raised questions about the social dimension of technological progress—who would direct it and to what ends.

In the wake of World War I, technology became essential to governments worried about another total war. The advancement of technology had been accelerating since the advent of the Industrial Revolution, but it was the early twentieth century that saw unprecedented integration of technology into the fabric of everyday life in the form of new modes of rapid transit, mass media, and telecommunications. As Cheng argues:

(m)odern technology promised discovery and change on a more individual and equal scale. Although nineteenth-century industrial technologies affected the lives of people rich and poor- reshaping social and class relations and conditions for work, particularly among artisan classes- other than a few urban exceptions such as bridges, early mass transportation and electric city- lighting systems, they functioned mostly to serve and benefit the wealthy and influential. (Cheng 89)

Science and technology guaranteed change and social evolution, but the meaninglessness and destruction caused by militarized science during WWI made it difficult to equate scientific industrialization with positive progress. Fear of science's violent prospects became common within mainstream popular media. As tensions rose, nations became more involved in an early arms race which only exacerbated and validated already existing fears. Magazines would publish stories about new "ray guns" or other fictitious weapons of destruction whose plausibility would be discussed by political leaders, generals, scientists, and prominent civilians (Fanning Jr. 253-4). These imagined threats were considered plausible by experts and were widely diffused in the media. General Eugene Debeney, Chief of Staff in the French Army, actively pursued the use of electric waves in future conflicts (225). He believed electrical technology would make possible weapons that would make airplanes "fall as though struck by a thunderbolt" and make tanks "burst into flame" (*War of Tomorrow* 1). International affairs furthered these concerns. In 1923 a

French commercial airplane experienced sudden engine failure over Bavaria. Rumors spread that this was caused by a German ray weapon that could “short-circuit the magneto of a gasoline motor” (256). German scientist Oswald Flamm publicly asserted that such a ray did exist. Popular media were fascinated by stories such as this, which only furthered the public’s anxiety with scientific progress.

The divided feelings on science and society were not limited to public media, becoming topics of lectures within academic institutions. One of the more well-known was Max Weber’s 1917 lecture, “Science as a Vocation.” Weber voices concern with the evolving processes of rationalization, secularization, and the “disenchantment” created by the rise of capitalism and modernity. As he discusses the benefits and detriments within an academic career in sciences and humanities within universities, he provides a view into the interaction between scientific progress, public life, and intellectualism: “Scientific progress is a fraction, the most important fraction, of the process of intellectualization which we have been undergoing for thousands of years and which nowadays is usually judged in such an extremely negative way” (6). Science is linked to a narrative of intellectualism existing throughout the historical progress of human society. Still there is an anxiety with progress that Weber identifies. He does not believe value and scientific fact should be merged. Weber cites Leo Tolstoy, exploring the way Tolstoy believes the individual interacts with scientific progress: “Individual life of civilized man, placed into an infinite ‘progress,’ according to its own immanent meaning should never come to an end; for there is always a further step ahead of one who stands in the march of progress” (7). This anxiety is caused by the individual’s life becoming submerged in a never-ending progress that will always outstrip previous achievements. New forms of technology, forcing society and individuals to constantly adapt to a world forever changing, make prior forms of living obsolete.

Weber explores here the disparity between technological progress and the intellectual and moral understanding of how to deploy it to humane ends: “The increasing intellectualization and rationalization do not, therefore, indicate an increased and general knowledge of the conditions under which one lives” (7). Therefore, scientific progress is lacking in its ability to fully answer the concerns caused in the aftermath of the devastating war that altered national boundaries, indoctrinated new forms of combat, and eroded faith in progress.

Instead of looking at science to define value, Weber urges a turn to philosophy: “Scientific work is chained to the course of progress; whereas in the realm of art there is no progress in the same sense” (6). Art is a personal and subjective experience, not one that is governed by fact. Art is not “chained” to progress like science, and it is thus able to engage the idea of technological advance critically.

In light of this broader context of the interwar discourse about the relationship between art and science, we can see the emergence of science fiction as a reflection of these concerns and an attempt to address them creatively. Instead of distancing artistic and creative impulses from science, science fiction merges the innovations of science and art. Coming out of a discussion, and a culture, that was placing these two aspects of human development in opposition, science fiction creates a space where innovation can be established through the use of science and literary imagination to further educate and inspire readers towards the development of humanity as a whole. Science fiction emerges from this dynamic moment that is symptomatic of the fascination and necessity with science, and also the anxieties about its aims and social effects. The fact that science fiction started to become more self-aware during the interwar period is essential to understanding its distinct difference from postwar science fiction that theorists and critics focus on. Jameson and Suvin emphasize the way the utopian energies of science fiction

are enabled by the genre's negativity, its estrangement of the present. With the further destruction caused by World War II, the rise of environmental movements, the rise in authoritarian governments, globalization, postcolonialism, and the widespread proliferation of technology as both a tool of progress and control, later science fiction took on a more pessimistic, inquisitive, and at times accusatory tone: "When interwar science fiction readers discussed change and history in their letters, they expressed that relation as part of a natural rather than a social history...Instead, seen through a lens of a modern science that saw such transformative forces and motives as natural, it gained a rationality that provided its own inevitability" (Cheng 204). While interwar science fiction expressed deep fears in the aftermath of the technological total war of World War I, there was still a strong sense of scientific progress as an organic part of human evolution. Science was still tied to a notion of progress that was expected to be beneficial for all and expand on humanity's possibilities and opportunities.

Editorials and the Collective Formed in *Amazing Stories*:

Coming out of this tense climate following World War I, as well as the discourse on science's place in society, science fiction was constantly positioning itself as a force of innovation and progress, a serious endeavor that belied its nominally "pulp" status. Accordingly, editors like Gernsback decided to build a romance around the genre itself, selling it as something unique and independent of other established pulp genres. In order to increase circulation and expand their access to writers and readers, these magazines worked to build a sense of community. One way to elevate science fiction's profile was to republish "scientific romances" from the recent past, including work by Verne, Poe, and Wells. Gernsback also rebranded this style of writing as "scientification," which was later amended to "science fiction." He referred to this style of writing through the editorials that covered the first or second page of the magazine.

He defined scientification as “a charming romance intermingled with scientific fact and prophetic vision” (Gernsback, “A New Sort of Magazine” 3)². This description appeared alongside the coining of the term “science fiction” in the first published issue of the magazine. By mixing the categories of romance, science, and prophecy, Gernsback emphasizes the uniqueness with which the emerging genre combines fantastic settings with the realities of scientific innovation. This first editorial lays the groundwork for emphasizing the genre’s pedagogical thrust, encouraging readers to meditate on the current state of science and speculate on its possible futures. With the merging of romantic fantasy with scientific fact, these stories are able to be both exploratory and explanatory. At the same time the publication does take on a prophetic vision, as it uses scientific fact to promote a philosophical, scientific, or political agenda. For Gernsback this agenda was the continuation of scientific progress.

Like all creators of periodicals, Gernsback felt intense pressure to grow circulation and build a dedicated base of subscribers and readers. Gernsback built these aims into the publication, emphasizing in *Amazing Stories* its bonds to its community of readers. This community would encourage the expansion of the magazine not just by providing readers with appealing content but by hailing them as potential contributors, as writers for the enterprise:

By its nature this [science fiction] culture was interactive, dialogic. It required circulation...Readers considered for themselves the content of pulp magazines and the many interests— those of editors, writers, and artists— represented within them. They also brought their own interests to be represented. (Cheng 50)

² The majority of *Amazing Stories* can be found on the Internet Archives online here: <https://archive.org/details/amazingstoriesmagazine>.

By having readers become active contributors to the magazine's process, Gernsback was able to create a dialogue between author, reader, and editor. This can be seen in the following editorial within the first volume of *Amazing Stories*:

The first issue of AMAZING STORIES has been on the newsstands only about a week, as we go to press with this, the second issue of the magazine; yet, even during this short time, we have been deluged with an avalanche of letters, of approval and constructive criticism from practically every section of the country, except the West— as we have not yet had time to hear from it. (Gernsback, "Thank You" 99)

Gernsback first praises the influx of letters and communication between the magazine and their readers. He follows this up with additional words of support, as well as advocating for increased activity by their readers to expand the magazine itself. The magazine becomes a foundation to build a community that is involved in the discourse. Gernsback's vocabulary is crucial here, as he carefully worded his plea to the readers. He states that, "After all, it is *your* paper, and we are striving hard to please you" (Gernsback, "Thank You" 99). He goes even farther as he puts the future of the magazine as part of their activity, "The success of AMAZING STORIES is entirely in your hands. We shall do our part— we pledge ourselves to do everything to merit your confidence" (Gernsback, "Thank You" 99). This plea unites editor and readership with the mutual purpose of expanding and evolving the magazine as a whole.

In the creation of *Amazing Stories* Gernsback also aligned the genre with innovation and progress. This gesture meant to elevate the status of the genre despite its "pulp" medium. In an early editorial, Gernsback details how governments follow science fiction stories in order to patent ideas that are developed within this style of writing. While there is no proof of this claim, it allows Gernsback to grant science fiction a seat at the table in the hall of power, in rhetorical

terms at least. This new mode of writing is so compelling, Gernsback suggests, that governments watch it for new ideas with real-world applications. This allows him to further his claim that science fiction is entrenched in innovation and progress. He goes as far as to state that it “should not be classed just as literature. Far from it. It actually helps in the progress of the world, if ever so little, and the fact remains that it contributes something to progress that probably no other kind of literature does” (Gernsback, “Imagination and Reality” 576).

In this manner, Gernsback is placing science fiction within a larger framework of progress, a recurring motif in the early editorials of *Amazing*. To further this claim, the header to each of his editorials reads, “Extravagant Fiction Today-----Cold Fact Tomorrow,” a rather bold act of staking claim to the magazine’s role in fostering humanity’s technological, scientific, and intellectual progress. The readership of *Amazing* was full of working-class individuals with modest educations yet a fierce interest in scientific progress. To be involved in this community granted an empowerment missing from many other mass media cultural forms in the broadcast era.

The emphasis on empowerment for the masses was not new for Gernsback. His previous job as an editor of *Radio News*, a widely read magazine on electronics, was focused on advocating for people to experiment themselves in order to further science and development. Gernsback was also involved in earlier attempts to popularize science, in particular amateur science. In April 1908 he founded *Modern Electrics*, the world's first magazine about both electronics and radio (Massie and Perry 267).³ He imported parts from Europe and actively attempted to invent things himself, having nearly eighty patents at the time of his death (Krome 21). Science fiction allowed him to explore a more diverse field of invention and amateur science, both of which he promoted heavily. Amateur scientists were not rare during this period.

³ Gernsback used this magazine to publish his first science fiction novel, *Ralph 124C 41+*.

As technology and science kept expanding, so did people's access, not only to the information, but to the tools required to experiment and create themselves. Gernsback addresses this dynamic in the first issue of his later science fiction magazine, *Science Wonder*, established in June 1929:

The wonders of modern science no longer amaze us— We accept each new discovery as a matter of course...The man in the street no longer recognizes in science the word impossible: "What man wills, man can do" is his belief...Who are the readers of SCIENCE WONDER STORIES? Everybody. Bankers, ministers, students, housewives, brick-layers, postal clerks, farmers, mechanics, dentists—e very class you can think of— *but only those who have imagination*. And as a rule, only those with intelligence and curiosity. (Gernsback, "Science Wonder Stories" 5)

Ordinary people were capable, or at least believed they were capable, of assisting in the production and advancement of science. Gernsback assures that the readership of these magazines came from all layers of society, and all were interested in the production of science. The stories presented in *Amazing Stories*, as well as the later science fiction periodicals such as *Science Wonder*, were not so unbelievable when read alongside the increase in technology. Gernsback promoted science fiction as a way for amateur scientists to explore new ideas. He encouraged people to write to the magazine and in doing so discussed science and the stories inspired by it, providing another form of experimentation and discussion that was vital to the formation of the genre as a whole. Readers, Gernsbeck's publications counseled, could be amateur scientists even without labs and expensive equipment. Instead, they only needed imagination and curiosity, both attributes any individual could possess.

One finds these emphases through the first volume of *Amazing Stories*. In Vol. 1 No. 3, Gernsback traces the historical relationship between science and technological innovation. He

then weaves science fiction as a genre into that broader narrative: “Perhaps [inventors] were not such outstanding figures in literature, and perhaps they did not write what we understand today as scientification at all. Leonardo da Vinci (1452-1519), a great genius, while he was not really an author of scientification, nevertheless had enough prophetic vision to create a number of machines in his own mind that were only to materialize centuries later” (Gernsback, “The Lure of Scientifiction” 195). Gernsback emphasizes that da Vinci, and other humanists like Roger Bacon, were able to imagine, and sometimes create, technologies that were deemed outlandish during their times but revolutionized society. Gernsback labels them as “prophetic,” seeing a future that wasn’t there for all to see. In “Imagination and Reality,” an editorial in the first volume of *Amazing*, he focuses again on the importance of imagination: “There is an old popular saying that what man imagines, man can accomplish” (Gernsback, “Imagination and Reality,” 579). Gernsback wants to empower imagination, stating that through imagination science fiction is able to actively influence the future. Through the act of imagining a new device or world, the writer is able to inspire the creation of that object:

An author, in one of his fantastic scientification stories, may start some one thinking along the suggested lines which the author had in mind, whereas the inventor in the end will finish up with something totally different, and perhaps much more important. But the fact remains that the author provided the *stimulus in the first place*, which is a more important function to perform. (“Imagination and Reality” 579)

As “stimulus,” Gernsback imagines a mutually beneficial relationship between inventor and author, such that the former uses the imagination of the latter as a springboard for the actual evolution of technology and humanity.

Gernsback is aware that science fiction works with ideas that many would deem unusual. This strangeness is central to the genre, a feature that Gernsback ties to progress and innovation. He validates these “so-called wild ideas” by stating that they “may prove to be not quite so wild if they give an actual stimulus to some inventor or inventor-to-be who reads the story” (“Imagination and Reality” 579). If the stories, with their unusual and wild ideas, are able to use imagination in order to provide inspiration to someone active in the sciences, then the ideas themselves are an aspect of progress.

Each editorial in the first volume is a moment for Gernsback to further validate and differentiate science fiction from other forms of literature, in particular other pulps. While he focuses more on the historical narrative in earlier editorials, this emphasis never disappears from his work. In the aforementioned “Imagination and Reality,” Gernsback continues with the historical narrative, mentioning Alexander Graham Bell’s inventions. Bell was interested in determining a way for the deaf to hear and in the process created the telephone. He started with a particular concept, and through experimentation and imagination he created something different with a far broader impact. In this argument, science fiction benefits technology, progress, and innovation, since it encourages practical experiment with fanciful speculation.

Not only did writers assist in exploring the profitable aspects of this newly formed genre, but also readers wrote to the magazines and became involved in discussions on science, literature, and the purpose of magazines such as *Amazing Stories*. Readers expressed a wide range of reactions, from inspiration to questions about the factual basis of stories to requests for particular ideas or literary styles or plots in future issues. There was a ferment of imaginative, logical, and literary thought in this dialogue:

Although they often disagreed substantively, science fiction readers also shared a common belief that they could and should distinguish what was possible from what was impossible in science. Science in this sense was a general authority, independent of individual opinion and able to adjudicate the claims of readers, writers, and editors alike. Under its aegis readers could equally present their views to be considered, and whether they were right or wrong, each was entitled to a judgment under the authority of science. (Cheng 99)

The assumption that all had equal access to the facts and to the authority of science fostered a communitarian and cooperative spirit linking editor, authors, and readers. Authors asked their readership to explain if they found anything incorrect in their stories, for their own benefit. Some readers would offer their own corrections to stories. Even if the science in their corrections was incorrect, their efforts were meant to educate and to further this collective discussion, becoming themselves subject to amendment or correction. The magazine even started including “What do you know?” quizzes that asked various complex scientific questions for readers to answer, and in doing so judge their own understanding of science. Such features emphasize the notion that science fiction was not a space of passive entertainment but of active participation and autodidactic practices.

One also finds an awareness of the broader politics of this democratic sharing of knowledge. In Vol. 1 No. 4, George Allan England, writer of one of the first stories published in *Amazing*, affirmed Gernsback’s emphasis on science fiction’s role in sharing knowledge, stating, “Fiction is certainly one of the most effective methods of disseminating scientific facts” (“The Thing from Outside” 382). He then takes a political turn, going against religion, which, to him, has kept “old superstitions alive” and resists the proliferation of science and fact, especially

regarding the teaching of evolution in schools. He praises Gernsback for publishing “all the scientific fiction you can, especially with bearing on evolution. The clergy can dominate educational systems, but they cannot control magazines. If people cannot be reached through the schools, they can through the magazines. Your work is of immense importance” (382). Here he validates science fiction more as a way to protest dominant methods of education and values. The magazines are also framed as a way to have a dialogue outside dominant modes of discourse, allowing protest, alternative opinions, and other forms of progress to be placed at the forefront. This can be seen in the varied writing styles and themes found within the works published within *Amazing* and other science fiction magazines of this era.

These dialogues within the readers’ letters column spilled over into other spaces. In the pages of *Amazing*, however sincere the commitment to an egalitarian spirit, Gernsback could control and lead the dialogue through his choice of writers, his editorials, and which readers’ letters were published. Eventually, since only so many people could be published, readers and writers were inspired to create their own channels for discourse. Magazines like *Amazing* inspired people to bond in even more personal communities, forming organizations like the Science Correspondence Club (SCC) to discuss scientific topics:

Still, because their community was a product of the pulps and many members retained ties to them, science fiction readers’ activities outside of them retained much of their character, style, and sensibility. Organizing readers to discuss science and science fiction on their own and for each other, the SCC and other clubs followed the pulps’ publishing example. (Cheng, 221)

These readers knew the way pulp magazines were organized and brought this style and purpose into their personal communities. Gernsback’s work inspired people to take initiative and form

their own communities where they could spread access to science and science fiction while providing a place to discuss these interests. Some readers formed libraries, where books could be traded between members, allowing more people to experience different forms of science fiction (Cheng 219). This form of alternative discourse has continued throughout science fiction's evolution, visible today in fandoms organized using free or cheap publishing platforms on the Web.

Despite the communal aspect of science fiction, there were divisions in gender within the readers and writers. The writers were overwhelmingly male, and the readers predominantly so, though one does find evidence of women who read *Amazing* and registered their desires for inclusion in the community it created. As Cheng argues, women were severely underrepresented as both authors and readers:

Nevertheless, female science fiction readers recognized the general perception that science was a male preserve and pursuit. "In the 1930s, science fiction was almost entirely masculine," Asimov recalled later. "The readership was almost entirely masculine, after all, and so were the writers." (Cheng 117)

The 19th Amendment broadened the role women had within the labor force as well as in society and education more broadly. Nonetheless there was still a belief that particular pursuits were meant for males, a bias clearly visible in the roster of writers who contributed to *Amazing Stories* in its initial run.

There were, however, female readers who wrote letters to the magazine. Cheng notes a range of responses. Whereas some women were vocal enthusiasts proclaiming their gender in order to find common cause among others, many didn't acknowledge their gender publicly or signed their letters with their initials rather than their full names. Even the diction of some of

these letters express a sense of stigma by women participating in scientific discourse. This can be seen in *Amazing* Volume 4, Nos. 3 and 10. One letter has a woman define herself as only a “*mere girl*” (Vol. 4, No. 10 988). Another states that she knows she is “not supposed to enjoy” educational or scientific stories. (Vol. 4, No. 3 286). We can see here that women within the science fiction community were aware of the social stigma around their participation within science yet were still actively accessing and commenting within the community in diverse ways. One also finds that women occupy a subordinate role in early science fiction as “subject matter.” Many of the stories, such as *John Carter of Mars* by Edgar Rice Burroughs, create heroines yet ultimately promote traditional domesticity. Female characters are commonly used to further a romantic diversion from the central scientific aspects of the science fiction text. Exceptions are few and far between.

Gernsback’s *Amazing Stories* provided readers access to science fiction works while also giving the editor the ability to shape and form the genre to his own needs and desires. It was inspirational, not only to new scientists and writers who would carry the genre forth, but also to the readers themselves. The genre took on its own themes, styles, and ideas due to the nature of the pulp magazines, the focus on inspiration and education, as well as the collective dialogue it created. This rapid development would help expand the genre, leading to the golden age of the 1940s and 50s and the theoretical texts that have brought a critical lens to this genre.

Imaginary to Inspire Community:

As *Amazing Stories* continued to publish, Gernsback started to further define “scientification.” Furthering the idea of scientification as an inspirational form of literature, he decided to build a medium of inspiration into the magazine. Each of the *Amazing Stories* issues had vivid and unusual cover art meant to draw readers to the magazine and highlight a particular

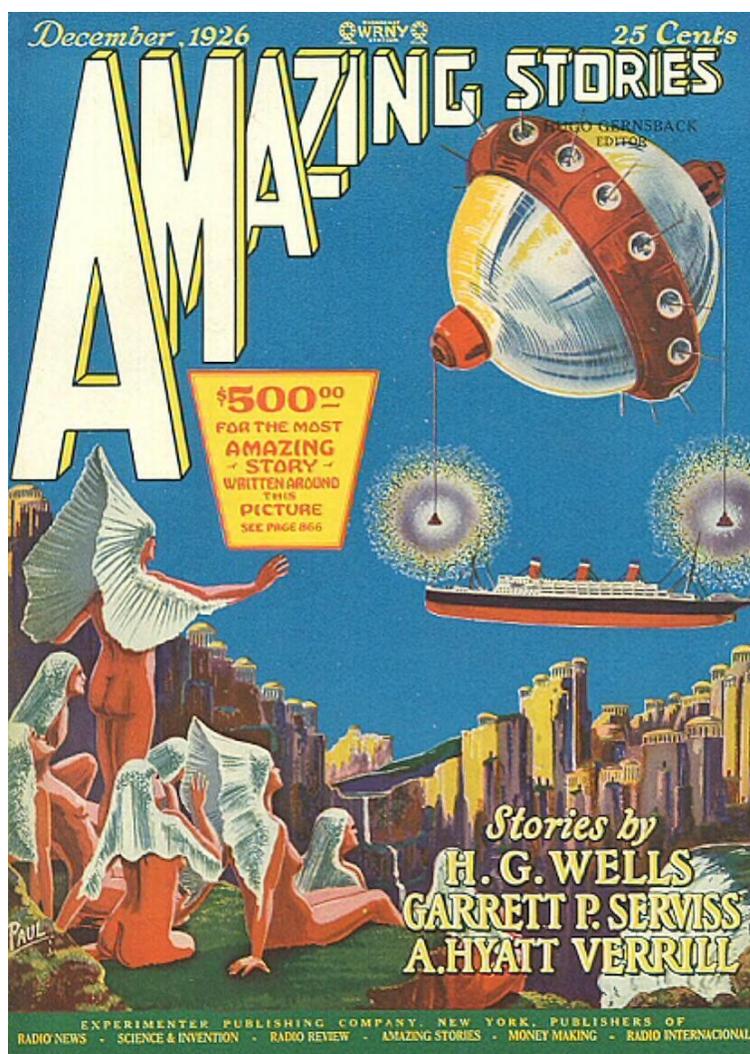
story within that issue. Most issues would also have a small, or at times full-page, drawing before the story that showcased a scene from a forthcoming fictional story. In Vol. 1 No. 9 Gernsback presents a cover complete with exotic alien life forms, an ocean liner held aloft by some strange device, as well as a strange city in the distance [figure 1]. Within the editorial contents of this issue, he presents a competition where readers could send in their own stories based upon this cover and some would be chosen and receive not only publication but also a cash prize.

At the start of Gernsback's pitch for this competition he states that the magazine receives a "great many manuscripts" as well as an "increasing number of letters asking if we are in the market for short stories" (773). In doing this Gernsback is ensuring his reader group that the interest in scientification is only growing as well as inspiring new writers. Yet at the same time, he states that "we can not get too many real short scientification stories" (773). To confront this problem, he decides to create this "unique contest" (773). In doing this Gernsback, along with his editors, gain authority over what they claim to be true or "real" scientification stories while also tapping into the collective they have established. The fact that the magazine gets full rights to these stories allows them to hold onto a particular new writer's work for further editions. This is useful if this cover inspired a writer who ended up becoming successful in further works. His rules are mostly legal boilerplate, though he does include a definition of what constitutes a science fiction story: "The story must be of the scientific type and must contain correct scientific facts to make it appear plausible and within the realm of present-day knowledge of science" (773). This is in the same vein as his previous editorials on the nature of scientification. Present-day science is interconnected with imaginative thought.

The image on the cover is meant to be vague, in order to allow creative freedom for the writer. Gernsback does offer some simplistic ideas and questions to give a general concept of what they are looking for. Many of these highlight the unusual aliens, strange city, and other scientification aspects of the cover. These “are vital questions” since they force the writer to use their imagination to detail the scene pictured. He goes to promote this contest as a “great chance for you to become an author” as well as an overall “great opportunity” (773). The contest becomes an opening into becoming a successful author, at least in Gernsback’s presentation of it. In the end, some three hundred and sixty stories were received of which seven were picked: three as winners, and four as honorable mentions. The authors’ addresses were included along with their names in order to further promote the interconnection between writers, readers, and editors.

These stories took on a similar structure as previous scientification stories within the magazine; some will be examined later within this thesis. The narrator takes on an “unimportant” role yet is forced to interact with an event that changes the world, and at times causes the destruction of national, social, and/or racial boundaries with ease via scientific evolution. This allows texts such as Wells’s *War of the Worlds* to challenge normality and question such constructs as imperialism.

Competitions such as these allowed the magazine to bring more people into the fold while also advancing a sense of community. Since the genre was still in a period of inception it needed to create interest. There was also only a limited supply of writers. In order to increase diversity, the magazine had to develop ways to establish new writers. Contests like this built community while ensuring the magazine’s longevity. Furthermore, they gave Gernsback the ability to assist in the direction of these new writers.



[Figure One: cover of *Amazing Stories*, Volume 1, Number 9]

Amazing Stories: Descriptions of Anxieties

Gernsback's editorials framed the discussion of scientific progress and its literary counterpart. He promoted a collective around the magazine, a community that could be actively involved in the formation of this new genre. While he did create a way to bring these people together across national and international lines, it was the stories themselves that were the tools of inspiration. These stories claimed the imagination of their readers, spoke to their own concerns, and were a central place to analyze scientific progress and its relationship with society.

Science fiction stories entered a larger discourse actively questioning what science offered, what was achievable, and how it altered people's daily lives. Through the imagined future realities science fiction created, it presented readers with various forms of estrangement meant to upset social assumptions.

Gernsback directed science fiction's focus through emphasizing hard science and stories that were also creatively educational. When he was able to, Gernsback celebrated the educational and scientific authority of their writers, editors, and at times readers. This pedagogical and participatory ethos fostered a model for science fiction in which reader, writer, and editor were all in conversation. It also provided stories that were able to maintain actual scientific fact within their story, even when they moved into speculative territory. Not every writer for *Amazing Stories* was a scientist, but many had some sort of scientific background either as current or former students or professional practitioners. Campbell, who wrote for Gernsback and eventually became a significant figure in future science fiction literature, was a student at Massachusetts Institute of Technology. There were others who were very distinguished in their respective fields, such as John Taine, which was a pseudonym for Eric Temple Bell, the president of the Mathematical Association of America. The presence of experts of differing degrees allowed the stories to interact with actual science that was being developed during the time of the publication. It also allowed the stories to play with the writer's personal knowledge, using this foundation to explore new ideas or the causes from current innovations.

Despite lacking the complex negations of present realities recent critics have attributed to postwar science fiction, the stories published in *Amazing Stories* did create their own estrangement through the use of Nova. While the themes, magnitude of estrangement, and conversation with ideology grew as science fiction evolved, the central conventions of the genre

are already legible in foundational pulp publications like *Amazing*. The emerging genre of science fiction differed from many literary conventions of the interwar period. They are as unique as the science it inspires and is inspired by. The most striking divergence from other fictional genres, which is already present in the pulps, is the elevation of the setting, and its Nova, over the agency of the central characters. As Suvin puts it:

(t)he world of a work of SF is not a *priori* intentionally oriented towards its protagonists, either positively or negatively; the protagonists may succeed or fail in their objectives, but nothing in the basic contract with the reader, in the physical laws of their worlds, guarantees either. SF is thus ... the only meta-empirical genre which is not at the same time metaphysical; it shares with the dominant literature of our civilization a mature approach analogous of that of modern science and philosophy. (Suvin 378)

The protagonists are not the main focus of science fiction text. Even with such a personable and striking character as John Carter in Edgar Rice Burroughs' work, the reader is constantly brought back to the different aspects of the described world. The new ideas, Nova, being brought into the story are the focus of the narrative. At the same time, people with authority are put into moments of unexpected powerlessness: the scientist is initially in disbelief and in awe of a new discovery, but more tests establish its validity and clarify its significance for a barely informed narrator. Many of the stories follow this framework in some capacity. Contingencies that trace back to Nova disrupt hierarchies, confusing ostensibly central characters and promoting marginal characters who are able to solve their mysteries.

Through this interaction with the Novum, the science fiction text is able to become meta-empirical rather than metaphysical. It is not concerned with what is there, rather what can be created. Instead, the science fiction text is interested in having the reader experience a possibility

rather than a reality, something that might or could become reality. And through its self-reflectiveness, it is able to mimic the process of scientific, philosophical, and critical thought. Protagonists are placed within a world that is focused on scientific knowledge and discovery, rather than their character's personal narrative. Science is able to take on a central role within the stories since it is through scientific progress that the imagined reality is created, yet it is able to remain separate from abstract academic conversation.

Science fiction protagonists were not usually the scientists who save the world through the expansion of their knowledge and experimentation. Instead, they are typically ordinary people, with limited scientific credentials, like the majority of readers. Thus, readers were able to engage the speculative possibilities bound up in the *Nova* by identifying with protagonists who, like themselves, must unpack them without specialized knowledge. One finds ample evidence of this dynamic at work within the first volume of *Amazing*, as well as in the careers of the authors themselves who blended science and fiction writing.

Wertenbaker, who was quoted in Gernsback's own editorials, published stories in *Amazing*. He came from a literary family and later became a contributing editor to *Time*. While his background was primarily in literature, he was deeply interested in science, as is evidenced in his science fiction writings and also in his future career as a speechwriter for NASA and chief historian of the Aerospace Medical Division (Ashley, "Wertenbaker, G Peyton," *sf-encyclopedia.uk*). His entire career has been a merging of the literary and science, just as the genre he wrote and supported in *Amazing*

His story, "The Man from the Atom," in the fourth issue of *Amazing Stories*, exemplifies the genre's early emphasis on everyday characters, scientific advancement, and the possibility of science's failures. The main character, Kirby, is an ordinary person who has established a

friendship with one Professor Martyn. This professor is a man “of intense imagination ... [who] first grasped the great results of his contemplated work, the vast, far-reaching effects, and then built with the end in view” (10). From the start the professor is seen as a futurist who embodies scientific advancement. Kirby, who states explicitly that he has no “claim to scientific knowledge” but “was romantic to a high degree, and always willing to carry out his strange experiments for the sake of the adventure and the strangeness of it all” (10). His everyday aspects are made clear, as well as his lack of scientific knowledge, yet he participates in science through his friend the professor, as well as a romantic sense of adventure and scientific discovery. Less democratically, the story features a hierarchical division of labor, whereby the professor requires the everyday man to perform his experiments, arguing that in the event of the professor’s injury or death, “the world would be in danger of losing a mentality it might eventually have need of” (10). The narrative thus places the scientist in a valued and privileged position, relative to the inexpert protagonist.

The plot features an apparatus that can enlarge objects, and Kirby allows himself to be used for the professor’s experiment, which expands him until his head is among the clouds. Eventually he gets so large that he disappears into space, floating aimlessly. The experiment that is meant to “revolutionize Science” instead leaves the main character isolated (13). He grows until he drops off the Earth, floating in space as he continues to expand. He sees Earth fade away and witnesses the formation of nebulas. At first these new sights fascinate him, but the excitement is short-lived as he starts to comprehend the scale of his isolation:

Suddenly I tired of the endless procession of stars coming together, forming ever into new stars that came together too. I was getting homesick. I wanted to see human faces

about me again, to be rid of this fantastic nightmare. It was unreal. It was impossible. It must stop. (20)

This isolation is further emphasized as Kirby slowly realizes the “awful truth:”

These stars were suns, even as mine had been, and they grew and died and were reborn, it seemed now, in a second, all in a second. Yet fair races bloomed and died, and worlds lived and died, races of intelligent beings strove, only to die. All in a second. But it was not a second to them. (23)

Humanity becomes meek and short-lived as he watches the cyclical formation and destruction of stars and planets that could be similar to his own. Instead of being able to gain knowledge he could bring back to the scientists and rest of humanity for their own development and evolution, Kirby is given a morbid awareness of the future’s fatality.

He finally lands on a “strange planet of a strange star” that he cannot comprehend. Its inhabitants’ customs and language are beyond Kirby’s “every effort to comprehend” (24). He loses any attachment to anything as he resides alone and estranged from his new reality. Despite the grand possibilities in science, the experiment doesn’t provide the expected end result. The romanticism is maintained though through the sheer alienation and newness of Kirby’s experiences, yet the knowledge gained makes him an outsider in a strange and new world that he *cannot* understand. In some ways this story speaks to a central dilemma of speculative fiction: that the future will differ vastly from the present due to scientific innovations, with uncertain implications for the individual.

While Wertebaker’s work shows a fear in the possibilities and isolation that science may bring, it is not the only view of science within early science fiction stories. Austin Hall, whose story, “The Man who Saved the Earth” was in the first issue of *Amazing*, portrays science as

being able to save humanity from the unknown and unexpected. The idea of an everyday person being able to gain special access and authority through science is expressed in Hall's piece. The protagonist, Charley Huyck, is an unassuming child, who studies, quite by chance, with a prominent scientist. This scientist is moved by Huyck's own experimentation with a magnifying glass: "So commonplace, so trivial and hidden in obscurity! Who would have guessed it?" (28). Again, there is an emphasis on how "commonplace" Huyck is, coming from a background that could be anyone's, including the reader's. Science appears here in romantic terms as a tool for personal growth and development, describing Huyck as "lean and frail of body, with, even then, the wistfulness of the idealist, and the eyes of a poet" (29). His physical demeanor is deemphasized in favor of an idealism that assumes future intellectual productivity. To further his own heroic nature, his "greatness is not of warfare, nor personal ambition; but of all mankind" (28). Here his greatness is linked to a global humanity rather than a particular nation. This boy, who was just a newspaper boy, became a scientist who worked for all of humanity and saves the world from destruction.

The world in this story has become romantically perfect and idealistic. Life, through innovation, and unnamed cultural evolutions, has become easy and relaxed. This is not entirely seen as ideal by the narrator, who emphasizes the boredom that grows alongside a world of perfection and contentment:

It was the days of dry reading. The world had grown populous and of well-fed content.

Our soap-box artists had come to the point at last where they preached, no disaster, but a full-bellied thanks for the millennium that was here. A period of Utopian quietness- no villain around the corner; no man to covet the ox of his neighbor. (33)

This seemingly perfect world is soon plagued, however, by an inexplicable natural disaster that erases whole sections of cities and threatens to remove all traces of humanity from the face of the earth.

The story emphasizes the heroism of ordinary characters in the face of this threat. A telegraph operator remains in Oakland before the city is destroyed, witnessing the destruction with one last message:

It is a strange and glorious thing how some men will stick to the post of danger. This operator knew that it meant death; but he held with duty. Had he been a man of scientific training his information might have been of incalculable value. However, may God bless his heroic soul! (40)

The unnamed character's heroism is acknowledged, yet it doesn't accomplish anything since he lacks the scientific training to provide any information that could prove useful to halting this unknown, yet naturalistic, destruction.

This destruction is eventually titled Opalescence, and Huyck sees it as a minor manifestation which is a mere message from a "sinister intelligence ... yet it is not all sinister. It is self-preservation" (79). Huyck, in this letter to "The People of the World" states that there will be a time when humanity "will be forced to employ just such a weapon for his preservation" (78-9). This weapon is tied to an unseen alien race on Mars, who, lacking their own source of water, attack Earth to provide for themselves. Self-preservation becomes the reason for the destruction of humanity, and only through Huyck is humanity saved: "Uncounted millions of men had never heard his name; there were but few, very few who had" (79). He was an unknown, everyday person, who was given access to scientific education, and through that, linked with an act of selflessness, is able to save humanity by giving Mars Earth's water, allowing both planets to

survive cooperatively. The last lines of the story promote a sense of unity rather than revenge: “And we look to a green and beautiful Mars. We hold no enmity. It was but the law of self-preservation ... We need what we have, and we hope to keep it” (86). The water becomes something necessary to both, and only through a state of mutual sharing, is humanity able to survive from a much more advanced scientific and military force.

With the fears of World War I still heavily embedded in people’s minds this story can be seen as an attempt to use technology and science to pursue peace rather than war. The Opalescence is absolute destruction, going as far as to remove Oakland from existence. Ordinary people were thrown into the Great War based upon the crumbling political alliances of the time. Here Huyck is able to find an alternative to total war and in doing so saves the human race.

Unlike in Wertebaker’s story, Hall portrays science as providing both destruction and protection. It doesn’t isolate humanity, as in Kirby’s experience, but it does alter the way humanity must interact with its environment, as well as its planetary neighbors. Huyck is different from Kirby, or his professor friend, since he merges science and moral imagination. This story critiques science along the lines of Weber’s aforementioned work, emphasizing the need to place technological mastery within ethical and philosophical frameworks. As Hall’s narrator puts it, the realm of “facts” must be synthesized with that of “poetry”:

Facts, facts, nothing but facts; no dreams or romance. Looking back, we can grant them just about the emotions of cucumbers. We remember their cold, hard features, the prodding after fact, the accumulation of data. Surely there is no poetry in them. (50)

Without this “romance,” there is a lack of vision, and science becomes mere data, whose only purpose is creating more facts. Kirby’s growth experiment is meant to bring data back to humanity, but the process isolates him. Here data divorced from social and moral considerations

is portrayed as negative since they are lacking in emotion. Huyck is described as removed from this factual focused science by being able to have “a peculiar combination of poetry and fact, a man of vision, of vast, far-seeing faith and idealism linked and based on the coldest and sternest truths of materialism” (50). Huyck becomes an embodiment of the theory of his mentor, Dr. Robold, that “True science to be itself should be half poetry” (50). Traditional education does not promote that form of science, since science is entirely governed by facts and materialism. Early science fiction, in contrast, fashioned the image of the scientist as visionary who linked invention and science, imagination and fact. Science is able to save humanity since it is able to bring a sense of selflessness and a unique personal and emotional view into the factual nature of the field.

Both Hall and Wertenbaker provide two particular aspects of scientific progress. One shows science’s attempt to reach new heights, and the other shows how science can destroy as well as protect the world around us. Each of these stories reveals the anxieties of the time: first, through the isolation caused by leaping beyond the social and political status quo, and second, through the destructive potential of technology. These stories showcase the tensions in popular perceptions of the value of science and technology and explore ways of engaging them. This engagement unfolded in ways accessible to the ordinary person, who serves as witness to science’s potential for both progress and destruction. Not only do they witness science’s duality, but the characters are also able to interact explicitly with these new innovations, altering the world through the decisions they make.

Conclusion: Distancing of Communities

As with any genre or medium, science fiction’s interaction with pulp magazines shifted in the 1930s as the genre evolved. Hugo Gernsback would eventually be overshadowed by John W.

Campbell. As the editor of *Astounding Stories of Super Science* in 1938, Campbell was instrumental in shaping the “Golden Age of Science Fiction” (Edward and Clute, “Campbell, John W Jr,” *sf-encyclopedia.uk*). Two of the “Big Three” authors who dominated postwar science fiction—Asimov, Clarke, and Heinlein—published major works in *Astounding Stories* (“The Big Three- Asimov - Clarke - Heinlein - A Bibliography,” *SFandFantasy.co.uk*). Isaac Asimov claimed that Campbell was “the most powerful force in science fiction ever, and for the first ten years of his editorship he dominated the field completely” (73). It is no surprise that many theorists such as Adams and Jameson have focused on Campbell’s legacy. As science fiction became more philosophical and analytical, there was a shift away from the pulp magazines in which the genre emerged.

The emergence of the “Big Three” in the postwar period is beyond the scope of this thesis, but I will note that, alongside the gains in complexity and cultural profile that came as the genre left the pulps and migrated into glossier magazines and paperback novels, there is a loss of the collective spirit with which Gernsback infused *Amazing Stories*. Through its interaction with its reader base, and its connection to scientific discovery, Gernsback invested the genre with an active, exploratory mission, one that was shared between authors and readers. Gernsback’s involvement in the creation of the genre was essential in defining how it interacted with the modern discourse by establishing the genre as one that was in dialogue with its readership.

It is this community that allowed the “Golden Age of Science Fiction” to develop. In *I, Asimov*, Isaac Asimov describes his childhood experience reading *Amazing Stories*. His father who sold them called these pulp magazines “‘Trash,’ and though I [Asimov] hate to admit it, the old man was about 99 percent right” (46). Yet even as Asimov is able to disassociate the magazine with “High-Brow” literature, he found it essential to his growth as a writer and reader.

Not only was the word “‘science’ in the new magazine...a gift from heaven” to the future prolific writer, but it also inspired his young imagination: “It was science fiction that introduced me to the universe, in particular to the Solar system and the planets. Even if I had already come across them in my reading of science books, it was science fiction that fixed them in my mind, dramatically and forever” (43-4). Here the inspiration developed by the community can be seen explicitly. This community of amateurs, tinkers, and inventors created a sense of exploratory thinking within the field of science. As science fiction moved into the mainstream media, this community became more fractured. Instead of being centered around this emerging magazine, people had to find their own clubs and groups to unite them.

As technology becomes more advanced, there has been an ascendance of the STEM fields within the public awareness. Yet even here there is a focus upon practical and profitable disciplines, with many seeing the humanities as less necessary. Science becomes more professionalized and bureaucratized. Alongside that development is the decline in the tinkerer. The reader becomes less involved in the scientific enterprise, serving only an observer or hobbyist. This shift is not far from what C. P Snow described in the 1950s as “The Two Cultures,” a divide between scientists and humanists. *Amazing Stories* may be considered “trash” by many, even during its time, but it cannot be ignored that it was able to unite the humanities and the sciences. Not only were the stories themselves built with both in mind, but the community itself was also interested in the interaction and relationship between these two fields. Currently there is much debate about the presence of humanities within the sciences. It is useful to remind ourselves of past examples, where the union of science and literature was essential. Gernsback’s pulp magazine is a prime example, and because of his inclusion of the average reader, the genre was able to flourish into the intellectual and philosophical genre it is today.

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