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## Bicycles Across the Galaxy: Attacking Automobility in 1950s Science Fiction

Jeremy Withers

*Iowa State University*, [withers@iastate.edu](mailto:withers@iastate.edu)

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# Bicycles Across the Galaxy: Attacking Automobility in 1950s Science Fiction

## **Abstract**

This essay focuses on several works of science fiction from the 1950s that function as counter-narratives to the hegemony of the automobile during this decade and to the accompanying dismissive perceptions of the bicycle. In its analysis of a novel by Robert A. Heinlein (*The Rolling Stones*, 1952), a novella by Poul Anderson ("A Bicycle Built for Brew," 1958), and a short story by Avram Davidson ("Or All the Seas with Oysters," 1958), it asserts that some of the leading figures in Golden Age sf were not content to relegate bicycles to the status of a technological obsolescence fit only for children. Instead, they chose to portray bicycles as useful, potent, and agentic—images that counter the prevailing ideology of "automobility" that was crystallizing with such durability in postwar America.

## **Disciplines**

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## **Comments**

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Jeremy Withers

## Bicycles Across the Galaxy: Attacking Automobility in 1950s Science Fiction

“Cycle tracks will abound in Utopia....”—H.G. Wells, *A Modern Utopia* (47)

Bicycles have rolled across the pages of science fiction almost since the genre’s inception. Even though scholars have identified important precursors to sf in premodern genres such as epic and the fantastic voyage, many people track the origin of modern sf to the works of H.G. Wells, the so-called “father” of sf.<sup>1</sup> In one of Wells’s early scientific fantasies, *The War of the Worlds* (1898), people frantically attempt to use bicycles (as well as a range of other transport machines) to flee the Martian onslaught, and the unnamed narrator himself is depicted as a cyclist. Later, we find Wells incorporating bicycles into futuristic war narratives such as “The Land Ironclads” (a 1903 story prophesying the tank) and *The War in the Air* (a 1908 novel prophesying aerial warfare). In *A Modern Utopia* (1905)—one of his contributions to the utopian tradition begun by Plato and Sir Thomas More—Wells memorably declares in a line that serves as the present essay’s epigraph his hope that bicycles will form a key component of future transportation. Even all the way back to his first novel, as Leon Stover has argued, Wells implies that a bicycle lurks behind the design of the most famous transport device he conjured up in his fiction: the time machine.<sup>2</sup>

After Wells, the bicycle lingers in sf. Ernest Callenbach’s *Ecotopia* (1975), a novel about an environmentalist utopia, depicts an early form of a bike-share program, a promotion of the bicycle’s associations with sustainability that shows up again in the environmental sf of Kim Stanley Robinson (such as his 1990 novel *Pacific Edge*). Cyberpunk draws upon the rebellious, youth subculture of cyclists in order to create central characters in Bruce Sterling’s “Bicycle Repairman” (1996) and William Gibson’s *Virtual Light* (1993). Octavia Butler highlights the utilitarian value of the bicycle in her dystopian *Parable of the Sower* (1993), where she portrays both adults and children moving around their collapsed society on bikes. At first a zine and now an annual anthology edited by Elly Blue, *Bikes in Space* (2013-), collects feminist, bicycle-oriented sf, thus tapping into the long tradition—beginning in the Victorian era—of bicycles intertwining with gender politics.<sup>3</sup> Moving beyond traditional literary sf, bicycles whirl across some of sf’s other media too (where they are often associated with the ephemeral innocence of childhood) in film (*E.T. the Extra-Terrestrial* [1982] and *Super 8* [2011]), television (*Stranger Things* [2016]), and graphic novels (*Paper Girls* [2015-2017]).<sup>4</sup>

In the 1950s, the decade that is the focus of this essay, some of that era’s most celebrated sf writers utilized bicycles in their fiction. For example, Eric Frank Russell—a one-time stalwart of “Golden Age” sf and supposedly John Campbell’s all-time favorite sf writer—makes use of a bicycle in “And Then

There Were None” (a novelette originally published in a 1951 issue of Campbell’s *Astounding*).<sup>5</sup> Russell employs his story’s bike, a machine ridden by a certain Tenth Engineer Harrison, as a foreshadowing and then eventually an emblem of Harrison’s adoption of freethinking individualism and anti-hierarchical libertarianism by the story’s close.<sup>6</sup> Famously, Ray Bradbury, despite living in car-centric Los Angeles for much of his life, never learned to drive and instead relied on bicycles and public transportation to move around that sprawling city. In a 1966 interview with Pierre Berton, Bradbury discusses his preference for bikes and buses and refers to cars as “destroying our cities” and as “lousily built, lousily designed” machines that “proceed to destroy hundreds of thousands of us every five years” (“Cassandra” 32, 34). Appropriately, several of Bradbury’s works from the 1950s incorporate bicycles, such as the stories “Way in the Middle of the Air” from *The Martian Chronicles* (1950) and “The Great Collision of Monday Last” from *A Medicine for Melancholy* (1959), as well as the novel *Dandelion Wine* (1957). Put simply, despite sf’s frequent association with extravagantly advanced machines like intergalactic spaceships, intelligent robots, and apocalyptic weapons, the bicycle has endured as a piece of technology for which the genre has never lost its fascination.<sup>7</sup> The bike persists in sf as a powerful avatar of a simple yet efficient and elegantly designed machine, one that represents a variety of values: sustainability, rebellion, equity, and innocence.

This essay focuses on several works of sf from the 1950s that function as counter-narratives to the entrenched dismissive perception of the bicycle and thus serve as literary challenges to the growing hegemony of the automobile in that decade. In analyzing a novel by Robert A. Heinlein, a novelette by Poul Anderson, and a short story by Avram Davidson, this essay argues that some of the leading figures in 1950s sf were not content to relegate bicycles to the status of “technologically static and obsolete vehicles inferior to more ‘advanced’ vehicles such as motorcycles and cars” (Vivanco 26). Put another way, some of these writers’ most celebrated and award-winning fiction brims with images of bicycles as pragmatic, reliable machines worthy of continued use and appreciation (in the case of Heinlein and Anderson), and with images of bicycles as potent, agentic pieces of technology capable of inspiring awe and even fear (in the case of Davidson). Such images continue a trend in sf of an ongoing skepticism toward excessively sophisticated machines while also representing a counter-argument to the ideological system of “automobility” that crystallized with such durability in post-World War II America. Drawing upon the work of sociologist John Urry, Zach Furness defines automobility as:

the assemblages of socioeconomic, material, technological, and ideological power that not only facilitate and accelerate automobile travel but also help to reproduce and ultimately normalize the cultural conditions in which the automobile is seen, and made to be seen, as a technological savior, a powerful status symbol, and a producer of both “modern” subjectivities and “civilized” peoples. (6)

As nearly any historian of transportation will tell you, America in the 1950s was a golden age of automobility's vigor and influence. After two decades of sluggish sales due to the Great Depression and World War II, car ownership surged during the postwar era. As Christopher W. Wells reports: "Between 1950 and 1960, annual new-car sales *averaged* 5.9 million—1.4 million more than the old 1929 record—and set a new single-year record of 7.9 million in 1955" (279; emphasis in original). Accompanying this increase in car sales was the massive growth on the fringe of cities of low-density, car-oriented suburbs. Additionally, the Federal-Aid Highway Act of 1956 forever altered the American landscape when it was signed into law by President Eisenhower and ushered in the largest public works project up until that time: the Interstate Highway System. The result of this sharp increase in car ownership, suburb expansion, and highway construction was an America "so thoroughly remade around car-based mobility that older ways of moving around have become difficult, if not impossible, for most Americans" (Wells 287).

Whereas the 1950s constituted a zenith of popularity for the car, it was a nadir for the bicycle. In the mid-1890s, during the so-called "bicycle boom," Americans—and a good portion of the rest of the world—embraced the bicycle with an almost religious fervor.<sup>8</sup> But throughout the early-twentieth century, the bicycle's fortunes in America steadily plummeted before bottoming out in the 1950s. As cycling scholar James Longhurst sums up the situation in this decade: "Across the nation, bicycles were increasingly being defined not as the equals of automotive vehicles but as their diminutive inferiors" (159). As Longhurst goes on to show, bicycles were, for the first time ever, "excluded entirely from certain public roads" (155), specifically the new interstate system of highways. Further signs of the bicycle's decline in the 1950s include the disbanding in 1955 of the once-mighty national advocacy organization, the League of American Wheelmen (founded in 1880), as well as the increasing juvenilization of bicycles by advertisers, the mass media, and even the bicycle manufacturers themselves. As many bicycle historians have noted, the increasingly popular perception and depiction of the bicycle in the 1950s was that of a child's toy.<sup>9</sup> This rebranding of cycling was particularly acute in the United States and motivated leading bicycle manufacturers such as Columbia and Schwinn to begin producing bicycles that resembled motorcycles or automobiles (by adding on to bicycles fake gas tanks, balloon tires, horns, and so forth). By the 1960s, "the bicycle began to enjoy a new period of popularity and ushered in a 'second bicycle boom' that, primarily due to the energy crises and oil embargoes of the following decade, "peaked with millions of bicycles sold in the early 1970s" (Vivanco 35).

Automobility in the 1950s finds memorable cultural expression in the films of that era such as *Rebel Without A Cause* (1955), in publications such as Jack Kerouac's novel *On the Road* (1957) and *Hot Rod* magazine (begun in 1948 and still published today), as well as in popular car-oriented practices of the decade such as "cruising" and going to drive-in restaurants and cinemas. Most memorably perhaps, the new rock 'n roll music encapsulates that decade's intense love affair with the car: from what some consider to be the first rock

'n roll song ever—"Rocket 88" (1951) about a new Oldsmobile—to later references to Cadillacs in Elvis Presley's "Baby, Let's Play House" (1954), Buddy Holly's "Not Fade Away" (1957), and to souped-up V8 Fords in Chuck Berry's "Maybellene" (1958).<sup>10</sup> But the works of sf discussed below open up noteworthy faultlines in the system of automobility by inviting their readers to reject the devaluation of the bicycle and to question the widespread glorification of the car taking place in the 1950s. Writing about cycling in the 1980s, James McGurn proclaims: "The bicycle is the vehicle of a new mentality. It quietly challenges a system of values which condones dependency, wastage, inequality of mobility, and daily carnage" (183). Yet, this "bicycle mentality" is not entirely new; the texts by Heinlein, Anderson, and Davidson discussed below challenged the automobility system of values of their era in addition to questioning the extravagantly complex nature of the car as a technological artifact. In other words, these various sf works are deeply imbedded in their historical context of a robust 1950s automobility; they display, however, what Marxists refer to as relative autonomy, which Robert Dale Parker defines as "at least a little independence from the clutches of the system" (235).<sup>11</sup>

**Labor and Commerce in Heinlein.** Let us first examine Robert A. Heinlein's *The Rolling Stones* (1952), published as *Space Family Stone* in the UK. This novel was written as part of the "Heinlein juveniles," a series consisting of twelve core novels published by Scribner's during 1947-1958 and aimed at a predominantly male, teenage readership. As Clareson and Sanders observe: "Besides the favorable reactions of generations of readers, critics agree on the excellence of Heinlein's juvenile novels. From Jack Williamson to Lois Bujold a virtually unanimous opinion praises the twelve juvenile novels published with Scribner's" (62). In 1952, *Boys' Life*, the monthly magazine of the Boy Scouts of America, published a version of *The Rolling Stones* in several installments with the title "Tramp Space Ship" before the full-length novel version appeared at the end of that year. Considerations of publication history and intended audience for this novel are significant here, for (as mentioned above) in the 1950s bicycles were almost exclusively made for and marketed to children and early teenagers. But even then, bikes functioned primarily as "signifiers of desirable automobility" (Longhurst 109) through their superfluous decorations such as gas tanks and luggage carriers, since it was "apparently inconceivable that the bicycle rider of today might also be the bicycle rider of tomorrow" (Longhurst 171). Because Heinlein's novel features two teenage boy characters—Castor and Pollux—and is a critical and commercial success that was published first in a boys' magazine and then in a juvenile book series, the analysis below will pay close attention to its frequent mention of bicycles—objects often associated with children—as well as to its one striking digression on the car. Such attention will reveal how Heinlein's novel subverts for its largely adolescent audience the promotion of the car and the dismissal of the bicycle that were both typical of this time.

*The Rolling Stones* is a novel about the adventures of the Stone family as they travel across part of our solar system in a spaceship after wanderlust seizes them while living on a lunar settlement. Therefore, the novel admittedly promotes certain values one would associate with automobility, such as freedom of movement and an ability to conquer vast distances, both of which are on full display in the novel's closing paean to mobility and restlessness. Here, in connection with Grandma Hazel's decision not to return to the Moon with her family but instead to head out to the rings of Saturn, Heinlein writes in the final pages: "In her train followed hundreds and thousands ... of restless rolling stones ... rolling out to the stars ... outward bound to the ends of the Universe" (253). Yet the text makes it emphatically clear that, whether or not they contribute to human freedom of movement, automobiles are to be excluded from any such glorification. This dismissal of the car is a continuation of the one Heinlein began in "The Roads Must Roll," an early short story from 1940 that describes cars as "steel-bodied monster[s]" and "steel juggernauts" that are "more destructive than war" (32).

The fault the novel finds with automobiles is their lack of bona fide technological sophistication. *The Rolling Stones* at one key moment opines that all technology goes through three stages and that the car belongs only to the second stage, a stage defined as follows: "an enormously complicated group of gadgets designed to overcome the shortcomings of the original [i.e. the first stage] and achieving thereby somewhat satisfactory performance through extremely complex compromise" (53). In short, the automobile, for Heinlein, is an overly and needlessly complicated machine. The next two pages of this section of the novel lay out in some detail the design flaws of the car that make it tantamount to "a preposterous collection of mechanical buffoonery" (53), flaws such as its inefficient engines that waste heat and its lack (at that time) of autocontrols of any kind. Strikingly, in this time period of the 1950s, an era of rapidly dominating automobility and a growing fetishization of the car by mainstream America, Heinlein's novel dismisses cars as "mechanical jokes" to which "[t]hree whole generations were slaves" (54). Heinlein does not appear to have bicycles in mind in this section as a superior alternative to cars, for he bemoans how the drivers of his time had to use their "own muscle power" (54; emphasis in original) to help stop or turn cars in this era before power steering and power brakes.

If within this diatribe against the automobile it is not apparent that Heinlein has the bicycle in mind as a superior alternative, as the novel progresses it becomes much clearer that he does indeed envision the bike as a machine worth celebrating. In the chapter that follows this anti-automobile screed, we learn that Castor and Pollux, the young twins of the family, have decided to fill the ship with as many secondhand bicycles as they can in order to sell them on Mars. The justification for this entrepreneurial venture is that "[o]n both Mars and Luna prospecting by bicycle was much *more efficient* than prospecting on foot ... all the prospectors took bicycles along as a matter of course" (68; emphasis added). And even when not actively riding them, the lower lunar and Martian gravities mean "it was an easy matter to shift the

bicycle to one's back and carry it over any obstacle to further progress" (68). This practicality of the bicycle for prospecting leads the narrator to opine: "on Mars or on the Moon [the bike] fitted its purpose the way a canoe fits a Canadian stream" (69). Unlike the car, the bicycle is associated with efficiency, versatility, and suitability. Heinlein references it as a nearly perfect machine not only on Earth (as bikes are typically depicted) but also in the diverse environments of other planets.

Heinlein's dismissal of the automobile and his praise of the bicycle connects his text—as well as Anderson's novelette (discussed below) with its positive portrayal of a bicycle and of a jerry-rigged, beer-powered ship—to sf's frequent mistrust and rejection of overly complex forms of technology. From early stories such as E.M. Forster's "The Machine Stops" (1909), with its dark vision of people living in isolation and whose every need is met by a vast, omnipotent machine that surrounds them, to fears about a rebellious and all-powerful A.I. machine in Harlan Ellison's "I Have No Mouth, and I Must Scream" (1967), sf authors often perceive elaborate technologies as all too likely to escape the control of their creators and to contribute to the misery of humanity. *The Rolling Stones'* depiction of the bicycle as a machine that genuinely assists people makes it an especially benevolent form of technology, derived in part from its relatively modest complexity.

Moreover, Heinlein resurrects here a social meaning for the bicycle that had become almost completely lost in the western world by the mid-twentieth century: the bicycle as a pragmatic device to facilitate work. In the late nineteenth and early twentieth century, American and British doctors, police officers, postal carriers, messengers, and others often employed the bicycle to enhance their speed and efficacy at work. In the East, as Glen Norcliffe has shown, working bicycles and tricycles—although increasingly under threat by the processes of modernization—continue to be everyday features of many Asian cities, particularly in China. What Norcliffe writes about the working tricycles of China might easily apply to Heinlein's interplanetary bicycle: "it costs little to manufacture and maintain, is flexible in where it can go and in the loads it can carry, is a safe vehicle with minimal risks ... and it provides meaningful work for people" (227). Heinlein, in short, undermines the frequent perception of bicycles as trivial playthings; he restores to the bicycle the dignity that often comes from its association with labor and commerce.

Despite the modest technological complexity of the bicycle, the twins of *The Rolling Stones* work on fixing up the used bikes for a good part of the time they are en route to Mars. It is also noteworthy that the text characterizes Castor and Pollux as engineering geniuses. For example, they help their father, the ship's captain, to calculate the complex ballistics of their interplanetary launches, flights, and landings. And yet the novel never implies that the bicycle is beneath their attention. Instead, repairing and restoring these machines is depicted as a worthy and sufficiently sophisticated challenge for these two prodigies. Even an adult like their father, the other engineering expert in this family, is not above assisting the twins in the work of fixing up these bikes, such as when we are told he "help[s] the twins spray enamel on

the reconditioned bicycles” (116). True, *The Rolling Stones* describes the bikes in somewhat debased terms as commodities that Castor and Pollux are trying to sell in order to make some quick money. But, significantly, the novel never portrays the bicycle as a simplistic, low-tech toy unworthy of the time and attention of this family of geniuses.

Heinlein further associates the bicycle with adults when the twins make their first sale en route to Mars to the captain of a nearby ship, Captain Vandenberg. Vandenberg specifically requests a “Raleigh Sandman,” a model that the well-established British manufacturer of bicycles never actually made, but which Heinlein likely invented for its association with the sands of Mars. The significance of the captain wanting a Raleigh lies in the fact that, unlike its American counterparts, the British manufacturer was known after World War II for producing high-quality, lightweight, three-speed bicycles for adults, and not the heavy balloon-tire bikes with fake gas tanks that were so prevalent in the US during this same period. Captain Vandenberg wants a decidedly adult, practical bicycle—not one of those inefficient, overly heavy bikes that American manufacturers such as Schwinn were churning out and marketing to kids. The aggressive marketing even involved using children’s television characters such as Captain Kangaroo who, in 1958, “began pitching Schwinn’s to the under six set” on television so that “when they got older they asked for a Schwinn” (Petty 167).<sup>12</sup> In this scene of the novel, Heinlein references a key disparity between the two sides of the Atlantic: even though American manufacturers were helping to ensure the obsolescence of the bicycle for adult mobility needs in the postwar years through impractical designs and a progressive juvenilization of the bicycle, their British and European counterparts demonstrated that the bicycle could continue to be a cost-effective and useful machine for adults if made (and marketed) correctly.

When Dr. Stone, the mother of the twins, wonders aloud why Captain Vandenberg might want the bicycle, the father surmises: “Probably just sightseeing” (116). In addition, then, to its utilitarian value for prospecting, the bicycle is also associated with the recreational needs of adults. After first establishing the bicycle as an important machine for aiding adults in their everyday work, the novel now associates it with adult pleasure. Pollux and Castor eventually sell their cache of used bicycles to a Martian restaurateur who wishes to rent them to tourists outside his restaurant. Later in the novel—in a memorable bit of anti-bureaucracy satire—Heinlein has the twins jailed for failing to pay the appropriate Martian customs duties and profit taxes on their bicycles. But Grandma Hazel gets the twins off by successfully arguing that the bikes, even when being used for the pleasure of tourists, are still serious and important contributors to Martian society. She declares to the courtroom: “albeit a luxury to the tourist, [the renting of bicycles] is a productive activity for export to the unmixed benefit of every city of the Commonwealth and that therefore those bicycles are ‘articles of production’” (174), thus, making the bikes exempt from taxes and duties. In the end, the sale of the bicycles defeats the Martian bureaucracy, allowing Heinlein to sound off about one of his favorite mid-career themes: “the importance of

individual liberty conceived in the American libertarian mode, with a pendant mistrust of ‘government’” (Roberts 201).

In sum, Heinlein’s *The Rolling Stones* consistently portrays bicycles as worthy of the attention of highly intelligent adults and children, not only associating these machines with serious, practical pursuits (such as prospecting) but also with pleasurable activities (such as sightseeing). Mature, practical, pleasurable: these are not words that mainstream American society of the 1950s often equated with the bicycle. Yet Heinlein’s novel, like the other sf texts discussed in this essay, offers up an alternative vision of this piece of technology that challenges American society’s dismissive view of it. The fact that this work was first published in *Boys’ Life* and then as a Scribner’s juvenile novel, and therefore had teenagers as its main audience, is indeed significant. As Longhurst reminds us, most young cyclists in the 1950s were addressed by texts such as bike safety films as being in “training for the adult responsibility of automobile driving” (168) and by Boy Scouts of America pamphlets as being “the automobile driver of tomorrow” (169). That is, it was assumed that bicycles were only a momentary stop on the inevitable path toward automobility. But *The Rolling Stones* subverts this “common sense” perspective. For Heinlein, bicycles are a superior and desirable mode of transport in their own right; automobiles, in contrast, are an inferior technology constituting only “mechanical buffoonery.”

**The Retrofuturism of the Bicycle.** Both Heinlein’s *The Rolling Stones* and the next sf text to be examined—Poul Anderson’s “A Bicycle Built for Brew” (1958)—portray bicycles as normalized components of the futuristic worlds they depict. Thus, the bicycle in these texts partakes in sf’s complicated engagements with time and history, engagements that find notable expression in such subgenres as steampunk and alternative history, as well as a post-apocalyptic medievalism found in many sf works.<sup>13</sup> Heinlein and Anderson in essence go back to the nineteenth-century to recover an image of bicycles that had largely been rejected and lost by the 1950s: that is, the notion of the bicycle as suggestive of “speed, mobility, progress and the future” (Smethurst 153). But of course the paradox here is that these texts *travel to the past in order to travel to the future*, a move reminiscent of retrofuturism, which one scholar defines as the literary and visual “practice of referencing, framing, or inserting elements of older futuristic imaginaries into contemporary narratives” (Frelik 207). That is, although the bicycle was a “veritable icon of futurism” (Smethurst 25) in the Victorian era, that iconic status had dramatically faded by the 1950s. But reverting to the bicycle in this later period of the 1950s, when automobiles were ubiquitous and spacecraft were being excitedly imagined by sf writers and other futurists, embodies a noteworthy form of retrofuturism. We see Heinlein and Anderson resurrecting that “older futuristic imaginary” of the *fin-de-siècle* era in their respective narratives.

At first glance, it might seem that these texts engage in some kind of pointless nostalgia for a lost pre-automobile past. Such a reading would resemble Frederic Jameson’s well-known critique of nostalgia as a cultural

amnesia, an amnesia that (say) forgets that bicycles were at one time problematically entangled in a rampant commodity culture and were at times used as objects to help strengthen divisions of gender and social class. Jameson's own critiques center on what he calls the "nostalgia films" of the 1970s and 1980s that attempt to recover a lost 1950s because "for Americans at least, the 1950s remain the privileged lost object of desire—not merely the stability and prosperity of *pax Americana*, but also the first naïve innocence of the countercultural impulses of early rock and roll and youth gangs" (1; emphasis in original). Alternatively, we might initially expect the retro element of bicycles to be mocked and criticized in these texts by Heinlein and Anderson like the colossal superhighways and giant zeppelins in William Gibson's story "The Gernsback Continuum" (1981). But it is important to note that the portrayals of bicycles in the sf texts under discussion are neither naïve attempts to go back into the past to "recover a lost object of desire" nor satires that deride the yearning to perform such a recovery. Rather, as in Elizabeth Guffey's analysis of retro, I see bicycles in these narratives as "representing a kind of subversion in which the artistic and cultural vanguard began looking backwards in order to go forwards" (Guffey 8). Even though these texts depict a mode of transport whose golden age had already diminished by the early twentieth century, the projection of bicycles into the future—alongside spaceships and interplanetary colonization—gestures toward the bike's futurity. These texts are not stuck in the past; rather, in the face of overwhelming 1950s automobility, they still perceive the bicycle as possessing a "capacity to point forwards and backwards" (Smethurst 153): back to the utopian shimmer with which the bicycle gleamed in the 1890s and forward to a future that, despite the supposed advantages of the car, embraces the bicycle as a useful, elegant, and efficient mode of transport.<sup>14</sup>

**Stealth and Pragmatics in Anderson.** Another sf text published in the 1950s that puts a surprising amount of focus on the bicycle, given the time period, is "A Bicycle Built for Brew," a novelette written by Poul Anderson and published in *Astounding* in 1958 (and subsequently expanded into an Ace Double in 1962 with the title *The Makeshift Rocket*). As the original magazine title suggests, bicycles are in the foreground of this story about Knud Axel Syrup, a Danish engineer who lands on an English asteroid in a decrepit spaceship filled with a cargo of beer. After discovering that the asteroid has been taken over by a group of Irish nationalists, Herr Syrup must then try to find a way to warn the English at nearby New Winchester of the threat of impending invasion. Tom Shippey finds that "A Bicycle Built for Brew" has "a good claim to be the funniest sci-fi story ever written." But according to the preface of a recent edition, "[t]he actual title proposed by Poul Anderson" for this very humorous story "was 'Bicycle'" (Katze "Editor's" 6).<sup>15</sup> Given the fact that bicycles play a less memorable role in this story than its beer-powered spaceship (the eponymous "makeshift rocket" of the Ace Double title), it is striking that the bicycle is foregrounded as much as it is by the title (and even more so by the alternative title of just "Bicycle" proposed by Anderson). But

as with the above discussion of Heinlein's *The Rolling Stones*, the bicycle here does indeed play a vital role in the story as a meaningful and important piece of technology.

The published title of the story, "A Bicycle Built for Brew," puns on the most famous song ever about bicycling: "Daisy Bell" (also known as "A Bicycle Built for Two" due to its memorable refrain: "It won't be a stylish marriage, / I can't afford a carriage, / But you'll look sweet / On the seat of a bicycle built for two"). Composed in 1892 by Harry Dacre, the song was a hit during the "bike boom" of the mid-1890s when many songs about cycling were written.<sup>16</sup> Because Anderson's story early on depicts Herr Syrup riding a bicycle and then later portrays him devising a power source to propel his spaceship from the kegs of beer stowed on board, it might just seem that Anderson couldn't resist connecting those two details by making a clever pun with "A Bicycle Built for Brew" when he thought of it. Knud Axel Syrup's pragmatic use of the bicycle throughout the story, however, and especially the fact that—just when it seems like all hope is lost—the bicycle saves Herr Syrup's plan to warn New Winchester about the Irish militants, points to the serious and weighty value Anderson ascribes to the bike within this funny tale.

After Knud Axel Syrup and the crew of the *Mercury Girl* land on Grendel, they are immediately prohibited from leaving the asteroid, lest they warn the English about the impending attack. At this point, Herr Syrup gets his bicycle out of the ship's storage and uses it for transportation around Grendel. We see him cycle a couple of times to The Alt Heidelberg, the bar run by a Martian named Sarmishkidu von Himmelschmidt, where Syrup develops a plan with Herr von Himmelschmidt and a woman named Emily Croft to warn the British king at New Winchester. More importantly, when at one point Syrup's crewmates try to rebel against the Irish and destroy some of the terraforming machines on Grendel, Syrup uses his bike to accompany the crew and try to talk them out of their foolish mission. After the crewmates are discovered and shot at by machine guns, Herr Syrup "stole from the shadows and began to pedal back the way he came" (29). The well-known stealth and speed of the bicycle allow him to return back to the ship undetected, thus escaping the fate of his friends.

The silence of the bicycle has been one of its most celebrated qualities since the Victorian era. Early advocates of the bicycle such as H.G. Wells boast of the bicycle's quietness (and its usefulness for wartime) in his futurological work known as *Anticipations* (1901) where he envisions the following military scenario: "under the moonlight and the watching balloons there will be swift, noiseless rushes of cycles, precipitate dismounts, and the never-to-be-quite abandoned bayonet will play its part" (111). Closer to Anderson's own time, the stealth of the bicycle was often noted during World War II. For example, Japanese soldiers famously captured Singapore from the British in a surprise attack that relied on a "blitzkrieg of bicycles," and French and Dutch resistance fighters often made use of bicycles for their clandestine missions against the Nazis.<sup>17</sup> Thus, although spaceships and automobiles obviously offer certain advantages and technological superiorities, Anderson's

story highlights the bicycle as remaining unmatched in this futuristic world because of its speedy silence. As we see in retrofuturism, “A Bicycle Built for Brew” goes back to go forward. It looks back to Wells’s *fin-de-siècle* and pre-World War II eras to project into the future the practical value of the bicycle.

Of course, the Danish-American author Poul Anderson and his Danish character Axel von Syrup are likely drawing upon in their respective uses of the bicycle the well-known devotion in Denmark to cycling. During the postwar years, northern European nations such as The Netherlands and Denmark (and unlike the United States) enhanced their material infrastructures, legal systems, and cultural values in ways that embraced cycling, leading them to become the world-renowned cycling meccas they are today.<sup>18</sup> As Carstensen and her collaborators point out, even when the Danish capital of Copenhagen (like nearly every other American and European city) was being inundated by unprecedented numbers of automobiles in the 1950s—causing rates of everyday cycling to decline during the postwar years—there was still “considerable growth” (“Spatio-temporal” 146) of new cycling paths in the city during those same years. “Bicycling infrastructure [in Copenhagen],” they write, “was built continuously during periods of distinct urban transformation” (153) and the many urban changes necessitated by the postwar surge in car ownership.

In his story, Anderson makes a humorously exaggerated claim about this deep connection between Danish society and cycling. When Herr Syrup brings his bike on board the ship before they head into space to warn New Winchester, Anderson tells us that Herr Syrup “took his bicycle by the seat bar and dragged it up into the ship. No Dane is ever quite himself without a bicycle, though it is not true that all of them sleep with their machines. Fewer than ten per cent do this” (39). Just as Danish society was not ready to completely abandon the bicycle in favor of the car as 1950s American society did, Axel von Syrup is not ready to abandon his bicycle even when heading into space. Unlike much sf, it is clear that “A Bicycle Built for Brew” does not celebrate those who adopt the most recent, cutting-edge technologies; rather, it is Syrup and his team, people associated with the clever and resourceful use of “low tech” objects like bicycles and beer, who emerge victorious in this tale.

To emphasize a point made in the discussion of *The Rolling Stones*, this valorization of more primitive technologies and the marginalization of more complex technologies is a recurring theme in the sf genre. For example, in an early pulp story “The Conquest of Gola” (1931), Leslie F. Stone portrays her “alien” Golan (i.e., Venusian) women as rejecting the construction of spaceships and travel to other planets, despite being capable of doing both. When Detaxalan (i.e., Earthling) men invade their planet, the Golans can only see the former’s invasive spaceships as “playthings” given to them by their mothers, as the Golans themselves “give toys to [their] ‘little ones’” (41). And although the Detaxalans possess such sophisticated technology, the Golans thoroughly defeat the human men in the end largely by means of mental, non-technological powers. Similarly, in *The Left Hand of Darkness* (1969), Ursula K. Le Guin shows her native Gethenians as preferring slow vehicles and (like

Stone's Golans) as being wholly uninterested in spaceship technology. "Gethenians could make their vehicles go faster, but they do not," Le Guin writes. "If asked why not, they answer 'Why?'" (50). Later, when the character Genly Ai suggests that Gethen might have spaceships of its own one day, a Gethenian character can only respond "in disgust and amusement" with "'You want *us* to go shooting off into the Void? Ugh!'" (139; emphasis in the original). As in the texts by Heinlein and Anderson, these sf stories extol more rudimentary forms of technology that are shown to be more benign, effective, and fulfilling than their excessively complex counterparts.

To return to "A Bicycle Built for Brew," the reason Herr Syrup insists on bringing the bicycle on board is (he tells us in his thick Danish accent) so that, if the batteries that allow the beer-powered spaceship to function "get too weak, we can resharshe dem" by pedaling the bike while it is "hooked to a simple homemade g'enerator" (55). And that is exactly what happens. The batteries do indeed run down and have to be recharged. Herr Syrup hops into the saddle and begins pedaling away while grumbling that "de vorst of it is ... who is ever going to believe I crossed [outer space] from Grendel to New Winchester on a bicycle?" (64). Similar to Heinlein's *The Rolling Stones*, Anderson's narrative recovers the lost significance of the bicycle as a pragmatic machine capable of aiding one's work. Furthermore, it is the bicycle, rather than that other slightly more impressive piece of technology—the "first beer-powered spaceship in history" (54)—that "A Bicycle Built for Brew" ultimately foregrounds as the savior allowing the plucky crew to reach New Winchester and to succeed in their mission.

Hence, there is an appropriateness to the prominence of the bike in the story's title, despite this novelette likely being more often remembered by readers for its eccentric and newfangled depiction of a ship propelled by kegs of beer. Shippey believes that "[m]ost important" for the success of Syrup's attempt to "raise the alarm, with spaceship and radio decommissioned" is that "part of his cargo consists of large barrels of beer." "A Bicycle Built For Brew," however, portrays the bicycle as doing the vital work not only of facilitating Knud Axel Syrup's movement around Grendel and his mission planning with Herr von Himmelschmidt and Emily Croft, but also of saving Herr Syrup from the incarceration that his crewmates are subjected to, and finally of rescuing the *Mercury Girl* in its dire moment of having lost power. Anderson's original idea for a title—simply "Bicycle"—seems quite fitting, since Herr Syrup's bike is clearly the most important object for his success in the narrative.

**Metallic Vitality in Davidson.** A text that deviates from the pattern used in Anderson's and Heinlein's works—because it depicts the bicycle in a way that departs from the benevolent images of bikes created by those other two writers, and because it takes place in the present day as opposed to a futuristic setting—is Avram Davidson's Hugo Award-winning story "Or All the Seas with Oysters," published in a 1958 issue of *Galaxy* magazine. The story revolves around the characters Ferd and Oscar, co-owners and operators of the

F&O Bike Shop, and their debates about the aliens who may or may not be hiding in their midst. Drawing upon the biological concept of mimicry, Ferd at one point in the story arrives at a theory that safety pins and coat hangers might actually be the pupa and larval forms of an alien species that, in its mature phase, then morphs into bicycles.

Even though the story suggests that some (or most) bikes are aliens using mimicry, the story's bicycles always function, at least in part, as signifiers of literal bikes. And despite the villainizing of the bicycle, I would argue that the story actually functions as a positive depiction of the bicycle, particularly in the 1950s. That is, through its representation of bikes as powerful entities, "Or All the Seas with Oysters" obliquely challenges the prevalent notion of the mid-twentieth century that bikes are the useless low-tech detritus of the past. In this alternative history of sorts, the bicycle is not relegated to a mere plaything for children or, at most, to part of the adult world only as an exploited resource for Ferd and Oscar's "big trade in renting bicycles to picknickers" (50). Instead, bicycles are portrayed as machines that must be reckoned with: one ignores them at one's peril.

The story's reference to bicycles as sentient machines destabilizes our established notions of living/nonliving and organic/inorganic dichotomies. As mentioned, Ferd conjectures at one point in the story that aliens are using mimicry in their imitations of safety pins, coat hangers, and bicycles. And after smashing up a red French racer one night in a rage, only to find the bicycle the next morning miraculously repaired, Ferd surmises the aliens are capable of something akin to biological regeneration as well. Skeptical of such a suggestion, Oscar asserts that, unlike newts or lobsters that are capable of regeneration, a "bike ain't [alive]" (54). Further pushing his subversion of the living/nonliving dichotomy, Ferd counters Oscar's claim by saying a "crystal isn't [alive], either, but a broken crystal can regenerate itself if the conditions are right" (54).

Ferd's suggestion that crystals and metallic bikes might be alive looks ahead to and parallels recent work done in the field of material ecocriticism and new materialism. One of the field's primary theorists, Jane Bennett, argues for a perception of nonorganic matter as possessing "vitality," which Bennett defines as "the capacity of things—edibles, commodities, storms, metals—not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own" (viii). Addressing the materiality of metal in particular, Bennett invokes the postmodern philosophers Deleuze and Guattari and their perception that metal is the "exemplar of a vibrant materiality," (55) for a "metallic *vitality*, a (impersonal) life, can be seen in the quivering of free atoms at the edges between the grains of the polycrystalline edifice" (59; emphasis in original) of which metal is composed. Related to Ferd's explicit mention of the liveliness of crystals, Jeffrey Jerome Cohen—in his new materialist analysis of stone—reminds us that the "lithic has for too long served as an allegory for nature stilled into resources," whereas many of the (often medieval) texts Cohen focuses on instead render stone as "ecologies-in-motion ... that offer

alternative visions in which a gem of cold gleam touched by water explodes in sudden storm, or a rock that calls out to be held burns the hand that grasps its heft" (10). Thus, whatever the possibly nefarious reasons the aliens-as-bicycles have for being on Earth, "Or All the Seas with Oysters" deploys a striking vision of bikes—a vision unlike what we saw in Heinlein or Anderson and one more akin to the stones in Cohen's study—as crackling with life, with becoming, with agency, and not at all as entities that have been chastened into submissive stillness by the world around them.

This emphasis on the liveliness of bicycles finds its parallel in some more recent science fiction such as the stories "A Short History of the Bicycle: 401 B.C. to 2677 A.D." (1980) by Michael Bishop and "To See the Stars from the Other Side" (2013) by Jessie Kwak (from volume one of the *Bikes in Space* series mentioned in this essay's introduction). "A Short History" focuses on a xenobiologist—an investigator of extraterrestrial life forms—named Praeger who is stationed on a planet named Draisienne (named after the first ever incarnation of the bicycle, the draisine, invented in 1817 by Karl Drais of Germany). Draisienne is a planet where "several different species" of "organic bicycles" (101) dominate the fauna. Bishop's story shows us these living bicycles frolicking around the landscape, even flying across its skies in the case of the "pterocycles" that "soared on Draisienne's winds" (102). Similarly, Kwak's "To See the Stars from the Other Side" portrays bicycles as animate and lively machines as well, even asserting at one point that they have distinct personalities. Furthermore, the interrogation in Kwak's story of a bicycle's carbon fiber parts as being living or nonliving resembles Ferd's provocative suggestion in Davidson's story that crystals—and, by extension, the bicycles in that story—blur the distinction between life and nonlife. This emphasis on the bicycle's liveliness in these stories challenges the popular notion of bicycles as the passive relics of a bygone era. Instead, they portray the bicycle as a vigorous entity, and not at all the inert object that so many people commonly think of the bicycle as or that popular culture so often depicts it as.

By the end of Davidson's story, Ferd has been violently thrown off the French racer bicycle and then eventually killed by "an unraveled coat hanger coiled tightly around his neck" (58). The suggestion here appears to be that the alien species, including its bicycle-form, deems Ferd a threat because he knows too much, and therefore he must be killed by the coat hanger before he can act on his sense of urgency that "mankind had to be warned" (58) about these lurking aliens. When a man named Mr. Whatney visits the bike shop after Ferd's untimely death, he asks Oscar "what's become of the French racer" that Ferd was thrown from and had destroyed only to find it regenerated the next morning. Oscar replies that "I put *him* out to stud!" (58; emphasis in original), a reference to Oscar's apparent cross-breeding of bicycles by the story's end in order to sell them in his shop. Oscar's comment implies some sort of reproductive control he now supposedly has over the alien bikes.

I would argue, however, that Davidson's suggestion here is that Oscar is being dishonest and that the bicycle has escaped from the shop, and thus from Oscar's control. When Mr. Whatney inquires into the whereabouts of the

French racer, Oscar's face is described as "twitch[ing]" and growing "bland" (58): that is, his face is registering some clear uneasiness surrounding the topic of exactly what has happened to the now vanished French bike. Such details do not suggest that Oscar possesses mastery over the bike but, rather, that the bicycle holds a mastery over itself. Thus, in the spirit of the new material ecocriticism, the "idea of the human agent" always being the one that "act[s] upon the world ... is refuted" (Iovino and Oppermann 465). In this case, the human agency is seemingly refuted by the bicycle's agency: its killing of Ferd and its apparent escape from the F&O shop and from Oscar's reproductive designs for it. It would seem to be an example of this "new understanding of agency" offered up by material ecocriticism, where "human and nonhuman elements coalesce in producing action" (Iovino and Oppermann 464). By story's end, the bicycle appears to be free of a controlling human presence; it is somewhere out there in the world, growing, plotting, breeding.

In fact, "Or All the Seas with Oysters" abounds with references to not only the fertility of machines like bicycles but also with references to sex and reproduction in general, such as Oscar's sexual encounters with female customers. The title of the story suggests ideas of wanton, runaway reproduction. Ever the skeptic of Ferd's theories, Oscar at one point asks his partner why, if the bikes are a reproducing alien species, "we ain't up to our belly-button in bikes?" (57). Ferd, referencing the idea that nature is extravagantly wasteful, reminds Oscar that "[i]f every codfish egg ... or every oyster spawn grew to maturity, a man could walk across the ocean on the backs of all codfish or oysters there'd be" (57). Similarly, the story, rather than portraying the bicycle as an invention of the nineteenth century that in its obsolescence is now sterile and barren, instead shows the bike as a wildly fecund piece of technology, given the opportunity.

And yet, we cannot walk across the ocean on the backs of codfish or oysters, and we are not up to our belly-buttons in bicycles, because (as Ferd reminds Oscar): "So many died, so many were eaten by predatory creatures" (57). This line raises the ominous specter of what exactly is culling the numbers of the alien bicycles in the world of the story. The text withholds any hints about what that predator may in fact be, but in the era of the 1950s we know well enough what preyed on the bicycle: cars and car culture. Not only were automobiles literally hitting and destroying bikes (and killing or injuring their riders), but also the suburbanization of our communities, the juvenilization of bikes, and the fetishization of the car itself were keeping the bicycle's numbers from growing. "Or All the Seas with Oysters" parabolizes, then, the potential of the bicycle to flourish and become a robust mode of transport—if only "invisible" predators such as a pervasive automobility were not preying upon and diminishing their numbers.

**The Ethical Stakes of the Bicycle.** As suggested in the opening of this essay, these texts' promotion of the bicycle form an important bridge between the advocacy of the bike in many of Wells's scientific romances at the dawn of modern sf and the championing of the bike in more recent sf such as the

cyberpunk works of Gibson and Sterling, the environmental sf of Callenbach and Robinson, and the dystopias of Butler. All three of the works discussed above demonstrate that there was a clear resistance in some works of sf to the values of automobility that were becoming hegemonic in the 1950s. In place of the dismissal and/or trivialization of the bicycle that was customary in so many texts of this decade, these sf narratives belittle (or wholly ignore) the car instead. That is, these narratives contribute to a frequent skepticism in sf of overly sophisticated machines and other technologies that often degrade rather than improve our societies. There is clearly something at stake in this reversal of the normal hierarchy. The bicycle—then as well as now—embodies a radically different set of ethical commitments from those associated with the car. By forcing people who rely heavily on bikes for their mobility to live more localized lives, this machine resists the unimpeded growth of non-urban residential communities—particularly the new suburbs of the 1950s—that transportation technologies like the car often foster. Instead, the bicycle contributes to living spaces that are denser, livelier, and ultimately safer. As a character in H.G. Wells's 1905 social comedy *Kipps* declares: "God gives [rich people] a gift like the motor-car, and all they can do with it is go careering about the roads ... killing children and making machinery hateful to the soul of man" (232-33).

Additionally, the bicycle contributes to greater social equality, given that the poor and people of color are often stranded at the margins of large, dispersed cities without cars and without effective public transportation. In terms of environmental sustainability within the transportation sector (which includes road, rail, sea, and air), road vehicles in particular have been estimated to emit "75-80% of all CO<sub>2</sub> emissions from transport" (Uherek et al. 4773). In other words, the bicycle is a transportation technology that is "emblematic of a sustainable future" (Horton 53), one that contrasts sharply with the car's contribution to the growing environmental crises such as air quality deterioration and global climate change.

Finally, these three sf works by Heinlein, Anderson, and Davidson stand as powerful subversions of the automobility of their time and the problematic values it embodied. We can, therefore, usefully read these sf stories from the 1950s in our own twenty-first century as a stepping-stone for rethinking our own over-infatuation with the latest technology—the latest car, the latest smart phone—just because it is new and just because it is (ostensibly) more sophisticated. In the context of transportation, such a love affair with the new threatens to lead us down a dark path towards a less just, less healthy, less sustainable future. But as these texts show in their depictions of the bicycle, we can also go back to the old to arrive at the new; we can also go back to the past to arrive at the future. And we may hope that future is a more utopian one in which (as this essay's epigraph by Wells declares) "cycle tracks will abound."

## NOTES

1. On pre-19th-century predecessors to sf, see Gunn and Roberts 21-31. On Wells and bicycles, see Withers.

2. See Stover's notes in Wells, *Time Machine*, 40 (footnote 31), 55 (footnote 60).

3. For a discussion of bikes and women, see Smethurst 88-96. Smethurst does an admirable job of pointing out that the bicycle's associations with gender emancipation is largely a Western phenomenon. On bikes and women in Asia and Africa, see Smethurst 130-32.

4. On these more recent manifestations of bikes in sf film, television, and comics, see Weldon.

5. On Russell supposedly being Campbell's favorite, see Foster ix.

6. The story was originally published in vol. 47, no. 4 (June 1951) of *Astounding Science Fiction* where it was featured on the cover. Significantly, the cover art prominently included Harrison's bike.

7. On sf's fascination with machines, see the essays in Dunn and Erlich, as well as the "List of Works Useful for the Study of Machines in Science Fiction" at the end of that collection.

8. On the "boom" years, see Herlihy 251-82.

9. On bicycles being increasingly marketed to children (and differences between America and Europe in terms of a decreasing use of bikes by adults in the early- to mid-20th century as, at least in part, a consequence of this juvenilization), see Longhurst 108-18, 128-29, 152-56, 165-74; Herlihy 325-30; Dodge 174-85.

10. On the intermingling of cars and early rock 'n roll music, see Heining and Widmer.

11. For more on relative autonomy, see Rosenthal.

12. Petty's essay, in general, is about Schwinn's transition to marketing to children after World War II as a way to outsell its primary rival, Raleigh.

13. Notable examples here include the steampunk classic *The Difference Engine* (1990) by William Gibson and Bruce Sterling (which anachronistically depicts a Victorian-era England that has embraced mass-produced computers), the alternative history classic *The Man in the High Castle* (1962) by Philip K. Dick (which portrays the Axis Powers as having won World War II), and the neomedieval *A Canticle for Leibowitz* (1960) by Walter M. Miller Jr. (which depicts a post-apocalyptic world that has reverted to one where Catholic monasteries once again preserve knowledge).

14. The use of the word "utopian" here might sound extravagant, but some cycling historians argue that the bicycle was seen in just such a light. For example, one scholar writes: "late nineteenth-century Americans looked upon the bicycle as an almost utopian instrument. The possibilities of the bicycle and the cycling city appeared limitless" (Friss 3).

15. Katze writes elsewhere: "The source [of this alternative title] was either Karen Anderson, Poul's wife, or Astrid Anderson Bear, Poul's daughter. I've had conversations with both so while I'm not entirely sure, it is more likely that it was Astrid" ("Re: 'A Bicycle Built for Brew'").

16. The song "Daisy Bell" has had some additional intersections with science and sf after Anderson's story was published. In 1961, an IBM computer at Bells Lab was programmed to "sing" the song "Daisy Bell" in the earliest demonstration of computer speech synthesis. After witnessing the demonstration, famed sf author Arthur C. Clarke referenced the event in *2001: A Space Odyssey*, his 1968 novel and subsequent film

script (co-written with Stanley Kubrick), in which the malevolent computer HAL sings "Daisy Bell" during its deactivation.

17. See Fitzpatrick 144-53 (invasion of Singapore), 158-64 (use by the Resistance).

18. Copenhagen, along with Amsterdam, currently has some of the highest cycling rates and some of the most extensive bike infrastructure in the world. The continuing influence of Copenhagen on cycling can be glimpsed in terms such as "Copenhagenize" often associated with people such as Jan Gehl, an urban planner who has helped bring Copenhagen's sense of urban design that privileges bikes to cities such as New York, London, and Sydney. For more on Gehl and "Copenhagenization," see McGrane.

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#### ABSTRACT

This essay focuses on several works of science fiction from the 1950s that function as counter-narratives to the hegemony of the automobile during this decade and to the accompanying dismissive perceptions of the bicycle. In its analysis of a novel by Robert A. Heinlein (*The Rolling Stones*, 1952), a novella by Poul Anderson ("A Bicycle Built for Brew," 1958), and a short story by Avram Davidson ("Or All the Seas with Oysters," 1958), it asserts that some of the leading figures in Golden Age sf were not content to relegate bicycles to the status of a technological obsolescence fit only for children. Instead, they chose to portray bicycles as useful, potent, and agentic—images that counter the prevailing ideology of "automobility" that was crystallizing with such durability in postwar America.