INTRODUCTION
In February of 2001, the New York Knicks’ volatile shooting guard, Latrell “Spree” Sprewell (who had, several years earlier, lost more than six million dollars and his position with the Golden State Warriors after repeatedly assaulting the team’s coach in the course of a dispute at practice), appeared on the MTV lifestyle program *Cribs*. There, he briefly mugged before a customized sport vehicle outfitted with an unusual accessory: a highly polished hubcap device on each wheel had been mounted in such a way as to spin freely, like a pinwheel rosette of steel. As a result, when the car began to roll, its shiny wheels initially seemed not to turn at all. Then, as the automobile picked up speed, the bling rims began, slowly, to rotate—gradually coming into sync with the motion of the vehicle itself (the roller bearings that permitted each hubcap-pinwheel to turn on its own were not, of course, perfectly frictionless, so the rotational force of the actual underlying wheel progressively overcame the inertia of its showy doppelganger). Finally, when the vehicle came to a stop, its four wheels appeared, disconcertingly, to continue spinning. Glinting metal rolled on flashily in the middle of each stationary tire.

For reasons that remain to be fully understood, this fleeting moment of celebrity exposure occasioned a veritable explosion of public comment on, and commercial interest in, this technology—hitherto known as “spinner” wheels (or just “spinners”) among a circumscribed coterie of hot rod aficionados, they were thenceforth universally dubbed “Sprewells.” Before the spasmodic swell of cultish enthusiasm receded, the devices had made appearances on countless lowriders and tricked-out funny cars, in addition to sneakers, wheelchairs, hats, belts, roller skates, and other unlikely knickknacks. Lyrical encomia proliferated—often truculent, sometimes pimpishly self-regarding; not infrequently, both. Properly pornographic cameos followed, and then, in train: fretting lawmakers; patent infringement cases; a long, spinning fall from grace; jets of caustic satire here and there; and, finally, something like oblivion.

Let us put this fetching cultural history aside. There is work to do in that arena, but I leave it to others. It is my contention here that these devices—which represent, I believe, a significant moment in the history of wheels—merit closer critical/analytic attention than they have yet received.

MECHANICAL GENEALOGY
Where did Sprewells come from? The question has been hotly disputed, not least because it lies at the crux of an intellectual property dispute between James D. Gragg, a Tulsa-based tinkerer who in 1994 patented a mechanism for “rotatably mounting” a “wheel-enhancing apparatus” on an automobile, and one David Fowlkes (of Devon,
Pennsylvania), who by 2003 had secured a considerably more specific patent for a “Wheel Spinner Assembly Independently Rotatable Relative to a Corresponding Wheel.” Unfortunately, disproportionate attention to this legal tiff has impeded deeper investigation of the origins and evolution of this notable technology.

A proper retracing of the historical roots of the Sprewell requires that we turn from a mincing obsession with precedence in the design of free-spinning custom rims per se, and refocus on the core issue at stake in the semiotics and phenomenology of these wheels: namely the décollage—literally, the un-gluing—of what I want to call “spin” (on the one hand) and “radiality” (on the other). It is central to the experience, and, I will argue, the meaning, of these devices that they effect a fundamental disruption in the coherence and integrity of rotation. In one sense, this is obvious. The tire-wheel and the (apparent) hub-wheel are manifestly de-linked in a Sprewell—this accounts for the charisma of the device, its defiance of our expectations. And yet, have we come to terms with the larger import of this disjunction? I believe we have not.

Setting to this task requires that we sift down and excavate the history of this “ungluing” of the actual orientation of rotation (spin) from the radial indexing of rotation (radiality). Doing so, interestingly, takes us much farther back, chronologically speaking, than we might have expected, and moves us from flashy pinwheeling to, perhaps counterintuitively, technologies of radical stability.

The Urtext in this stemma, as best I have been able to determine, is US patent 1,432,274: E. F. Braucher’s ingenious 1922 design for a “disk that is pivotally connected to the hub [of an automobile wheel] and counterweighted so that it will remain stationary while the wheel rotates.” What we confront in this early specimen of ornamental wheel customization is a primitive version of what would eventually be known as the “floater” hubcap: to wit, a hubcap that does not rotate under any circumstances. Historians of technology will here recognize that familiar burlesque of Whig-logic: what one initially took for a “progressive” technological evolution (e.g., the Sprewell as a sparkly “innovation” on the cusp of the new millennium) turns out, in fact, to be better understood as a technological devolution (Sprewells are, it turns out, deponent floaters; they are floaters from which the ballasting counterweights have been removed).

As far as I am aware, the full history of the floater remains to be written, but even a cursory review of the technical literature places in evidence that a prime impetus to the development of such systems was, in fact, not “mere” adornment, but rather safety. So, for instance, we have patent 1,955,735, “Cheatham’s Safety Hub Cap” of 1934, which is very precisely a floater (indeed, the design arguably infringes on Braucher), whose inventor states clearly:

My invention ... has for its object to provide a hub cap which tends to protect the hub, wheel, and car against damage when striking other objects, and, by having a rotatable convex protector, to decrease liability to interlock with or injure objects it strikes. (emphasis added)

Limitations of space oblige me to move quickly here, so I will not belabor the point: it is widely known that the ignominious endgame of the Sprewell craze included a significant legal backlash spearheaded by citizen-groups and elected officials who believed that free-spinning rims and hubcaps—on account of their disorienting capacity to articulate motion-in-stasis/stasis-in-motion—actually imperiled public welfare. Thus, in view of the surprising origin of the technology in the safety hub, we find ourselves in the heartland of an important and often overlooked general dialectical principle of sociotechnical change: every threat unfolds as the evolution of a prophylactic aspiration.

I propose that this problematic be known, henceforth, as “the Sprewell Principle.”

SEMIOTIC TRAJECTORY

I have, perhaps, fibbed—or better, slightly misled—since to this point I have elided another very significant strain or refrain in the process of décollage between spin and radiality. Yes, the insulation of the rotation—its protection from harm in the world; protection of the world from its harms—was obviously a major driver of this dynamic. But so, too, was a pervasive and perhaps predictable preoccupation with legibility—a manifest concern for how the spinning wheel might be made readable, might, indeed, be read.

And at this point it will be appropriate to return to E. F. Braucher’s original patent for what I have called the very first floater-style hubcap. What purpose was this device designed to serve back in 1922? Not safety, which receives no mention in the specification. Not aesthetics, which are similarly disregarded (this despite the fact that much would later be made of the “stanelness” of floaters, the mannered immobility of which bespeaks an imperturbable dignity; Rolls Royce, it should be

opposite: Eleven spinners and one floater made by MHT Luxury Alloys. Can you spot the difference?
noted, experimented with their use on its Phantom
series). No, the function of Braucher’s wheel-device was
ultimately *semiotic*. As Braucher himself put it:

*The counter-weight [3] prevents the disk from rotat-
ing*, with the result that the printing thereon can be read
when the machine is moving, as well as when it is stand-
ing still. (emphasis added)

Yes, it is true: US patent 1,432,274 was awarded for an
“Advertising Disk for Automobile Wheels.”

Lest it be thought that I have cherry-picked from
the archive, let me hasten to gesture at a robust lin-
eage of such wheel-mechanisms, all of which were
designed, through various contrivances, to *stabilize legible writing in the middle of spinning wheels*. I am
alluding to, inter alia, Arthur Ryan’s postwar (1948) dis-
play hubcap, in which

*The advertising message displayed on the sign-carry-
ing member is maintained in a readable position at all
times during vehicle movement, and a striking visual
effect is created by virtue of the fact that the rotating
wheel of the vehicle is concealed from view behind the
sign-carrying member, and the tire on said wheel is
made to appear as if it were spinning orbitally around
the sign-carrying member.*

The “striking visual effect” cited here is, naturally,
the experience of static legibility in the context of a
larger overall motile dynamism. This catnip conjunction
promised to seize the attention of a bystander and then,
crucially, *center* his/her roving gaze on what amounted
to an expanded “axis” of rotation—where a commercial
message or, more often, a consumer logo/icon might
be found. In view of the immovable axis of a spinning
wheel having served immemorially as a trope for the
god-position, it will be appreciated that the center of a
spinner hubcap offered privileged real estate in the secul-
ar cosmology of vehicular modernity.

All of which is to say, any interpretation of the fun-
damental disjuncture between spin and radiality must
go beyond our first-order analysis (concerning a sub-
strate anxiety about the damage wheels can do/suffer).
Ultimately, the desynchronous deconstruction of the
wheel must be understood semiotically: we are talking
about signs, signing, and, indeed, *signage*.

This observation positions us to rearticulate the
crucial hermeneutic (as opposed to mechanical) distinc-
tion between the floater and the spinner. To do so, let us
take up the text of David Fowlkes’s 2003 patent for the
modern Sprewell. There we find both a very sensitive
discussion of the “aesthetically pleasant visual effects
that may occur if the spinner were to rotate at a different
speed relative to the wheel speed,” and, more particu-
larly, a stunningly specific allusion to the “pleasant blur”
that is experienced by those who regard the spinning
spokes of any wire wheel or radial hubcap. This direct
invocation of blur aesthetics (the aesthetics of visual
imprecision, smear, smudge, *bokeh*, etc.) in the context
of the invention of spinner-rims speaks volumes—since
it is exactly blur that is at issue.

That which is blurred is illegible, inscrutable, form-
less: blur is a solvent—*the* solvent—of all articulations.
Hence, the “pleasures” of blurring are the pleasures of
a sensuous release into suspended indeterminacy. And
every spinning wheel conveys some fleeting impression
of blur. By these lights, the floater hubcap comes clearly
into focus as an *Apollonian revenge upon the condi-
tion of the wheel*: through the agency of the floater, the
wheel is stripped of blur, and reconfigured as a vehicle
for text, signs, and stable images.

By contrast, the “outlawry” of the Sprewell, its pal-
pably counter-normative mood, inheres precisely in its
*unleashing of blur*. And by this I mean something specific:
the decoupling of spin and radiality actually liberates
blur from the last tenuous threads that bind it to stabiliz-
ing signification (in an ordinary spinning wheel, whirling
blur can at least be understood to indicate the rotation
of the wheel itself; not so, if that wheel is equipped with
a spinner). Blur thusly “off the chain”—DJ Paul’s telling
description of his spinner rims—is blur rampant, blur
loosed to move in the world on a Corybantic mission of
breaking down (“they spinnin’ like a saw so don’t touch
’em,” as Lord Infamous notes), grinding together (Juicy
J refers to spinners as “spinmills”), and generally dis-
solving the boundaries of forms and persons (e.g., Lil’
Flip’s “smokin’ trees,” “pokin’ freaks,” etc.).

The blur of a Sprewell spins free, a bright vortex of go-anywhere
instability.

From the floater to the spinner, we have very
definitely crossed a watershed separating the plea-
sures of Apollo from those of Dionysus: we have rolled
from the *pleasure of sign-reading* to the *pleasure of
not-sign-reading*.

The vehicle in which to take this ride is equipped
with Sprewells.

**PHENOMENOLOGY OF PERCEPTION**

In 1828, the Belgian mathematician Joseph Plateau
published a brief notice in volume four of Quetelet’s
*Correspondance mathématique et physique* concern-
ing a striking optical illusion. In the course of setting
up one of his early experiments in sensory physiology. Plateau chanced to notice that a spinning wheel, seen through another spinning wheel, could, under certain conditions, give the appearance of a wheel standing still. Varying speeds and arrangements produced a host of other peculiar visual effects. Michael Faraday, working in England, arrived independently at the same phenomenon and published a longer analysis of such interference effects a few years later.9

These texts mark the beginning of technical work on what has come to be called the "Wagon Wheel Illusion." The modern designation refers, of course, to the paradigmatic instance: as a stagecoach is coming to a stop in an old Western, the whirling spokes of the wheels frequently appear, temporarily, to come out of sync with the movement of the vehicle—sometimes passing through an interval of apparent retrogression, or even seeming to stop, momentarily, as the wagon still rolls. This is a stroboscopic illusion, caused by what is known in the sciences of information processing as "temporal aliasing." To put it simply, the effect is the result of phasic interference between the shutter of the movie camera and the movement of the wheel itself. The motion of the wheel is, in life, smooth and continuous; what one is seeing in the cinema, however, is a series of discrete frames which sampled the real world situation at specific intervals determined by the setting of the camera. If the camera happened to sample the scene repeatedly at the very moment when the spokes of the wheel were all configured in exactly the same position, then in the movie the wheel will look as if it is standing still, regardless of what else is going on in the scene (so the world can roll by, and the wagon can clearly be moving, but the wheel won’t budge, rotationally speaking). Similarly, if the camera sampled the scene in such a way as to capture the spokes in a series of images that the eye reads as reverse motion, then that is what one sees.9

Now note the following exchange about the phenomenon, which troubled early cinema audiences. I quote from the "Letters" column of the Times-Picayune of New Orleans on 18 November 1917:

While viewing a motion picture recently I saw an automobile on which the wheels seemed to be turning backwards. Could a wheel be built to do this, or was it a defect in the photography? —R.S.

While it would be possible to have the wheel turn one way and a disk with painted spokes on it turn the opposite direction, it would only be used in comic pictures.

What you saw frequently occurs when the wheels are turning at a certain speed relative to the speed at which the camera is operated. (emphasis added) —W.H.S.

It is a striking moment in the history of wheel-trouble, placing in evidence, as it does, not only that the technical history of the Wagon Wheel Illusion obviously merits close attention in any effort to come to grips with the modern decoupling of spin and radiality, but also that the Wagon Wheel Illusion is actually inextricable from the narrow history of the "spinner" hubcap itself.

The theatrical bravura of the Sprewell, its air of trickster-menace—all this, one suddenly appreciates, can be felt to participate in a rich history of optical illusion, cinematic vertigo, and (given the durable link between the Wagon Wheel Illusion and the genre of the Western) even Wild West gun slingin. And so, when DJ Paul suddenly makes it known that his Sprewells are “clear like flat-screen plasma,” the unexpected allusion must be understood to signal the close ties between free-spinning rims and the technologies of the moving image, while simultaneously providing a troubling reminder of the there/not-there conundrum at the heart of cinema.

Upshot: a Sprewell in action is perhaps best understood as the spinning shutter of a movie camera chopping the world into a ribbon of instantaneous stills. Or is it the shutter of a rolling projector?

CONCLUSION
Those tempted to reserve their assent to some or all of the foregoing should not do so before spending some moments with the uncanny ten pages that comprise the specification and diagrams of US patent 7,726,746 B2, "Hubcap Having Lighted Spinning Element," awarded on 1 June 2010. This document (or more properly the device it describes) quite effectively epitomizes the analysis I have attempted in these pages. The mechanism itself is simple enough: imagine a hubcap configured as a translucent screen; behind it we find a “spinner member,” which consists of several radial arms along each of which has been fixed a row of bright LEDs. A small, programmable microprocessor can precisely time the illumination of these LEDs in any desired sequence and pattern; an optical sensor regulates rotational speed.9

With such a device installed, there is no visual phenomenon—no display of text or information, no pattern of apparent spoke behavior (retrograde, stationary, etc.), no still or moving image—that could not, in principle, be generated as a wheel-show. Indeed, if a small camera were added to the system, it would theoretically be possible to turn the wheels into mirrors of the surrounding
world, or to film what was passing behind them and project that in real time, effectively “erasing” the wheels themselves through a form of real-time cinematic camouflage.

The only remaining question, it seems, is whether such a device should be understood definitively to embody or definitively to resolve what I have identified as the dialectical destabilization of the wheel across the last century. It seems to me that the only possible answer is: yes.


2 Momentum on bans in several states (most prominently Virginia, New York, and Iowa) picked up in 2004.


5 See, for instance, the great exposition of what we might call the “cosmology of axial Providence” in book 4, prose 6, of Boethius, The Consolation of Philosophy. In Victor Watts’s translation: “In the same way whatever moves any distance from the primary intelligence becomes enmeshed in ever stronger chains of Fate, and everything is freer from Fate the closer it seeks the centre of things. And if it cleaves to the steadfast mind of God, it is free from movement and so escapes the necessity imposed by Fate. The relationship between the ever-changing course of Fate and the stable simplicity of Providence is like that between reasoning and understanding, between that which is coming into being and that which is, between time and eternity, or between the moving circle and the still point in the middle.” But for an animadversion on this construal, consider: Noel Harold Kaylor, Jr., “Euclid in Boethius’s ‘De Consolatio Philosophiae’ and Some of Its English translations,” Fifteenth-Century Studies, vol. 35 (2010), pp. 70–79.

6 The cited allusions here and below hail from the 2003 single “Ridin’ Spinners” by the Memphis-based hip-hop ensemble Three 6 Mafia.


8 Similar phenomena can be generated by other stroboscopic conditions, including flashing lights, ordinary AC illumination (alternating current has an inherent phasic oscillation), and even mechanical vibrations (including humming—see William Rushton, “The Effect of Humming on Vision,” Nature, vol. 216 [23 December 1967], pp. 1173–1175). When heavy rotary machinery is in use, AC lighting should be modulated to avoid dangerous illusions. There is also a form of the Wagon Wheel Illusion that can be experienced under normal light conditions. The explanation for this phenomenon is currently the subject of an active debate in neuroscience. For an introduction, see Tim Andrews and Dale Purves, “The Wagon Wheel Illusion in Continuous Light,” Trends in Cognitive Science, vol. 9, no. 6 (2005), pp. 261–263.

9 I was surprised to discover that the automotive enthusiast and essayist Patrick Bedard in fact described a very similar stroboscopic wheel device (apparently satirically—he dubbed it the “Bedardatron”) in his column in Car and Driver in June 1982.