

SPECIAL SECTION: DEGENDERING THE DRIVER

Introduction

Autonomous Driving and the Transformation of Car Cultures

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Abstract

This special section on “Degendering the Driver” explores how gender intervenes in the potential shift from a driver-centered to a driverless car culture. It focuses on representations of imagined futures—prototypes, media images, and popular discourses of driverless cars. Following the tradition of feminist cultural studies of technoscience, we ask in our introduction how these new techno-imaginaries of autonomous driving are gendered and racialized. We aim to explore if the future user of an autonomous car is gendered or degendered in the current media discourse. The four articles explore what kinds of images are used, what promises are made, and how the discourse about autonomous driving is influenced by gendered norms. Some authors emphasize that self-driving vehicles could encourage pluralized forms of masculinity. Nonetheless, all authors conclude that driverless cars alone will not degender the driver but rather encourage a multiplication of gendered and racialized technologies of mobility.

Keywords: autonomous driving, automotive, automobility, driverless, gender, masculinity, race, self-driving

The automobile elicits a wide range of feelings: the pleasure of driving may include the experience of power, freedom, autonomy, independence, speed—and virility.¹ In daily road congestion, however, the pursuit of individual mobility often turns into collective immobility. The problem of traffic jams, accidents, and the environmental costs of individualized mass mobility have become a major hindrance to the promise of automobility. Over the past twenty years, advanced driver assistance systems have been developed that renew the promise of the automobile. Most of them have become standard features in contemporary car models. Nowadays, however, researchers at high-tech companies, in the automotive industry and in academia, are pursuing an even more ambitious goal: fully autonomous driving.



Existing concepts of the driverless car that may or may not hit the road in a few years' time differ considerably. Something they all have in common, however, is that the promise of safer and more efficient self-driving cars—a promise made by the manufacturers and echoed in journalistic and popular culture discourse—rekindles the old familiar logic of a “technological fix”: technology is understood mainly as a tool to shape the social in a one-directional way rather than as the embodiment of social relations and the common product of human and nonhuman practices and actors. Accordingly, the dominant discourse seeks to solve the problems of contemporary road transportation systems in a top-down and instrumental way, leaving unaddressed key social and cultural issues of post-Fordist mobility.

The aim of this special section is to address an important aspect of the cultural and societal consequences of the potential shift—or break—from a driver-centered to a driverless car culture. Following the tradition of feminist cultural studies of technoscience,² we ask not only who benefits but also how the new techno-imaginaries of autonomous driving are constructed, which futures they seek to prefigure, and how they are gendered and racialized. Accordingly, we have invited mobility scholars, sociologists, science and technology (STS) scholars, and feminist theorists to reflect on the relations between gender, race, class, and car culture.

In the countries of the Global North, driving has traditionally been considered a masculine skill, and the main promises of the automobile are articulated in masculinized forms and codes.³ As far back as the 1960s, media theorist Marshall McLuhan insinuated this notion when he wrote that the automobile has been imagined as an “extension of man that turns the rider into a superman.”⁴ The emotions and pleasures derived from risk taking when sitting at the steering wheel of a car⁵ remain a major element of “doing masculinity.”⁶ Accident statistics from most countries testify that men have more crashes and are more likely to be killed in car accidents than women.

This highly gendered configuration is likely to change with a driverless car that delegates control from the driver to a computerized steering unit. The nexus of mastery, control, and pleasure comes to be questioned or reconfigured with the advent of self-driving cars, so say recent studies from the social sciences and humanities.⁷ Our special section aims to explore how this transformation is imagined and “performed” by the first prototypes of autonomous cars. When the human driver turns into a passenger, what does this imply for the genderings? Are there first models of driverless cars that challenge the traditional imaginary of the active and emotion-laden driver? How is autonomy and agency redistributed between (the gendered) driver and digital control systems? How does gender intervene in the shift between these two “systems”⁸ or “regimes”⁹ of automobility? In reconfiguring the dominant elements of driver control, do self-driving cars potentially change the symbolism of driving? Will the lack of a steering wheel affect the capacity of

driverless vehicles to perform masculinity? Can self-driving cars still function as prostheses of male identity? *Could autonomous automobility even degender the driver?* Or will hegemonic masculinity merely be reconfigured in future mobility cultures? As history teaches us, gender stereotypes are highly flexible—but often this adaptability serves only to maintain the hierarchical gender relations.

Many scholars have explored the relationship between gender and automobility over the years. Cultural historians have rendered the woman driver visible and made her an important part of automotive scholarship.¹⁰ Literary scholars have analyzed female drivers in fiction and popular culture.¹¹ Many of these studies sought to demonstrate how “women” appropriate a technology that is signified as masculine. More recent approaches from social history¹² and American studies¹³ have explored women’s reconfiguration of “masculine” machines, while sociological studies have examined the relation between gendered representations and automobiles.¹⁴

Nevertheless, very little scholarship has been dedicated to the gender dimension of transportation transitions, especially the transformation of masculinity by automation.¹⁵ Our special section explores this topic in detail: How might the hegemonic association of automobility with masculinity¹⁶ be challenged if autonomous cars become a mass phenomena? How might automation affect the car as a symbol of masculinity?

The self-driving car is already a feature of traffic on the roads of North America and Europe, though mostly in the form of a research vehicle, driven by engineers. Whether autonomous cars will ever be designed for the purpose of mass transportation remains unclear. But the approach of our special section is to analyze representations of imagined futures—prototypes, media images, and popular discourses of driverless cars—in order to understand how global players are attempting to prefigure our mobile future. We want to know whether the current media discourse genders or degenders the future user of an autonomous car. What kinds of images are used, what promises are made, and how is this discourse influenced by gendered norms? Do class and race interact with gender in the case of driverless cars? The exploration of these imagined futures is revealing: rather than prefiguring “the future,” they actually reflect the present-day concepts of private corporations that are likely to influence the future. They give mobility scholars a means of accessing the contemporary imaginary of autonomous driving and perhaps of developing alternative narratives that may serve to weaken the hegemonic discourses.

We asked mobility studies scholars to think through these issues of gender reconfiguration from sociological and cultural perspectives. Their articles are centered around the assumption that automobility should be understood in the context of the intense emotions, passions, feelings, and desires it provokes. Such responses are part of a gendered economy that ought to receive scholarly attention.

The special section begins with the article “From the Automobile to the Driven Subject? Discursive Assertions of Mobility Futures.” Following the tradition of science and technology studies, Katharina Manderscheid analyzes the gendered sociotechnical script that shapes technology in three layers: it genders the car as a material object, it genders the practice of driving, and it genders the production of social identity around automobility. Manderscheid uses these layers to analyze two different visions of driverless automobility: the Google self-driving car—a project that started in 2009 and has been developed since 2016 by the Google spinoff Waymo under the name Firefly—and the F 015 concept car from Mercedes-Benz. The Google car features a concept of autonomous driving that is short-range, shared, and inclusive: it includes nonhegemonic depictions of women, children, the elderly, and impaired people. It contains a gender script that softens the masculine traits of the automobile subject. The F 015 promotes a long-range, more exclusive concept for the spatially detached and socially isolated business elite, based on the promise of a private space for the nomadic subject who depends on virtual mobility. With its detachment from any reproductive task, the gender script of this vision fits into the image of hegemonic masculinity.

Manderscheid reflects further on the ontological status of both visions, identifying them as imagined futures of corporate interests that neglect the shaping role of the potential future users when the technology is inserted into “real” social lives. Both narratives, therefore, reveal less about our future than about a contemporary social formation that is centered on present ideals of individualization, flexibilization, and mobilization of the subject. The two corporate visions constitute a discursive frame that serves to restrict the multiple shapes driverless vehicles may take. Other possible uses, such as autonomous public transport, are excluded. Manderscheid concludes that gendered practices and subjectivities of mobility will not be subverted by driverless cars themselves. Autonomous driving could be shaped by different sociotechnical scripts of future users in a way that cannot be anticipated today. For this reason, it is even more important to think of alternative modes of mobility that transcend the well-known norms of economic growth, traditional energy paradigms, and the hype of mobility as something desirable. A “social ‘right to immobility’” should be included in this vision.

Based on popular media debates and a Volvo research project on automated trucks and their future users, the next contribution, “Masculinity and Autonomous Vehicles: A Degendered or Resegregated Future System of Automobility” from Dag Balkmar and Ulf Mellström, explores the cultural imaginary of autonomous vehicles. The authors argue that autonomous driving can challenge the foundations of a gendered economy of pleasure and undermine the performance of masculinity that is based on risky and aggressive driving. Autonomous trucks could lead to a demasculinization of very traditional figures of working-class masculinity such as the truck driver. In challenging the

model of the male driver, autonomous trucks could even serve as a model for thinking about a more inclusive truck design for disabled drivers. Typically feminized subject positions such as the car passenger could be accorded more value and associated with pleasure. The interior space of the vehicle could become a more social environment. The vehicles might still be anthropomorphized, only this would occur beyond specific interpellative regimes based on masculinity, speed, risk taking, and calculation. Nevertheless, this process is unlikely to take the form of degendering. The authors expect there will be a regendering and resegregation where “certain forms of masculine gendered economies of pleasure will lose ground and others will become more dominant.” Traditional working-class masculinities in the transport system could give way to a “ruling-class masculinity” associated with the “calculating rationality of technical specialists” and engineers.

In “Media Ecologies of Autonomous Automobility: Gendered and Racial Dimensions of Future Concept Cars,” Julia Hildebrand and Mimi Sheller explore how historically gendered and raced representations, meanings, and practices of (auto)mobility are reconfigured and reproduced in contemporary visions of autonomous driving. The authors use a media ecological lens to analyze the gendered and racialized dimensions of two audiovisual concept car previews (Nissan IDS and Volvo Concept 26) and the journalistic and academic discourses surrounding them. The Nissan clip features an autonomous vehicle that adopts traditionally feminized roles in domestic organization with subdued navigational control, suggesting an empowering partnership between its male owner and the machine. The Volvo preview depicts the interior design of a driverless car prototype, accompanied by comments from project representatives. Both audiovisual previews place the white or honorary white male driver at the center of their narratives. They emphasize the active control and mastery exerted over the vehicle by the male user: even when he chooses to delegate the task of driving to the car, associations of passivity are strictly avoided. Masculinity remains actively bound to the mobile public space. The female body is delegated to the feminized passenger seat of the driverless car and remains associated with passivity, the domestic space, or the romantic partner. In both videos, women are matched with the race of the male driver, creating “heteronormative and racially homogenous spatial arrangements.” In the context of the clips and current discourses surrounding autonomous automobility more generally, Hildebrand and Sheller discuss the interior of the self-driving car as a racialized and gendered space of surveillance, subordinated to algorithms devised to detect deviant behavior and to represent a male gaze. Feminine and nonhegemonic subject positions are “subordinated or absent” within these corporate imaginaries of driverless automobility. In this approach, the safety promise of self-driving vehicles could translate into a “surveillance of the racial or sexualized ‘other.’” The authors conclude that autonomous driving will contribute to a complex multiplica-

tion of gendered and racialized technologies of mobility, rather than to a degendering of the driver.

The essay by Sarah Redshaw on “Combustion, Hydraulic, and Other Forms of Masculinity” confronts two concepts of masculinity: first, the dominant and more archaic form of combustion masculinity, linked to explosion and violence, risky behavior, acceleration, and high speed; and second, a fluid form of less aggressive, more cognitive, skill-based hydraulic masculinity, based on cooperation with the environment. Examining the representation of drivers in advertising, popular motoring magazines, games, and car-related TV shows, Redshaw argues that most of these popular imaginations of automobility are referring to combustion masculinity. The author sees this form of masculinity as the greatest obstacle to the introduction of autonomous cars. Another, rare form of hydraulic masculinity appears in a famous truck advertisement made by Volvo (2013), which shows the actor Jean-Claude Van Damme doing the splits between two trucks in motion. Even if the image of the truck driver can be associated with traditional forms of masculinity, hydraulic masculinity paradoxically coincides with truck advertisements because professional driving cannot be associated with risk taking, having more to do with safety and caution while driving. Redshaw then explores how advertisements for new technologies evoke different forms of masculinity. In emphasizing the accelerating power of their electric cars, Audi and Tesla maintain dominant references to combustion masculinity. In contrast, respecting the rules of priority for pedestrians and speed limits positions Google’s driverless car as an alternative to the dominant images of combustion masculinity. Redshaw then asks why driver assistance systems (Audi, Volvo, Mercedes) are promoted showing women as drivers—when most car advertisements are marked by the absence of women. A car that takes over the task of driving seems more compatible with dominant gender images of the woman driver as passive. Like Mandercheid, Redshaw concludes that driverless vehicles alone will not contribute to gender-neutral mobility systems. A transition to driverless cars is not possible if the model of combustion masculinity remains dominant: a change in mentalities and desires related to cars is necessary. Hydraulic masculinity could help to reframe travel and commuting as active and to emphasize the complex social environment of the motor vehicle.

The articles are largely linked through their focus on the transformation of masculinity. Some authors emphasize that autonomous driving could encourage more fluid and pluralized forms of masculinity as well as new forms of gender performances. Nonetheless, all the articles conclude that driverless cars alone will not degender the driver or demasculinize the automobile. It is more likely that autonomous vehicles will be part of a regendering process in which certain forms of masculinity will lose ground and others will become more dominant. As Judith Wajcman¹⁷ pointed out in the 1990s, not every technology is gendered in the same way, while Wendy Faulkner¹⁸ revealed the

close links between high tech and masculinity. If autonomous cars were to become an everyday life technology in the next few decades, the staging of gender identities might be reconfigured again. For now, though, a key task is to show how gender identities are reified by global players such as IT companies and automobile firms and how these identities are then reiterated in popular and journalistic discourses. On this basis, we can then begin a debate on alternative narratives and designs for our future mobility.

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Notes

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