

## **Cars and Contemporary Communication: Machine, Medium, Mobility**

### *Introduction*

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As an introduction to the Special Section on cars in contemporary communication, this article positions the seven current studies against the backdrop of historical investigations from previous decades. While the car has always intrigued scholars as a highly personal machine; a context for new, mobile communication technologies; and a vehicle of autonomy, all these aspects are taking on new significance with the emergence of connected and increasingly autonomous cars. We identify some common theoretical foundations for the articles in this Special Section both in fundamental reflections on communication and transportation technologies by James Carey and in current initiatives toward a deeper integration of communication and mobility research. All the articles share an emphasis on a certain ritual view of automobility. Each contribution is introduced with its unique perspective.

*Keywords: cars, communication, ritual view, autonomous vehicles*

Cars don't talk back they're just four-wheeled friends now.

—Queen, "I'm in Love With My Car"

Although conversing with cars is a rare experience even today, communication scholars have contemplated cars time and again (e.g., Ling, 2014; McLuhan, 1964; Sawhney, 1996). They seem to do so not only to contribute their expertise to the understanding of this key transportation technology for the purpose of building knowledge; communication scholars also turn to the car when they are in need of orientation, when

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their own objects of research and action are blurred by media change and their own conceptual instruments falter. They rely on the car as a familiar point of reference, to taxi them through the turmoil.

This was the case when the challenge to develop a digital communication infrastructure for the masses was cast in the metaphor of building "information superhighways" (Sawhney, 1996). When scholars explored how mobile phones individualize communication (Goggin, 2012; Ling, 2014), they found a precedent in the way cars had individualized mobility (Packer & Oswald, 2010). And current scholars look to the self-driving car as a prism to analyze the broader phenomena of automation and artificial intelligence as these extend into many domains of transportation and communication (Pink, Fors, & Glöss, 2018; von Pape, forthcoming).

These ongoing considerations also mark a new dynamic in a process that appears to have pulled cars themselves ever more into the gravitational field of media change. Whereas only select media were incorporated into the bodies of earlier cars, from the transistor radio to video streaming, today's cars increasingly rely on information and communication technologies in their core functionalities to the point that they are steered by algorithms. In the words of Apple's operations chief Jeff Williams, the car is becoming the "ultimate mobile device" (Chmielewski, 2015). In response to this evolution, scholars of mobility have suggested adopting a new perspective for which a "broadly defined concept of mobility—encompassing the movement of people and goods as well as ideas and information, respectively—provides the foundation" (Müller & Weber, 2013, p. 67).

This Special Section attempts to capture the current state of communication scholars' continuing interest in the car—offering a snapshot of what the car means for contemporary communication. To open this discussion to a broad range of perspectives, we provided no particular guidance to the contributors beyond an invitation to present their thoughts and findings on cars in contemporary communication. The seven articles in this Special Section are heterogeneous in many respects: (1) They share a conceptual orientation, but some also build on quantitative and qualitative empirical data; (2) they are oriented toward the future of autonomous vehicles, but several also reflect on the car culture that has been essential to the consumption society in the second half of the 20th century; and (3) they address profound ethical questions of autonomy, privacy, and accessibility but also examine such concrete technical and economic issues as ride-hailing services and mapping of roads. And yet this apparent heterogeneity conceals profound connections among the articles on a deeper theoretical level. The next two sections explore and apply these underlying links to present the overall structure of the Special Section and its individual contributions.

### **Toward a More Ritual View of Transportation**

Müller and Weber's (2013) call for a broad view of mobility that embraces the movements of atoms and bits in all their forms may appear as a sufficiently large common denominator for our present purpose to consider the car from a perspective of contemporary communication. It permits us to conceive of the car as a functional alternative to certain communication technologies, bringing people and objects together when mediated experiences are not enough. And it permits us to consider ways in which cars and mobile media complement each other: how mobile media make cars "smarter" (Oswald, 2016) by providing added layers of connectivity that make the rides more productive and enjoyable and how cars can serve as four-

wheeled resonating bodies for mobile media, providing the use cases and the seamless technological integration that permit mobile media to unleash their full potential, from radio receivers in the 1950s to location-based apps for ride-hailing today.

However, a closer look at the theoretical foundations of such an integrative perspective reminds us that there is more to the integration of transportation and communication than the logistics of well-oiled bits and atoms. In James Carey's (1983) reflections on the telegraph and railroad, such a logistical view would amount to a mere "transmission model" of communication. The transmission model conceives of communication as a one-way extension of messages over time and space for the purpose of control. In contrast, the more culturally inspired "ritual model" emphasizes the beliefs, contexts, and practices around communication. Whereas Carey introduced this distinction to expand our view on communication beyond the transmission model toward the ritual model, it may have had the opposite effect on our views of transportation. Jonathan Stern (2006) has observed:

In fact, many scholars have used the phrase "transportation model of communication" to deride conceptualizations of communication as nothing more than a means to an end. This is an interesting slip of the pen, so to speak, from Carey's critique of the "transmission model" of communication in his "Cultural Approach to Communication" essay. . . . We must be careful not to confuse a specific model of communication, the transmission model, with all possible configurations of transportation. To treat transportation as a mere instrumentality, as nothing more than a means to an end, is to misunderstand the meaning of transportation for most of its history. (p. 124)

Sterne illustrates this point with Wolfgang Schivelbusch's (1986) reflections on early railroad journeys. As transportation became industrialized with the railroad, the effects that a journey could have on a traveler lost the positive meaning they had acquired in the genre of 18th- and 19th-century travel journals. Ultimately, a modern train rider's impressions of a passing landscape would be considered mere interferences with the goal of getting the traveler unaffectedly from point A to point B, just as impulses on a poorly isolated signal are considered "noise" in Shannon's (1948) mathematical theory of communication. To do justice to communication scholars, Sterne concedes that many geographers have the same reductionist view on means of communication—as an added layer that makes transportation smart and seamless where it used to suffer from friction. In conclusion, Sterne calls for all sides to consider both the instrumental dimension of communication and transportation and the "constitutive dimension" (Sterne, 2006, p. 124)—that is, constitutive of meaning in the cultural perspective of a "ritual model."

One recent proposition to cast such an integrative perspective more broadly and do justice to both traditions of communication and transportation research is Julia Hildebrand's (2018) approach to align media ecology and transportation research to what she calls "transportation-information-communication technologies (TICTs)" (p. 349). From this view, we can speak of subjects (in the sense of actors and contents) that move through modes (of transportation) or media. But, departing from a logistic transmission perspective, Hildebrand also emphasizes how the subjects, their environment, and their relation are transformed in the very process of their mobility to constitute a change in what she calls their "mood." In

describing this process, Hildebrand implicitly addresses Sterne's critique of an instrumental view of transportation that seems to isolate travelers from their environment:

A different kind of mood is promoted when observing the gliding landscape on a train compared to on an airplane. . . . Likewise, diverging kinds of experiences, "structures of feeling" . . . , and "itinerant sensations" (Löfgren, 2015, p. 176) are furthered when using the mobile smartphone in contrast to the stationary telephone. (p. 349)

This leads us back to the contributions of this Special Section. Although they do not subscribe to any particular new kind of integrative approach and hardly mention the opposition between the ritual and transmission-oriented perspectives, the articles do emphasize the ritual view of transportation and communication. Thus, the contributions here consider cars as means of transportation and communication to jointly provide new experiences of mobility: arguably smarter, safer, more efficient, and more enjoyable. But the articles also reflect the evolution of the meanings of the car, the practices we pursue in and through cars, and our own identities as drivers and passengers.

### **Seven Perspectives on the Car in Contemporary Communication**

In the first article of this Special Section, **Nathanael Bassett** and **Steve Jones** explore the implications of autonomous vehicles on a cultural level, below the technological and economic challenges for which they are mostly discussed. Drawing on representations of automobility from an early Disney short to vintage car advertisements to the interface of a Tesla, the authors detect profound shifts and contradictions in the semantics of key notions of car culture such as freedom, control, and privacy. Thus, the promise of automobile freedom can mean taking one's Jeep to escape from the constant control and surveillance of everyday life, but also taking one's hand off the steering wheel in a Tesla. However, with the inescapable control and surveillance that drivers are subjected to in these highly automated cars, it cannot mean both.

It is from this assertion that the new autonomy of self-driving cars also involves new technological entanglements that **Rowan Wilken** and **Julian Thomas** set out to develop an updated conceptualization of the car as a communications platform and its ties to mapping systems. Where a common view of the car as communication platform is attached to the more manifest ways in which cars relay, amplify, and display communication signals to their passengers (through audio systems, car phones, etc.), Wilken and Thomas use the case of mapping technologies to illustrate a change that comes with autonomous cars. The cars actively collect, interpret, and act on geographical data from both digital sources and the physical environment—and even generate such data to update the very maps they are following. By tracing back this new conception of cars as communication platforms to mechanical predecessors of our contemporary autopilots and navigation systems, Wilken and Thomas reveal a number of highly significant but mostly forgotten technologies. And by projecting it into the future, they ultimately come to conceive of the car as neither a means nor medium of transportation but as a "decision-making technology" and discuss the question of governing such machines.

**Leopoldina Fortunati, Guiseppe Lugano, and Anna Maria Manganelli** offer a nuanced and rich theorization of the relationships between two facets of cars and communication. The first dynamic is the rise of autonomous and robotized cars and vehicles, which has widely captured the public imagination. The second and interrelated process is the increasing robotization of cars, which paves the way, so to speak, for people to imagine and place themselves in grand scenarios of driverless and connected cars. Fortunati and her coauthors draw on two representative sets of survey data from Europe. Survey respondents from 28 countries allow the authors to explore citizens' attitudes and opinions concerning automation and digitization. Their thought-provoking findings include the following: Europeans feel increasingly less comfortable about traveling in a driverless car as they age; respondents with a more positive attitude to robots, or those who already use a robot, are more at ease than others with the notion of traveling in a driverless car; while respondents tend to be somewhat more comfortable with goods rather than passengers being transported in an autonomous or driverless commercial vehicle or truck, their general comfort level with the transportation of goods is similar to their level of comfort with passenger transportation when it comes to driverless vehicles.

Fortunati and her colleagues complement their Europe-wide survey data with a focused investigation of how children, preteens, and adolescents in northern Italy perceive the robotization of cars and everyday technologies. From these Italian children and teenagers, it appears that the humanization of robots in decades of mass culture from the Terminator to WALL-E may have been as misleading as the humanization of animals in early Disney documentaries. In any case, the young generation appears ill-prepared to recognize robotization when they see it today's machines. Overall, the authors help us better understand the deeply rooted, often contradictory attitudes associated with the way contemporary cars are emerging as a dense, complex nexus of communication, driving, and other activities, social functions, and meanings.

**Gerard Goggin** takes the notorious focus on people with disabilities in discourses accompanying the design, regulation, and marketing of autonomous vehicles as an occasion to question the broader relations between disability and automobility. After elaborating how the accompanying discourses have contributed to a certain understanding of disability (as an exclusion from the driver's role, a tragic outcome of traffic accidents), Goggin proposes to reverse this relationship: to depart from a multifaceted understanding of disability as a productive starting point for rethinking the communication for, with, and about future automobiles.

**Rabindra Ratan's** ingenious article tackles the question of what the car stands for, what its uses might be, and what functions it serves—instead of where the vehicle goes. In his article, the car does not stand for particular values but more immediately for the driver. Ratan proposes the concept of "avacars," departing from the idea that the avatar is not simply digital. Rather, they can be conceived more inclusively as "mediated . . . representations of human users that facilitate intersections with other users, entities, or environments." Ratan explores the ways that automobiles serve as self-representations, social others, and/or something that offers utility. Ratan offers suggestions for how his framework can be used for thinking about emerging and new kinds of automobile technologies, such as car-voice agents or autonomous driving technologies, as well as long-standing aspects of cars such as personal ownership and brand loyalty.

**Rich Ling** explores the challenges that an emerging system of roaming automobiles might pose to the negotiation of mobility. Where the taxi had constituted an exception between modes of transportation that were under the full control of the individual (driving, walking, cycling, etc.) and those that were institutionally controlled (public transit), the new possibilities of hailing rides that are perhaps increasingly managed and guided by artificial intelligence raise new questions about the negotiation of mobility. Under the concept of “mobile canvassing,” Ling envisions a key role for the smartphone as a “meso-scope,” enlightening users about the possibilities for mobility provided by their midrange environment. Ling explores the ways that mobile canvassing platforms supported by the smartphone revolve around the key issue of “symmetrical critical mass,” of putting relatively itinerant customers and drivers into a two-sided negotiation as harbingers of the new transportation era.

**Laura Forlano** discusses an approach that may help overcome the inertia and path dependency with which sociotechnical imaginaries can not only mislead our perception but also restrict the evolution of technologies as they are emerging. The speculative design methods approach helps destabilize deterministic visions of the car. Forlano’s article draws on a one-year, multidisciplinary project on The Driverless City that used a range of experimental methods to study the social aspects of the emerging technologies associated with autonomous vehicles. Forlano charts key coordinates of autonomous vehicle imaginaries, highlighting the interplay among contending ideas, narratives, and claims as the construction of driving and communication futures unfolds. Via field notes and a critical analysis of advertising and promotional materials celebrating an autonomous vehicle’s capacity to master night driving, Forlano draws attention to the way that representations of the future are powerfully harnessed to sell the present (and distract from pressing current problems). As an intervention into the shaping of such futures and the production and configuration of the technologies they entail, Forlano presents and discusses four videos that offer alternative visions of autonomous vehicles, their actors, practices, infrastructures, and relationships. She also describes a physical prototype dubbed the “Scenario Builder”—a repertoire that aims to generate citizen-driven ways to create alternative futures as “alternative nows” rather than distant realities.

Taken together, the seven contributions to this Special Section permit us to take measure of recent transformations of cars and communication, evoked in the quote from Queen’s “I’m in Love With My Car” at the beginning of this introduction. It is evident that transportation and communication have changed, as has our relation to technology, and this makes our relationship with cars more complex. We expect so much more from them—to know where we want to go, to guide us there, to warn and protect us (including from our own bad judgment), and eventually to take us to our destinations automatically—that they may seem entitled to some talking back. And because they are so smart and well connected, we have reason to suspect them of observing and telling on us and reason to doubt their undivided loyalty. All in all, there are rich implications in such emergent car technologies, practices, rituals, and imaginaries that provoke us to think again about what cars tell us about communication.

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