

Social Media on the Road

Computer Supported Cooperative Work

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Oskar Juhlin

Social Media on the Road

The Future of Car Based Computing

 Springer

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Preface

In the future, everyday life in traffic will be intricately meshed with city life. Today, motorways, city streets, toll roads, country roads, etc. are places where we spend a considerable amount of time, and where a large number of everyday encounters between people occur. Any road user's journey coincides with several, sometimes hundreds or even thousands of other people's journeys. But these encounters are brief and the interaction is slight. Mobile technologies and services provide us with new possibilities to support drivers and passengers beyond just helping them to reach their destination. We suggest that new technologies and applications could enhance social interaction in traffic and make life on the road more interesting and meaningful. We provide examples of some innovative applications such as car stereos that share music among drivers and digital games that interact with the landscape passing by outside the car windows.

Mobile applications could help people share their knowledge about what is going on in traffic, e.g. to warn of incidents or obstructions. In traffic encounters we already have to decide how to share the road surface so that everybody gets to where they are going in a reasonable amount time, without injuries or damage to vehicles. Much effort has also been put into making traffic encounters more efficient and safe. However, the role of social interaction as a resource in that effort has received only limited attention in traffic research, as well as from the car industry and transport authorities. To understand the potential of such new media, we must take a detailed look at the social interaction that occurs on the streets and highways in cities and in the countryside around the world.

Consider how people used the street before the car became a medium of mass transport. Human activities, which include everything from trade to gossiping, naturally took place where there were a lot of people and plenty of movement. Only a few decades ago streets would have been the places people headed for. People standing around here and there, shopping or walking by, did not impede the street's function—quite the opposite. In fact, they were a natural part of it. The arrival of mass automobility has in many ways changed what we do in the street. But it is also somewhat true that wherever people live and go to, there are still activities on the road which can only be understood as the “whole point of the journey.” Rather than happening before or after the trip, these activities and experiences can only take place on the road. Car journeys are sometimes pleasant experiences, which are

enjoyed for their own sake. Watching the motion of other drivers and vehicles provides for an interesting experience, as does looking at the passing scenery. But the experiential downside of traffic must also be recognized. Social interaction on the road is characterized by very brief encounters and by the participants being enclosed in the shell of a vehicle. This detachment occasionally makes what little interaction occurs monotonous, and in the end, driving becomes a lonely activity. Again, emerging technologies could be used to reintroduce some of the socialization that used to occur in the streets.

In our research at the Interactive Institute and the Mobile Life VinnExcellence Centre in Stockholm, we have studied social interaction on the roads and developed applications that support it in various ways. The increased availability of telecommunication and mobile computing technologies is a strong motivation for our interest in traffic. These technologies make it possible to think about designing new support for interaction between road users—support which may transcend the constraints upon social interaction that derive from the speed of the vehicles and the enclosed position of the driver when driving. Computers and telecommunications could make interaction possible in other ways than just brief visual interaction through the existing “car body-language.” We could have a broader set of interfaces with other drivers, e.g. sound or graphics, and we could also prolong the time available for interaction. Technology could provide means of interaction before the physical encounter takes place, or it could sustain interaction when the brief meeting in person is over. We have developed, implemented, and evaluated a number of mobile services to investigate how increased interaction can provide improved coordination, better community life, and richer emotional experiences in traffic encounters. These services are prototypes that provide us with feedback on the experiences of road users and with an understanding of the technical constraints we are facing. But most importantly, these mobile services provide us with inspirational patterns (Löwgren 2005) that might inspire a discussion on how, in the future, we want to spend our time on the streets.

We envision that this book will primarily be used in higher education. It should be of interest to those studying human–computer interaction in mobile use contexts, as well as those interested in designing new forms of mobile applications and services. It may also be of interest to those whose object of study is traffic per se, for example people working within transport and urban planning. Finally, we hope that IT professionals and the general public will find it interesting to read about and reflect on the future of life in traffic. We examine a global phenomenon and our research is therefore of relevance in many countries. We draw on the experience of social life in traffic from both Europe and the US, and are inspired in the creation of new services by an international research community. Thus, although our own studies have mainly been conducted in Sweden, we believe that the results and the prototype applications we propose, are of a wider interest.

Acknowledgments

The ideas in this book began taking form as early as 1991, when I was a young PhD student studying the social character of engineering knowledge. My thesis came to focus on technical practices such as testing and demonstrating various forms of information technology being developed to handle road traffic. The first publication (Juhlin, 1994) was a review and discussion of contemporary research projects in a field called Intelligent Transportation Systems. That study prefigured some of the basic arguments in this book, such as the importance of accounting for driving as a collaborative and social activity. The ideas emerged out of my initial misunderstanding of what the community of developers and researchers in this area were out to do. In my mind, they were digitally connecting the drivers and enabling them to communicate through various forms of data networks. But the mistake soon became obvious when I realized that they were rather linking cars and computers to each other. Still, after only an initial period of confusion, it became clear that the role of social interaction was an important, but missing topic in this gigantic research field. In the end, the misunderstood intentions of this particular community initiated a new research endeavor, which set out in a very different direction.

The various paths of this journey have been greatly enriched by Liselott Brunnberg, Mattias Esbjörnsson, Daniel Normark, and Mattias Östergren, all of whom have written their PhD theses on this topic. Their contribution to the research presented in this book cannot be underestimated. They have, since becoming PhDs, moved on to other areas of research and mobile industry, where I believe they will also have important roles to play. I would also like to mention two other colleagues. Lars Erik Sjöberg was a senior civil servant and sponsor at the Swedish National Road Administration when it all was getting started, and then became a research colleague and friend. Alexandra Weilenmann, my colleague and friend, has also been there for a long time to help me sharpen my arguments and improve the research. I would also like to thank a number of colleagues who in many ways have supported me in developing this research: Hans Glimell and Bo Dahlbom, who were both always around at the outset to support and guide; and my British friends Barry Brown, Eric Laurier, and Mark Perry, who really seem to have a similar “taste” in research topics as I have, and have constantly influenced this work. I would also like to thank Everett Thiele who has been around for several years to improve my English language, not least during the work with the this book.

My many colleagues at the constantly growing Mobile Life Centre, which emerged from a long-term collaboration with Lars Erik Holmquist and Kristina Höök, have been influencing the research in this book for a long time. The research has also allowed me to work with, and get inspiration from many previous members of our research group such as Mark Ollila and John Bichard. Here I would also like to mention my current colleagues Annika Waern, Arvid Engström, Ylva Fernaeus, and Maria Holm.

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Last but not least, I would like to mention my dear family. It would, of course, have been possible to write this book without the love I get from my family, but it would have been a much more tedious job. Therefore, I would like to thank my family, that is, my partner Maria, my sons Benjamin and Leo, as well as my mum and dad, for being such a dear part of my life and for just being there.

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