



CASE STUDY


Exploring a Greener Future for Humanity by Understanding and Transforming the Way People Think About Transportation

Our client – an urban innovation company – has set its sights on shifting society towards a green and low-car future, where people forego owning vehicles to travel using a mobility service package which caters to individual travel needs on a subscription basis.


This vision is momentous, and cuts across many issues we currently face. First, there is the issue of how people currently commute; traffic congestion costs Americans nearly 100 hours per year, and searching for parking adds an additional 17 hours^{1,2}. Switching transportation modes reduces congestion, and allows people to use that time for something other than just driving. Further, it will help address enormous inefficiencies that are inherent in our current transportation approach. Aerial images reveal that cars spend, on average, 95% of their time being parked and waiting for the occasional episode of use³. If we can

offer individuals a viable alternative to car ownership, we have the potential to tangibly reduce the number of vehicles being manufactured (and eventually destroyed), and get one big step closer to a truly sustainable way of living.

Solving this challenge is fundamentally a matter of understanding and changing human behavior. In order to design a service for which people would be willing to exchange their cars and parking spots, our client needed a deep understanding of what makes car ownership appealing – and thus what will be essential for creating a feasible alternative to the current system. To this end, we set out to investigate the motivational psychology of car ownership, and to help our client develop a revolutionary value proposition.

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DISCOVERY & BEHAVIORAL DIAGNOSTICS:

Understanding the psychological appeal of transportation

In collaboration with our client, we synthesized a set of hypotheses about the psychological factors that motivate car ownership. To test our ideas, we conducted a conjoint analysis of decision-making data from 900 car owners living in large North American cities, representing a variety of age groups, income levels, and families with and without children.

The goal of the analysis was to estimate precisely how much individuals valued the various emotional, cognitive, and social attributes of transportation. To this end, our experiment required participants to make a series of choices between theoretical mobility service packages featuring varying proportions of qualities we flagged as potentially important (e.g., flexibility and luxury).

Insights into natural segmentation of the car owner population

Our findings revealed that the most important factor motivating the choice to own a vehicle is individual aversion to uncertainty (i.e., the desire to avoid having to worry about whether transportation would be available should the need for it arise). This aversion – and the associated preference for reliability – was disproportionately important to older individuals. On the other hand, a car’s ability to ward off idleness and boredom, as well as to signal social status, emerged as a crucial factor for younger age groups. These insights suggest that the population can be naturally segmented into groups with distinct psychosocial needs, which can be met by tailored mobility service packages.

Uncovering loss aversion as a primary barrier to changing mindsets

Even a service that is perfectly tailored to an individual’s preferences is not guaranteed to result in a willingness to give up one’s car. Our research revealed that only 40% of respondents would immediately accept a mobile service package that met all of their preferences, while 27% would only do so if given the option to change their mind and regain their car. These findings highlight loss aversion and fear of irreversible change as a crucial barrier to the desired behavioral shift. Thus, unlocking the adoption potential of these 27% will require our client to make a value proposition that targets this aversion.

Scientific research into the power of social norms^{4,5} suggests that the transition towards a car-free future will only begin, rather than end, with early-adopters (i.e., the individuals who expressed an interest in making the transition in our study). Once this demographic takes on the change, we have psychological reasons to hypothesize that a tangible proportion of the remaining individuals will follow suit.



Towards a scientifically informed approach to changing behavior

The behavioral insights we have generated in partnership with our client provide a crucial building block for the implementation of a revolutionary shift in human behavior. Taking an experimental lens to the question of human motivation allowed us to obtain actionable insights about the psychological needs and barriers a mobile service must address if it hopes to supplant the unsustainable practice of car ownership.

Achieving this level of psychological understanding might make the difference between a successful service launch and a costly initiative in which thousands of hours of work are poured into a service that does not garner uptake. Based on our promising results, we look forward to continuing our collaboration and taking an experimental approach to building and refining a service value proposition that will compel large-scale behavior change.

QUIRKS OF BEHAVIOR: LOSS AVERSION

People are much more sensitive to the prospect of losing things or money than they are to gaining them. In fact, researchers estimate that losses are twice as psychologically powerful as gains⁶. Roughly speaking, this means that the pain of losing \$100 is twice as strong as the pleasure of gaining that same amount.



Loss aversion can be intuitively understood if we imagine an experimenter giving us \$100 dollars and then offering us a gamble with a 50/50 chance of winning more or losing that \$100. The prospect of losing \$100 is, without a doubt, uncomfortable. So how big does the potential prize need to be for us to accept the gamble? Research says that, for the average person, it would have to be \$200. Loss aversion is clearly a powerful agent: overcoming the discomfort requires at least twice the reward potential.

Our aversion to losses means that we hate giving up things we already own, even when offered an alternative of equal economic value^{7,8}. This is one crucial factor



that holds many people back from deciding to give up their cars in exchange for sustainable travel arrangements. The risk of losing something convenient for an uncertain benefit just feels too great - something to be understood and navigated with expertise.

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