



## PAVE Poll Briefing #2:

### The Real Relationship Between ADAS and Autonomy

**Poll information:** 1,200 adults from across the United States were polled between 2/27/20 and 3/5/20 on behalf of PAVE. 678 of these respondents reported owning cars with advanced driver assistance system (ADAS) features and were asked an additional battery of questions. A sample of 200 adults with reported “mobility issues” were also surveyed.

As discussed in our briefing on AV perceptions, ADAS enjoys far more favorable sentiment than AVs do. The data in this survey suggest that the main reason for this is familiarity: ADAS features are widely available as consumer products, whereas AVs are more of an abstract concept. Whereas ADAS can be readily assessed through personal experience, a lack of information about AVs means people tend to project more generalized anxieties about technology onto them.

- Reactions of all Americans to the idea of “a vehicle with safety systems that support a human driver, but with the human driver always in full control” were significantly more favorable (49) than reactions to the idea of a “self-driving car” (3), “autonomous vehicle” (-3) and “driverless car” (-13).
- 82% of drivers with ADAS-equipped vehicles said they “have a good understanding of how the safety technology in my car works” whereas all respondents rated their level of knowledge about AVs quite low (-21, on a scale of -100 to 100).
- Americans who own cars with more advanced ADAS features gave their knowledge of AVs some of the highest ratings in the survey, such as Remote Parking (29), Driver Monitoring (21), and Active Parking Assist (12). In contrast, reported knowledge about AVs was even lower than average among respondents who do not have vehicles with any ADAS features (-32) or were unsure if their vehicles had such systems (-44).

Personal experience with more advanced ADAS features is not only correlated with greater self-reported knowledge about AVs, but also with more favorable sentiment toward AVs and confidence in their eventual arrival. This suggests that as ADAS proliferates, it will serve to familiarize the public with automated driving technology and build trust in AVs.

- Though Americans on average reported unfavorable sentiment toward the terms “driverless car” (-13), “autonomous vehicle” (-3) and “self-driving car” (3), those respondents who report owning vehicles with ADAS features were considerably more positive about these terms. For example, owners of vehicles with remote parking systems rated their sentiment toward all three of these terms in solidly positive territory, exceeding the average by 39 to 51 points.
- 73% of respondents with forward collision alert said safe AVs would be available within 10 years, compared to 58% of those without FCA. There was a similar difference among those with and without blind spot warning (73-59), lane departure warning (73-59) and automatic emergency braking (70-59).
- Almost half of respondents (48%) reported that safety features in their vehicle had prevented a collision – a result that may demonstrate appreciation for the value of advanced safety features, though it is possible these responses may refer to more common safety technologies such as ABS.

Despite the clear correlation between ADAS ownership and higher rates of knowledge about (and positive sentiment toward) automated driving technology of all kinds, there are signs that ADAS may contribute to some misperceptions about the technology. The belief that fully autonomous vehicles are available to consumers today is particularly troubling as it may contribute to a driver dangerously over-relying on a limited system in the misguided belief that it is fully autonomous.

- Only 55% of respondents correctly stated that it is not “possible for me to own a completely driverless vehicle today,” with 19% stating that it is possible and 26% answering “not sure.”
- Ownership of vehicles with certain (generally more sophisticated) ADAS features made respondents much more likely to believe that “it is possible for me to own a completely driverless vehicle today,” with 59% of Remote Parking System owners, 47% of Driver Monitoring System owners and 44% of Automatic Emergency Braking answering in the affirmative.

Although 82% of Americans who report owning vehicles with ADAS features say they have a good understanding of the technology in their vehicle, there is evidence that ADAS ownership may be overreported. Without being able to compare their self-reported knowledge against the “ground truth,” this raises some uncertainty about the exact relationship between ADAS ownership and knowledge about both ADAS and AVs.

- Two-thirds of those with vehicles in their home reported having at least one ADAS feature, which suggests potential over-reporting. For example, 38% of respondents reported their vehicle has adaptive cruise control, even though just 12% of new vehicles sold in 2018 were equipped with that feature, according to AAA.
- 39% of respondents admitted that “I am confused by all the different names of advanced safety features.”

Though ADAS enjoys better awareness and appreciation than AVs and can serve to normalize automated driving technology of all kinds through hands-on experience, significant educational challenges remain. The data suggest that an overabundance of brand names and descriptions creates confusion about different ADAS features and functions, which may even lead consumers to misunderstand their own vehicles capabilities. Furthermore, certain ADAS features may contribute to the dangerous perception that cars currently available for sale are capable of fully autonomous driving.

Though not the most prevalent misperception about automated driving, this confusion of ADAS and autonomy is incredibly dangerous and warrants immediate attention by educational groups like PAVE. Working with the industry to simplify and standardize the language and descriptions used to communicate automated driving capabilities to the public can also contribute to public education and safety. Finally, further studies of consumer perceptions and sentiment, especially those that allow reported knowledge levels to be verified against “ground truth,” will help more specifically understand and target these and other educational shortfalls.

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