

Name: Benjamin Matthew Linam

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Case Study Report # 4

I certify that this assignment is the result of my own efforts.

Signature

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UWF Student e-mail:

bml42@students.uwf.edu

e-mail:

bmlinam1@gmail.com

**Step 1:** Determine the facts in the situation – obtain all of the unbiased facts possible

Danny Haldm, a reporter for the New York Times, penned an article entitled, “Study Says Making Cars Lighter Would Cost Lives.” This article discussed how a study performed by the National Highway Safety and Transportation Agency (NHSTA) ranked minivans and large four-door sedans as the safest vehicles on the road. The findings were certainly interesting as they implied that larger, heavier vehicles were safer overall. Smaller, lighter cars were found to be more dangerous as fatal wrecks were more frequently reported for those vehicles. A study by Honda; however, finds that reducing vehicle weight has the possibility of saving more lives as it takes less energy to slow down a lighter car compared to a heavy sedan. The counter to that statement though, is that if a heavier vehicle collides with a large obstacle, less of the vehicle will crush in as opposed to a smaller car that would receive more damage.

**Step 2:** Define the Stakeholders - those with a vested interest in the outcome

Vehicle manufacturers would be concerned with cutting costs by producing lighter cars that take less material to make. Consumers would also be concerned with the outcome of the debate as the safety of their lives is up to the standards set in place by studies done by both manufacturers and critics alike.

**Step 3:** Assess the motivations of the Stakeholders - using effective communication techniques and personality assessment

If making vehicles lighter would assist in reducing production costs for vehicle manufacturers, it is more than likely that studies that they perform would find that

lighter cars are safer. For most companies, saving money is more important than saving lives. Consumers would be more willing to see overall safer vehicles of any kind be produced. So it is important that they receive unbiased information instead of figures that only further the goals of big corporations.

**Step 4:** Formulate alternative solutions - based on most complete information available, using basic ethical core values as guide

The first, and obvious solution to the safe vehicle debate, would be for everyone to drive the safest type vehicle which studies show to be minivans and large four-door sedans. The next possible solution would be for everyone to drive smaller vehicles to prevent collisions between small and large vehicles. The only other solution would be for all drivers to maintain a safer environment on the road by adhering to every traffic law and watching out for other drivers on the road.

**Step 5:** Evaluate proposed alternatives - short-list ethical solutions only; may be a potential choice between/among two or more totally ethical solutions

Drivers on the road would be more protected in a larger vehicle during a collision, but the economic drawback here is fuel costs would be more expensive for drivers than if they were to drive small economy cars. In the case of everyone driving smaller, compact cars, a large change, such as this, would prevent shipping companies to make as much money delivering large shipments through use of tractor trailers. This would result in fewer injuries, if drivers refrained from driving at breakneck speeds, but it would adversely affect people or businesses that relied on

larger vehicles to carry any type of material. If people were to continue to drive whatever vehicle they currently drive, but drove at reasonable speeds, maintained caution around other drivers, and followed all traffic laws, studies would see highway safety skyrocket as wrecks decreased.

**Step 6:** Seek additional assistance, as appropriate - engineering codes of ethics, previous cases, peers, and reliance on personal experience, prayer

With the last solution, the people of this nation would need to undergo a major lifestyle change. People would have to follow the “Golden Rule” and treat other people with the same respect and care as they would like to receive. The problem with this is that the nation focuses more on self than others: what feels good to me, rather than what is right. When I make my morning commute from Molino to Pensacola every day, the highway becomes a free-for-all with people frantically swerving around slow vehicles to make up lost time; people flying through traffic lights just to get stopped at the next intersection; and people blindly speeding through foggy roads without lights on. A single person might not notice these cases while making the thirty minute commute into town, but any regularly observant individual will notice at least one of these situations occurring. Not until America stops focusing on itself will the highways become a safe place to drive vehicles of all sizes.

**Step 7:** Select the best course of action - that which satisfies the highest core ethical values

The best ethical solution would be for all commuters to utilize the “Golden Rule” while on the highway, as both of the other solutions would result critically affecting the economy.

**Step 8:** Implement the selected solution - take action as warranted

No matter what federal laws may be enacted, America’s people as a whole are still going to focus on themselves rather than take care of others. A more reasonable implementation of a safer road environment would be for regular instruction and reminders of road laws, whether by constant reminders pushed to commuters phones or restrictions set on vehicles to prevent them from driving over the speed limit in any given area. There would be a federal ruling that manufacturers must install systems in new vehicles to keep them from reaching excessive speeds and any registered vehicle would also need to be upgraded with the system as well. Service providers would be responsible for developing a software that could determine when a person is about to operate a vehicle and send them reminders of good highway safety.

**Step 9:** Monitor and assess the outcome - note how to improve the next time

The solution was implemented about a year ago and initially, it was not very well received by commuters. People were concerned about safety and personal freedom when it came to the way they drove on the highway. There are still many people who are enraged about the limits on their vehicles but overall safety has seen a major increase. Manufacturers have seen a decline in profits as they needed to hire

software engineers for implementation and upkeep of the limiting systems. The economy has flourished as consumers have more disposable income since they are regularly spending less on gas and the job market has expanded as more software engineers are desired by major manufacturers. The safety notification policy was phased out over time as studies showed road safety was affected more by the speed limiters. This situation may seem over the top, but unless people learn to change the way they treat others, this solution remains to be the best.

## Appendix

### Case 4 (37-3e) Making Cars Lighter

In a New York Times article entitled, “Study Says Making Cars Lighter Would Cost Lives,” Danny Halpern reports on a study released by federal regulators that concludes that “reducing vehicle weights would have a deadly effect over all.” Headed by Charles Kahane, a leading researcher on safety at the National Highway Safety and Transportation Agency (NHSTA), the study ranked minivans and large four-door sedans as the safest vehicles on the road. Small cars were found to have the highest fatality rates, with midsize cars being safer than small and midsize sports utility vehicles (SUVs).

The original aim of the study was to explore possible effects of changes in vehicle weights to the fuel economy system. “The study confirms what we’ve known for a long time, that the down weighting of vehicles has an adverse impact on safety.” commented Eron Shostack, spokesman for the Alliance of Automobile Manufacturers (AAM), who expressed reservations about reducing the weight of heavy vehicles.

According to EPA figures, the average car weight plummeted from 4,071 lbs. in 1975 to 3,013 lbs. in 1985, rising to 3,408 lbs. by 2003. Hakim reports that cars weighing 2,500 lbs. or less garnered 18 percent of automotive sales in 1985, but less than 0.5 percent in 2003. By 2003, heavy cars and station wagons were largely replaced by light trucks, whose average weight increased from 3,840 lbs. in 1987 to 4,569 lbs. in 2003.

The study has not gone un-criticized. Some consumer groups and researchers, says Hakim, claim that the dangers sport utilities pose for other vehicles are understated in the study. Similar studies by Honda, reports Hakim, conclude that reducing weights by 100 pounds across the board would

save lives on balance. He quotes John Zeilner, engineer and president of Dynamic Research, which did the Honda studies, as saying that reducing weight could be beneficial: “It’s an energy management issue. If you are moving along at 60 miles per hour and you weigh two tons, in a crash you have to bring that two tons to a stop quickly. If you only weigh one ton, you only have to dissipate half that amount of energy. All things equal, if you have a large vehicle that weighs half as much, in a crash against a brick wall it will crush-in half as much.”

What ethical issues seem to underlie the controversy about vehicle weights? In conducting a study that attempts to determine the relevance of vehicle weight to safety, what sorts of facts would it seem most relevant to get clear about? What, if any, conceptual and application issues might such a study raise?

Discuss the relevance of the following additional items mentioned in Hakim’s article:

Later in 2003 the Bush administration was expected to recommend new fuel economy regulations for light trucks (sport utilities, minivans, and pickups).

With the exception of Honda, AAM has the major automakers as members.