

**bad**vertising

# Mindgames on wheels

How advertising sold  
false promises of safety  
and superiority with SUVs





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## Authors

David Boyle, Leo Murray, Emilie Tricarico, Andrew Simms and Robbie Gillett

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## Executive Summary

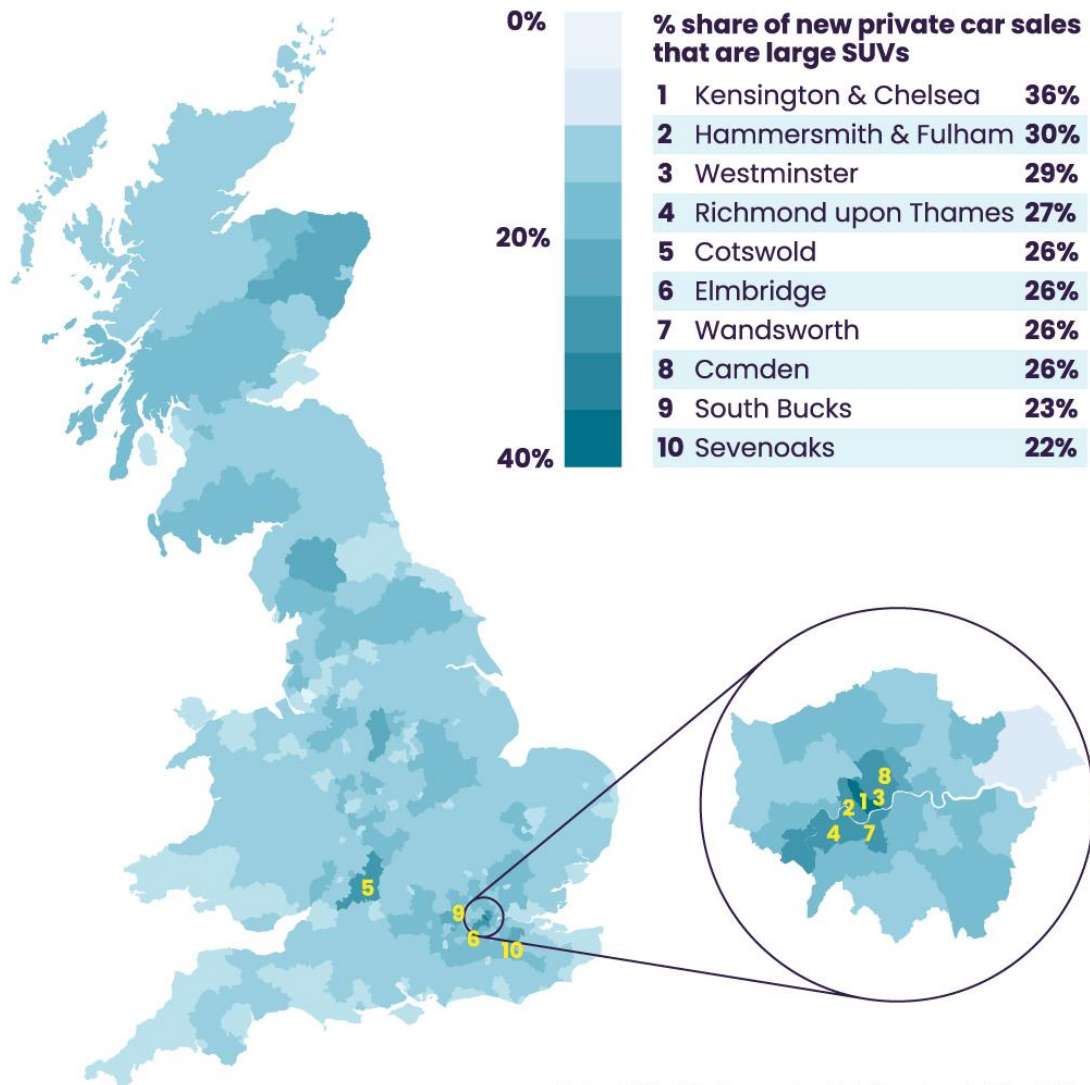


Mindgames on wheels looks at the history of how advertising persuaded urban families that they needed the equivalent of two-ton trucks to go shopping, and why that is a problem. In addition to this created demand, we reveal new data on SUV ownership that shows how the reality is far removed from the uses that these large vehicles were originally designed for.

Our analysis of the data on new car registrations in the UK for 2019 suggests that rising consumer demand for larger, more polluting SUVs is not primarily driven by buyers' practical needs:

- Three quarters of all SUVs sold in the UK to private citizens in 2019–2020 were registered to urban addresses
- Even for the largest class of SUVs, which are more likely to have genuine 4-Wheel-Drive and off-road capability, two thirds of new vehicles sold are registered to addresses in towns and cities.
- Large SUVs are most popular, not in remote farming regions, but in affluent urban and suburban areas. Six of the top ten areas for large new Large SUV sales were wealthy London boroughs (as measured by share of new private car registrations).
- The top three districts for Large SUVs – Kensington and Chelsea, Hammersmith and Fulham, and Westminster – are all Inner London boroughs. On average, one in three new private cars bought in these areas is a Large SUV.
- The borough of Kensington and Chelsea is also the Range Rover capital of Britain, by a considerable margin; one in ten new cars registered in the district is a Range Rover.
- These three boroughs also top the league table for popularity of the most polluting cars by UK sales volume (all of which are SUVs). More than one in five new cars bought in Kensington and Chelsea fall into this category.

- The areas where new cars that are too large to fit in a standard UK parking space are most popular correspond closely with those places where road space is most scarce, and where the highest proportion of cars are parked on-street.



Data: UK Dept. for Transport vehicle licensing statistics 2020

Our analysis of the history of automobile manufacturers' marketing messages around SUV models finds that car makers have spent decades working with advertisers to carefully and deliberately cultivate consumer demand for vehicles that are far bigger and more powerful than their typical buyers could ever need in practice. Their phenomenal success has relied on exploiting different groups of consumers' susceptibility to four key messages:



- Get back to nature
- Dominate the road
- Help the environment
- Protect your family

Although these messages have been highly effective at attracting buyers towards SUVs, consumers are being misled. Evidence suggests that SUV occupants are no safer, SUVs are much worse for the environment than smaller vehicles, and finally, SUV marketers' promise of escape to the wilderness is very rarely fulfilled.

The exception here is the invitation to 'dominate the road'. It is certainly the case that the rise in SUVs has made other road users less safe, but is this reality an acceptable way to sell cars to the public?

This report's conclusions lead us to make three key recommendations for action:

### **Recommendation 1: An end to SUV advertising**

In keeping with its climate commitments, and as 2021 host of the United Nations climate conference COP 26, the UK government must initiate an immediate ban on advertising for at least the dirtiest third of most polluting vehicles.<sup>1</sup> New sales of diesel, petrol and hybrid vehicles are due to end by 2030 in the UK. An advertising ban would complement this policy measure; it would work to prevent a final surge in sales of these polluting vehicles in the 2020s which will then stay on the road for an average of 6 to 11 years after purchase.<sup>2</sup>

### **Recommendation 2: A renewed commitment to tackling climate change from the Advertising Standards Authority, implemented with new codes of practice**

The Advertising Standards Authority (ASA) is the UK's self-regulation body. Its purpose is to ensure that advertising is not misleading or harmful. Given the tactics used by marketers and the harms caused by the growth of SUV ownership, the ASA has not fulfilled these objectives with regards to car advertising. The ASA must be re-structured to

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<sup>1</sup> See Upselling Smoke (2020) for more information:

<sup>2</sup> Autolist, September 11, (2019), *How Long Should a Car Last?*  
<https://www.autolist.com/guides/how-long-should-car-last>

show less bias towards advertising industry interests, and must be far more proactive in addressing climate change. We recommend that the ASA and its sister organisation the Committee on Advertising Practice immediately consult on, and implement, new advertising codes that would end advertising for high carbon products.<sup>3 4</sup>

### Recommendation 3:

#### **Reject the brief: advertising agencies must stop selling pollution**

We call on creative agencies and their media partners to reject future advertising work for polluting SUV vehicles – again as more ethical practitioners once rejected tobacco clients. Recent initiatives in the UK such as #AdNetZero and #ChangeTheBrief<sup>5</sup> mark important steps forward for the industry to clean up its own emissions and promote attitudes and behaviours that build the low carbon transition. This good work is undermined however, by the continued promotion of high carbon lifestyles by other parts of the advertising industry.

Many agencies and individual creatives are pledging not to work on fossil fuel company briefs<sup>6</sup> and to disclose what proportion of their work comes from other high pollution sectors.<sup>7</sup> These steps are to be applauded and should be integrated into the industry's mainstream initiatives such as #AdNetZero. Given the huge rise in SUV ownership today, we suggest these vehicles are added to the list of products that climate-conscious advertisers refuse to promote.

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<sup>3</sup> For a definition of high carbon products, please see Low Carbon Advertising Advertising Policies – a Guide for Local Policymakers (2021) <https://www.badverts.org/policymakers-toolkit>

<sup>4</sup> We support the recommendations of Adfree Cities report in to the ASA here: <https://adfreecities.org.uk/asa/>

<sup>5</sup> Change the Brief initiated by Purpose Disruptors <https://www.purposedisruptors.org/changethebrief>

<sup>6</sup> Clean Creatives – <https://cleancreatives.org/about>

<sup>7</sup> It's Nice That, July 09 (2019), *Creative agency Futerra wants the ad industry to declare a climate emergency* <https://www.itsnicethat.com/news/futerra-creative-climate-disclosure-advertising-090719>

## Introduction



**“Which auto-driver has not felt the temptation, in the power of the motor, to run over the vermin of the street – passers-by, children, bicyclists? In the movements which machines demand from their operators, lies already that which is violent, crashing, propulsively unceasing in Fascist mistreatment...”**

Theodor Adorno, *Mínima Moralía*, 1951

In August 2020, climate charity Possible and the New Weather Institute think tank launched the Badvertising campaign to end advertising of high carbon goods and services, with an initial call for curbs on adverts for the biggest, most polluting vehicles – which are overwhelmingly Sports Utility Vehicles (SUVs).<sup>8</sup>

Our accompanying analysis found that the strong consumer shift towards SUVs from smaller, cleaner cars is the key reason why the average carbon dioxide emissions of a new car sold in the UK has been increasing since 2016 – when our climate goals need them to be moving rapidly in the opposite direction. The car buying public has been switching to SUVs at a much faster pace than they have been switching to electric vehicles (EVs), both in Britain and around the world. So much so that SUVs have been identified as the second biggest source of the global rise in carbon emissions since 2010, after the power sector.<sup>9</sup>

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<sup>8</sup> <https://www.badverts.org/>

<sup>9</sup> IEA, October 15 (2019), *Growing preference for SUVs challenges emissions reductions in passenger car market*  
<https://www.iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market>



Our previous report showed that higher profit margins from the manufacture and sale of SUVs compared with smaller cars has led auto makers to concentrate their marketing spend on pushing their more polluting product ranges to potential customers.<sup>10</sup> By connecting the dots between fossil fuel consumption, automobile manufacturing, and the advertising industry, we were able to tell a clear story about the urgent need to introduce curbs on ads for the most environmentally damaging goods, starting with the least fuel efficient SUVs.

This clear rationale was met with predictable protests from both motor manufacturers and advertisers, who made a range of incoherent and contradictory arguments against such regulations. Mike Hawes from the Society of Motor Manufacturers and Traders (SMMT) retorted that, “SUVs are an increasingly popular choice”<sup>11</sup>, but neglected to engage with the central campaign question of how they came to be so popular.

Steve Gooding of the RAC Foundation said, “People spending £70,000 on a new car are probably not swayed much by ads – they’re attracted to the prestige brand. I suspect banning adverts wouldn’t make a great deal of difference.”<sup>12</sup> What Gooding seems to have missed is the central role of advertising in creating a ‘prestige brand’ in the first place.

The advertising industry’s complaints made even less sense, with Matt Bourne from the Advertising Association managing to argue simultaneously that the right approach is “a public education campaign” (coincidentally, making more money for advertisers) to “equip people to fully understand what the climate impact is of their decisions”; but also that, “we shouldn’t be focusing on advertising bans on SUVs” because a ban would “not be effective”.<sup>13</sup>

His reticence is easy to explain: automobile brands spent nearly a billion pounds on advertising in the UK in 2018<sup>14</sup>, with

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<sup>10</sup> Badvertising, August (2020), *Upselling Smoke, the case to end advertising of the largest polluting cars*

<https://www.badverts.org/s/Upselling-Smoke-FINAL-23-07-20.pdf>

<sup>11</sup> BBC, August 03 (2020), *Adverts for large polluting cars ‘should be banned’*

<https://www.bbc.co.uk/news/uk-53607147>

<sup>12</sup> *Ibid.*

<sup>13</sup> TalkRadio interview, 3rd August 2020.

<sup>14</sup> Zenith, Global Intelligence. *Automotive Adspend Forecasts*

<https://www.zenithmedia.com/wp-content/uploads/2019/03/Automotive-adspend-forecasts-2019-executive-summary.pdf>

an ever-increasing share of that spend going towards pushing SUVs.

But either advertising works to influence consumer behaviour or it doesn't, whether it is raising consumer awareness about environmental impacts – or persuading them to buy larger, dirtier vehicles than they need. Advertising executive Rory Sutherland addressed the ethical tensions intrinsic to marketing in 2010, famously explaining that he “would rather be thought of as evil than useless.”<sup>15</sup> So the Advertising Association's bland statement that “advertising reflects consumer demand” may be true in itself, but insults the public's intelligence via the absurd pretence that advertising does not also play a central role in shaping that demand.

As economist J. K. Galbraith set out as long ago as 1958, “Demands are not internally created by a consumer.” Rather, he said, “As a society becomes increasingly affluent, wants are increasingly created by the process by which they are satisfied... producers may proceed actively to create wants through advertising and salesmanship.”

The main body of this report explores exactly how car producers and their marketing agencies have sought – and spectacularly succeeded – to cultivate consumer demand for SUVs.

Before we get to that, our fresh research on new UK car registrations puts to bed the related argument often made in response to our call for an SUV ad ban: that consumers are simply buying the cars they need to meet the practical demands of their lifestyles. As motoring journalist James Batchelor put it, “For a lot of people in the UK they do need SUVs in remote places... I don't like this idea that we are demonising people who have to use a car to commute because quite often their car is their sole means of transport”.

<sup>16</sup>

But as our new analysis demonstrates, three quarters of new SUVs in the UK are registered to urban addresses. Even for the largest, heaviest class of SUVs, which are more likely to have genuine 4-wheel drive and off-roading capability, two thirds are bought by people living in towns and cities. Range Rovers, the archetypal British off-road car brand, are more popular in Kensington and Chelsea than anywhere else in the UK, with

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<sup>15</sup> The Marketing Society, *Empower*  
<https://www.marketingsociety.com/the-library/we-cant-run-away-ethical-debates-marketing>

<sup>16</sup> BBC Radio 5 Live interview, 3rd August 2020.

the neighbouring Inner London Boroughs of Westminster and Hammersmith and Fulham close behind. London boasts a world class public transport network, but zero opportunities for off-roading.

So how did we end up in this situation, where global climate change goals are in jeopardy because so many ordinary households are being persuaded to buy two tonne trucks to drive the kids to school on crowded city streets?

## Background and context



Transport is now Europe's biggest source of carbon emissions, contributing a massive 27 percent to the EU's total carbon dioxide emissions in 2018, with cars and vans representing more than two thirds of these.<sup>17</sup> Car adverts – and especially adverts for SUVs – often display images of exotic, wild or rural locations surrounded by plenty of space. The ads promise adventure, escape and the open road; but the reality in most world cities is traffic jams and soaring, illegal levels of air pollution.<sup>18</sup> There is a key paradox here that is particularly painful for SUVs owners, lured with the promise of wilderness and the open road, but actually trapped inside a polluted gridlock of their own making.

Manufacturers have now shifted away from selling family cars towards even bigger and more polluting SUVs, and the industry's drive to persuade us to buy these larger, dirtier vehicles has been so effective that it now threatens to trash our climate change targets.<sup>19</sup>

Now, with the coronavirus pandemic, we also need as much space on our streets as possible for pedestrians and cyclists to get around and commute to work safely. But as well as being more polluting, oversized SUVs take up more precious urban space than conventional cars – often too big to fit in a standard UK parking space.<sup>20</sup>

Recent years have seen vehicle manufacturers move the bulk of their advertising spend to promoting their SUV ranges rather than traditional cars. In 2018, car maker Ford reportedly spent 66 percent of its advertising budget promoting SUVs

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<sup>17</sup> Transport & Environment, April (2018), *CO2 Emissions from cars: the facts*  
[https://www.transportenvironment.org/sites/te/files/publications/2018\\_04\\_CO2\\_emissions\\_cars\\_The\\_facts\\_report\\_final\\_0\\_0.pdf](https://www.transportenvironment.org/sites/te/files/publications/2018_04_CO2_emissions_cars_The_facts_report_final_0_0.pdf)

<sup>18</sup> Transport & Environment, June 7 (2018), *Six EU Governments finally face legal action over air pollution*  
<https://www.transportenvironment.org/news/six-eu-governments-finally-face-legal-action-over-air-pollution>

<sup>19</sup> See <https://www.badverts.org/>

<sup>20</sup> Badvertising, August (2020) *Upselling Smoke, the case to end advertising of the largest polluting cars*  
<https://static1.squarespace.com/static/5ebd0080238e863d04911b51/t/5f21659998148a15d80ba9be/1596024223673/Upselling+Smoke+FINAL+23+07+20.pdf>

and light trucks in the USA – up from 42 percent in 2016.<sup>21</sup> As a result, more and more people are buying SUVs, when we could instead be investing in a cleaner future. If we want to encourage sustainable transport and travel, it is time to end advertisements promoting big, polluting SUVs.

### Key facts about SUVs

- In 2019, over 150,000 new cars were sold in the UK that are too large to fit in a standard parking space (according to European Environment Agency vehicle sales figures).
- For every one fully electric vehicle sold in the UK in the last four years, 37 SUVs were sold.<sup>22</sup>
- These unnecessarily large, energy hungry vehicles produce around 25 percent more carbon dioxide emissions than a medium-sized car.<sup>23</sup>
- Globally, rising sales of SUVs are the second biggest cause of increasing carbon emissions (after power generation, but ahead of aviation and heavy industry).
- Air pollution, largely from motor traffic, kills between 28,000 and 36,000 people a year in the UK.<sup>24</sup>

The Badvertising alliance is calling for adverts for new cars with emissions exceeding 160g of carbon dioxide per kilometre or with an overall length exceeding 4.8m (that's longer than your average crocodile) to no longer be permitted in the UK in any form, starting now. These thresholds would equate to an advertising ban on the dirtiest

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<sup>21</sup> Inside Radio, Ford Ad Spend Predicted Company's Shift Away from Cars, November 12 (2018)

[http://www.insideradio.com/free/ford-ad-spend-predicted-company-s-shift-away-from-cars/article\\_69c0c832-e65a-11e8-a609-5b56473df19e.html](http://www.insideradio.com/free/ford-ad-spend-predicted-company-s-shift-away-from-cars/article_69c0c832-e65a-11e8-a609-5b56473df19e.html)

<sup>22</sup> UK Energy Research Centre, December (2019), Review of Energy Policy 2019

[https://d2elqxpsswcpqz.cloudfront.net/uploads/2020/03/ukerc\\_review\\_energy\\_policy\\_19.pdf](https://d2elqxpsswcpqz.cloudfront.net/uploads/2020/03/ukerc_review_energy_policy_19.pdf)

<sup>23</sup> IEA, October 15 (2019), Growing preference for SUVs challenges emissions reductions in passenger car market

<https://www.iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market>

<sup>24</sup> Public Health England, March 11 (2019), Public Health England publishes air pollution evidence review

<https://www.gov.uk/government/news/public-health-england-publishes-air-pollution-evidence-review#:~:text=Air%20pollution%20is%20the%20biggest,lung%20cancer%2C%20and%20exacerbates%20asthma.>

third of the UK car market in terms of carbon emissions – and on all cars which are too big to fit in a standard UK parking space.

The question at the heart of this report is why this measure should be necessary. And, perhaps most important, how have manufacturers managed to pull off this trick – persuading consumers that they will be safer or closer to nature by buying SUVs, when in all cases we have seen, the reverse is true?

The short answer to the other key question of why it is that SUVs are so aggressively marketed is because they are enormously profitable – the early SUVs provided a 25 percent profit, compared to just 5 percent on ordinary cars: Ford were able to buy Volvo and Land Rover with their SUV profits by 1999.<sup>25</sup> Thanks to the vast sums spent marketing SUVs – and some of the cleverest creative minds in advertising – automobile manufacturers have managed to seduce so many potential buyers that SUVs now account for four in ten of every car sold worldwide.<sup>26</sup> That is what this report is about.

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<sup>25</sup> Keith Bradsher (2002), *High and Mighty: The dangerous rise of the SUV*, New York, Public Affairs, 89.

<sup>26</sup> <https://www.iea.org/reports/tracking-transport-2020>



## A short history of the SUV



The origin of mass motoring lies in the USA in the 1950s, where they opened the world's first – and possibly only – drive-thru wedding chapel in Las Vegas in 1951. President Dwight Eisenhower endorsed the interstate highway system five years later, in 1956.

By the 1960s, thanks to the arrival in the US market of European and Japanese cars, the market had begun to segment – you could choose fast and cool like James Bond in his Jaguar or small and trendy in a Morris Mini, or tuning in and dropping out with the hippy image of a VW camper van. But all these different approaches to marketing motor cars came from similar roots: they all meant escape.

## The development of motoring fantasies

The first advert to use the trick that SUV advertisers would turn to in the 1990s – showing the car by looking up at its radiator, a kind of abject prostration before the motor – was for 'The newest car in the world', looking up beyond the car at the modernist Guggenheim Museum [Cadillac, 1939].<sup>27</sup>

By the 1940s, car adverts got tougher, exemplified by one car in particular, the American Jeep. The Jeep was a quarter-ton truck from the American Bantam Car Company. Even before the war came to the USA, Bantam found they could not keep up with demand, so in 1940, they signed contract licences over to Ford and Willys-Overland. Willys produced 350,000 Jeeps during the Second World War and Ford 280,000. In 1945, Ford gave up production of the Jeep and Willys went on to develop a four-wheel drive passenger version they called the Jester.

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<sup>27</sup> Judy Vaknin (2008), *Driving it Home; 100 years of car advertising*, Middlesex University Press, 51.



1939 Cadillac advert and 1961 Land Rover promotion

## Why did SUVs emerge in the USA?

The answer was a series of gaps in the American regulations.

This emerged as part of a post-war spat between the USA and the European Economic Community, as it was then, which came to a head in the mid 1960s. Preceding today's chlorinated chicken tussles in post-Brexit Britain, in the 1950s, American chickens were imported into Europe in great numbers, and especially in Germany. The forerunners of the EU wanted to develop their own agricultural sector, so they imposed a tax on imported chickens. The Lyndon Johnson administration responded with a tax on imported pick-up trucks.<sup>28</sup>

In effect, this locked foreign competitors out of the US off-road market for a generation, until the turn of this century. That meant that, for nearly four decades, the off-road market was just American—at least in the USA. Even though most

<sup>28</sup> Keith Bradsher (2002), *High and Mighty: The dangerous rise of the SUV*, New York: Public Affairs, 12–13.

SUVs are rarely driven off roads, that is the basis of their definition. More on that in the next section.

Also important was a mistake made by the chairman of transportation in the Carter administration in the late 1970s. Joan Claybrook set the weight limit at 8,500 pounds for fuel economy regulations, intending to raise it further to 10,000, but – thanks partly to the fact that there was too much else to do to respond to the energy crisis – they never did.<sup>29</sup> Which means there were for many decades no fuel economy rules when your truck was over 8,500 pounds in weight. That provided an opportunity, should somebody want to, to design a serious gas guzzler.

## Inventing an SUV

By 1984, the first SUV that American buyers seized on was the Jeep Cherokee, which began recording high sales that year – and the term SUV was beginning to emerge in the motoring press. That came to the attention of a Swiss-born former US marine called Bob Lutz, by then a Ford executive exiled to trucks. He also noticed how the Cherokee with four doors was not threatened by the two-door Bronco II. Two years later, Lutz had made his case to the board and was recruiting his team.

The Ford board had been sceptical, as well they might be: why would anyone buy a car based on a light truck which could only manage 20.5 miles per gallon (mpg) – especially when they could spend less on a more traditional car which could go 27.5 mpg or more?

The answer, startlingly enough, came from the UK.

## The rise of the Range Rover

Immediately after the Second World War, UK manufacturer Rover's managing director Maurice Wilks had been using an old US army Jeep on his farm. It needed replacing and he noted that no British equivalent existed. And so the Land Rover was born in 1948. Its utility bodywork was initially wrapped around a saloon engine and given a 4x4 driving system. In spite of its rugged nature and purpose, ultimately, various incarnations of it would come to be driven as a badge of social and economic success.

The Land Rover was so successful that, by 1951, it was selling twice as many as all other Rover vehicles combined and by

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<sup>29</sup> Bradsher (2002), 29–30.

appealing to two markets simultaneously, on one hand fostering a taste for off-road 4x4s among a broader public, and on the other supplying armies, police forces and other government contracts around the world.<sup>30</sup>

Land Rover's take-up by the farming and land-owning classes deepened the company's association with the establishment and the landed aristocracy, and made Rover even more synonymous with a certain kind of British or, more properly, English identity. It was something, again, that the company deliberately cultivated in its marketing.

The Range Rover went on sale in the UK in 1970, as a two-door, larger Land Rover. It was not originally designed as a luxury car. In fact, its utilitarian plastic dashboard was intended to be washed with a hose. But a few of them made it to the USA via the grey market<sup>31</sup>, and one of these was imported to Detroit by Edsel Ford II, grandson of the company founder. He backed Lutz to build the Ford Explorer because he wanted a US equivalent from Ford. That was how the decision was made. Lutz recruited the top Ford engineer Steven Ross and, by 1986, the team was in place in a big room covered with photos of contemporary films like *Top Gun*, *Rambo* and *Rocky IV* – signalling the next phase in the SUV's marketing journey.

## Market researching

There was by then a huge amount of market research carried out on the unsuspecting Cherokee owners, who – as it turned out – did not want minivans, which they described as 'mum mobiles'. A typical Cherokee owner was a man with a family, who wanted to send a different message via their car than a "docile, family" one.<sup>32</sup> He wanted something to make him feel a bit younger and carefree. This male midlife crisis marketing message married perfectly with the SUV's rugged public image: these buyers never needed off-road 4x4 capability for any actual journeys, but they still wanted to have it.

Marketing for the Ford Explorer, which Lutz's team went on to design, emphasised toughness and a sense of safety, especially in city streets which they portrayed as unpredictable and threatening, just as SUV advertisers have

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<sup>30</sup> Andrew Simms and David Boyle (2011), *Eminent Corporations*, London: Constable & Robinson.

<sup>31</sup> A grey market is a market in which goods have been manufactured by or with the consent of the brand owner but are sold outside of the brand owner's approved distribution channels—an activity that can be perfectly legal

<sup>32</sup> Bradsher (2002), 51 and 101–2.

done ever since: adverts for the Chevy Blazer claimed that it provided “a little bit of security in an insecure world”. One of the top motor design consultants in the car-making city of Detroit said that: “SUV buyers want to be able to take on street gangs with their vehicles and run them down”.<sup>33</sup>

Once again, US auto manufacturers borrowed a little from British attempts, especially around Rover, to sell bigger cars by putting across a combination of safety and wartime strength – plus a hint of youthful naughtiness:

‘In a country that has 184 rainy days, 51 freezing days and 25 foggy days every year, no car can ever be too safe’ [Rover, 1973].<sup>34</sup>

‘It pulls beautifully’ [overtly sexual innuendo for the Triumph Spitfire, 1979].<sup>35</sup>

Range Rover often also played on the British penchant for outright snobbery: ‘There’s only one car for the double-barrelled’ [grouse-shooting with Range Rover, 1981].<sup>36</sup> Range Rovers were meant for the type of person that is both posh and armed.

One other key development that fed into the creation of the SUV market was the first Gulf War. Introduced in 1979, the HumVee was a military transport and assault vehicle used by the US military that had featured prominently in news coverage of the ‘Desert Storm’ operation of 1991. Expecting a declining military demand after the end of the Cold War, HumVee manufacturers started producing the \$100,000 Hummer for the civilian market in 1992 – the same year Lutz launched his Ford Explorer by driving it through a huge plate glass window at the Detroit auto show.

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<sup>33</sup> Bradsher (2002), 97, quoting Rapaille.

<sup>34</sup> Vaknin (2008), 108.

<sup>35</sup> Vaknin (2008), 112.

<sup>36</sup> Vaknin (2008), 120.





Ford Explorer launch at Detroit auto show in 1992; Arnold Schwarzenegger unveils the new Hummer H2 in downtown Manhattan in 2001.

Early print advertising emphasised the HumVee's violent mastery of the natural environment: "Premeditated and deliberate aggression, violence, and the deployment of weaponry against nature are endorsed by the manufacturer. . . . Nature has become an assault course, its geomorphology reduced to measured contours and gradients of technological challenge," wrote the American academic Leigh Glover.<sup>37</sup> The company failed to sell enough civilian

<sup>37</sup> Leigh Glover (2000), 'Driving Under the Influence: The Nature of Selling Sports Utility Vehicles', *Bulletin of Science, Technology and Society*, Vol 20, No 5. Oct.



HumVees to make much money, so they sold out to General Motors in 1999. Ford responded by buying Land Rover the following year. They were by then awash with cash from the success of their in-house SUV programme.

The point of these explicit associations with violence was not to reflect a growing brutalisation of society, but to identify people the market researchers describe as “especially self-centred”.<sup>38</sup> Thanks to increasingly sophisticated market research and the help of in-house psychologists, the marketers knew a great deal about SUV buyers. This early SUV marketing strategy was deliberately targeted at people who were more self-centred and vain, who tended to be worried about their marriage and relationships – to people who had a weak sense of community but were nervous about how other people saw them.<sup>39</sup> That was the consumer profile being used by car marketing departments to identify potential SUV buyers.

The marketing was very closely targeted towards specific psychological types. Most people hated the aggressive advertising for the enormous Dodge Ram. Only 20 percent of people in the USA liked the adverts – but that minority loved them.<sup>40</sup>

With the Hummer, GM began to shift from “the casual brutalisation of nature deployed in the earlier ads” and towards a “more sinister articulation of nature and society in which the truck’s off-road prowess implicitly figured as a means of protecting oneself against social dangers”.<sup>41</sup> In 2001, GM used Arnold Schwarzenegger to unveil the new H2 in downtown Manhattan on the three-month anniversary of the 9/11 attacks.

## Psychology and advertising links

The links between psychology and advertising date back to the start of the marketing industry in the early 20th century. A few leading psychologists specialised in the field lent their services to the advertising profession and thereby contributed to the development of techniques to assess the

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<sup>38</sup> Keith Bradsher (2002), *High and Mighty: The dangerous rise of the SUV*, New York: Public Affairs, 101–3.

<sup>39</sup> Bradsher (2002), 101.

<sup>40</sup> Bradsher (2002), 98–9.

<sup>41</sup> Shane Gunster (2004), “You Belong Outside”: Advertising, Nature, and the Suv’, *Ethics and the Environment*, Fall/Winter, Vol. 9, No. 2, Indiana University Press,

effectiveness of advertising messages directed at consumers (see appendix).<sup>42</sup>

Today, while excessive levels of consumption are posing a direct threat to sustaining life on the planet, people go as far as falling into debt to fuel their consumption desires. This is sometimes referred to as "compulsive" or "emotional spending" and has been shown to be more prevalent with people who are vulnerable to advertising pressures.<sup>43 44</sup>

**“Advertising design, in persuading people to buy things they don’t need, with money they don’t have, in order to impress others who don’t care, is probably the phoniest field in existence today.”**

Victor Papanek, 1972, *Design for the Real World: Human Ecology and Social Change*

While marketing generally never makes any explicit mention when drawing on psychological theory, this is not the case for the advertising industry whose appropriation of psychological tools dates back to the onset of the profession.

<sup>45</sup> In the 1920s, John Braodus Watson – a leading advertising psychologist – was the first to apply behaviourist theories<sup>46</sup> to the profession.<sup>47</sup> Since then, ad agencies went on to rely on different methods to study consumers based upon their “values and lifestyles” (psychographics) or assess people’s

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<sup>42</sup> The Psychologist, August (2007), *Marketing psychology and the hidden persuaders* <https://thepsychologist.bps.org.uk/volume-20/edition-8/marketing-psychology-and-hidden-persuaders>

<sup>43</sup> The Guardian, February 09 (2021), *‘I thought buying things would make me feel better. It didn’t’: The rise of emotional spending* <https://www.theguardian.com/business/2021/feb/09/i-thought-buying-things-would-make-me-feel-better-it-didnt-the-rise-of-emotional-spending>

<sup>44</sup> Mikolajczak-Degrauwe, K., and Brengman, M. (2014), *The influence of advertising on compulsive buying – The role of persuasion knowledge* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4117277/>

<sup>45</sup> The Psychologist, August (2007), *Marketing psychology and the hidden persuaders* <https://thepsychologist.bps.org.uk/volume-20/edition-8/marketing-psychology-and-hidden-persuaders>

<sup>46</sup> Behaviourism is a psychological theory focussing on the “malleability of human behaviour”.

<sup>47</sup> Buckley, K. W., (1982), *The selling of a psychologist* [https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(198207\)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(198207)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8)

physiological responses to adverts in order to exploit these for beefing up sales.<sup>48</sup> A recent innovation is the field of neuromarketing, developed in 2002, using MRI scanners to isolate activity in the brain in response to marketing stimuli.<sup>49</sup>

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From the late 1990s until now, criticisms have been directed at the marketing discipline and agencies for their ideological role in normalising consumerism.<sup>51</sup> A vanguard to this critique is Vance Packard's *Hidden Persuaders*, published in 1957, which came as a shock to both the public and marketers. This was the first publication to present a clear picture of the influence of psychological methods that marketers used to persuade and manipulate consumers.<sup>52</sup> Today, psychologists are still fairly represented in the marketing and advertising professions. Based upon information available on LinkedIn, we found that there were around 2–3 percent of psychologists represented at the biggest marketing firms, such as *Leo Burnett*, *We are Social*, *Havas* or *TBWA Worldwide*. Other marketing agencies like *Socialfix Media* and *IDEO* had up to 5–7 percent of psychologists among their staff. These professions are even promoted within academia. On its website, the famed *American Psychology Association* (APA) showcases careers in marketing and product development.<sup>53</sup>

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## Over here and there

In the 21st century, Japanese manufacturers have been particularly influential in shaping the marketing messages for SUVs (see below). In 2007, the Japanese carmaker Nissan managed to steal a march on their rivals with the Qashqai, which came out of their European operation. This convinced

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<sup>48</sup> The Psychologist, August (2007), *Marketing psychology and the hidden persuaders* <https://thepsychologist.bps.org.uk/volume-20/edition-8/marketing-psychology-and-hidden-persuaders>

<sup>49</sup> Erasmus Centre for Neuroeconomics (2021) <https://www.erim.eur.nl/neuroeconomics/projects/detail/2329-the-history-of-neuro-marketing-and-neuroeconomics/>

<sup>50</sup> The Psychologist, August (2007), *Marketing psychology and the hidden persuaders* <https://thepsychologist.bps.org.uk/volume-20/edition-8/marketing-psychology-and-hidden-persuaders>

<sup>51</sup> *Ibid.*

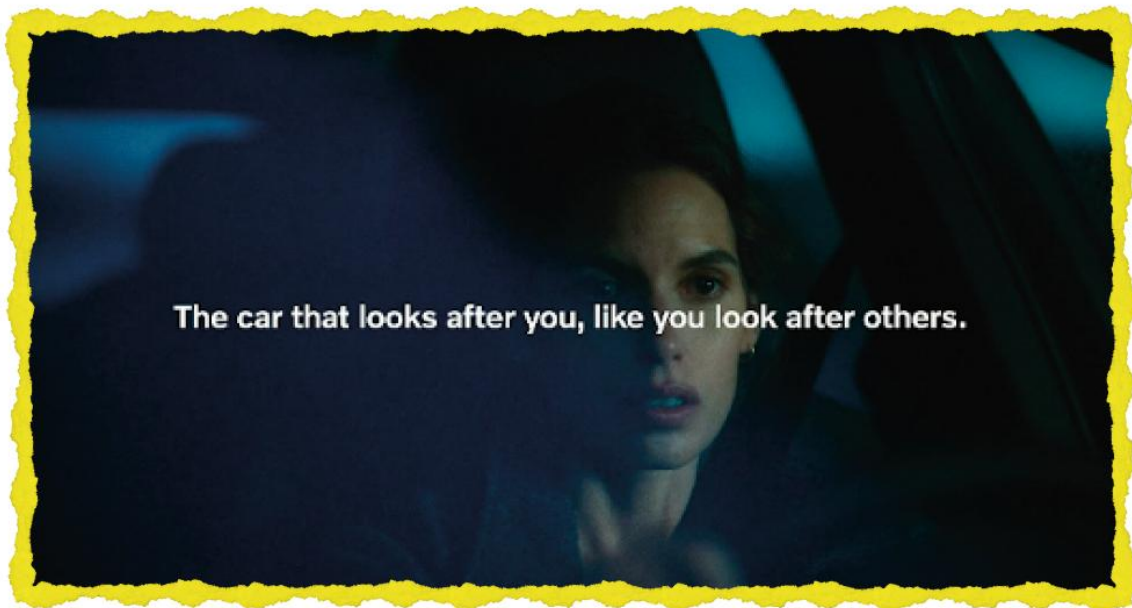
<sup>52</sup> *Ibid.*

<sup>53</sup> American Psychological Association (2021), *International Market Research Consultant* <https://www.apa.org/careers/resources/profiles/garfein>

<sup>54</sup> American Psychological Association (2021), *Market Research Consultant* <https://www.apa.org/careers/resources/profiles/kraus>

them to abandon their old saloon car ranges in Europe in favour of the 'mid-market' SUVs.

Europe has been relatively late in the dash for huge cars, helped by collective fuel economy regulations. But by 2002, as many as 100,000 were sold in Germany. Three years later, they were reaching that same number after about seven months (93,000 by June). Some of these were very large vehicles, categorised as over 2.8 tonnes.



TV ad for Volvo XC60 and XC90 models by Swedish film director, Niclas Larsson 2020.

Volvo, for example, has been criticised in Sweden for their recent advertising campaign which used a well known comedian (Fares Fares) to market their huge XC60 as a vehicle that "takes care of you".<sup>55</sup> But although their automatic safety systems may protect children in cars from accidents, there is no acknowledgement that the extra carbon and other pollutants pumped out may endanger them later.

This may provide a clue about why people have turned to SUVs in such numbers. How did such an expensive and petrol-guzzling car ever win the kind of public support that SUVs have done? Again, the answer lies in advertising.

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<sup>55</sup> Resumé, September 09 (2020), *Volvo Cars lanserar global kampanj – med Fares Fares*  
<https://www.resume.se/marknadsforing/kampanj/volvo-cars-lanserar-global-kampanj-med-fares-fares/>

## Selling junk



**"Modern railroad travel is so fixed; it has no latitude, no elasticity ... But the prospect of new and varied roads, and of that intimate contact with woodland silences, grassy slopes, sudden and sheer vistas at sharp turns, streams not followed by endless lines of cars – of being able to change your mind and go by this route or that according to your mood – what a difference! These constitute a measureless superiority."**

*Theodor Dreiser, [The Magic of the Road](#), 1916*

This passage from 1916 sounded some of the key themes of auto ownership that resonate even in the present day era of the SUV. Yet there was a paradox at the heart of all motor advertising, which has grown more pointed – and poignant too – with every passing year. The more successful the advert is, and the more drivers seek the open road, like Mr Toad in 'The Wind in the Willows', the less true the advertising becomes. By the 1950s, the available road space was largely full. Far from providing drivers with an open road, punters ended up in a traffic-filled, choking gridlock.

The motorway system and the inner-urban expressways were, in this respect, a series of attempts to get cars out of the cities again. German critics at the time wrote about the paradox of their autobahn system taking people out to nature. Nevertheless, a visit by British transport planners to see Germany's autobahns in 1937 shaped the whole UK approach in the years to come.<sup>56</sup>

What these and other planners failed to grasp was that these extra concrete spaces would simply encourage more people

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<sup>56</sup> See remarks by R. A. Kidd, former county surveyor of Nottinghamshire in Allan Smith (1984), *A History of the County Surveyors Society*,

to buy cars, and to fill them up. What could motor advertisers do, except to encourage very slight social distinctions in cars? Then along came the SUV and it seems to have provided an opportunity to re-run their original ideas – and reclaim them from the great dustbin of advertising past.

The plan has succeeded spectacularly. The trouble is, this second time around, its tenuous connection with the truth seems to have seeped away...

## **Get back in touch with rugged nature**

Ford went to enormous lengths in the 1990s to promote the idea that their new Explorer SUV made families or people who drove them 'bold, adventurous and carefree'.

In October 1999, Ford launched their 'No Boundaries' campaign, linking the car with rugged outdoor individualists, who were shown hiking, kayaking or rock-climbing, with an Explorer parked nearby. At the same time, Ford dealerships were encouraged to get in some camping equipment. One store even installed some trees and a river running through them. Then there was the Ford travelling show called the 'No Boundaries Experience', where children could test-drive mini SUVs.

From May 2002, Ford sponsored a string of outdoor festivals and they also co-produced a 'No Boundaries' TV show which saw contestants hiking up the Arctic Circle. And they sponsored an all-woman team to climb Mount Everest.

There is no doubt that this taps into a strain in the American psyche that believes in the outdoor life – and in fact Ford had always tried to promote their cars along these lines, even driving a Model T up Ben Nevis in 1911. But since most Explorer drivers never needed their 4X4 capability, there was also something faintly ridiculous about it. So is the idea of selling access to the wild in this way, when success would undermine the wild completely. Imagine lines of Ford Explorers queuing to get into the wild. It made no sense.

Particularly in Europe, which lacks the abundance of wide open spaces enjoyed by Americans, the promise of driving into the wild included an element of pyramid selling; after a few years of everyone doing it, the sale becomes meaningless.

This trend was also evident in the H1 Hummer adverts with the message: "Sometimes you find yourself in the middle of





Cars parked at the base of Mount Snowdon, Wales, 2020.

nowhere. Sometimes in the middle of nowhere you find yourself.” [Hummer, 2001].<sup>57</sup> This may be true of course, but not at the wheel of a car.

This was the essence of the first marketing appeal of SUVs. Around \$9 billion was spent on advertising between 1990 and 2001 to persuade people that they wanted to escape into the rugged purity of the wild, though most of the evidence suggests that they never actually did.<sup>58</sup> What’s more, as our latest analysis of UK car sales shows, three quarters of new SUVs are registered to urban addresses, while the Range Rover capital of Britain is the Inner London Borough of Kensington and Chelsea.<sup>59</sup>

## ‘Beat up everyone else’

In 2011, the advertising agency Saatchi & Saatchi Sydney won an award for their ‘no soft stuff’ adverts for Toyota 4x4s.<sup>60</sup> In their own words, this was “designed to intimidate and

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<sup>57</sup> Hummer 4x4 Off Road (2011)

<https://www.hummer4x4offroad.com/forum/showthread.php/487-HUMMER-Decal-Ideas>

<sup>58</sup> Gunster (2004).

<sup>59</sup> See Appendix B

<sup>60</sup> D&AD (2011), *Country Australia Border Security: Nothing Soft Gets In*

<https://www.dandad.org/awards/professional/2011/direct/18377/country-australia-border-security-nothing-soft-gets-in/>

interrogate city people, while giving country folk a new champion. 'Tofu, hair gel, small fluffy dogs, roller blades, soy decaf lattes. Not on our watch.'

We realise their tongue was firmly in the cheek, but fomenting strife between town and countryside feels more dangerous a decade later.



Dodge Durango ad (top) and Jeep Cherokee ad (bottom).

Perhaps because, in the end, marketing messages about loving the wild so much that you asphyxiate it seemed so corny; another message emerged at the same time from car advertisers trying to drag down Ford's market share. And this message was too dangerous to be corny.



One 1999 advert for the Jeep Cherokee seemed to more than hint at violence. It appeared to be a celebration of the destruction of the American west, smeared in blood. The slogan was 'Adrenalin rush hour', as if somehow General Custer or similar had just lost his head when he slaughtered his way to Little Big Horn.<sup>61</sup>

Also hinting at the acceptability of violence was the Daimlerchrysler advert for the Dodge Durango: "This baby carries around chunks of your wimpy wannabe [SUVs] in its tailpipe..." [Dodge, 2000].<sup>62</sup>

Or Isuzu's "Put the world at the mercy of your whims." [Isuzu, 1998].<sup>63</sup> Or Jeep's "Get out there and show mother nature who's boss." [Jeep, 2000s].<sup>64</sup>

These are adverts, in effect, for battered people. They took their cues from Ford's idea of the wild, aware that sometimes the environment around us may feel so wild that we need to see it as a threat – and treat it accordingly, be careful of it – and it may be just around the corner too.

It was Honda's channelling of bodybuilder Charles Atlas which revealed that the target of these adverts were the parts of all of us, no doubt, that feel inadequate: 'Now let's see who gets sand kicked in their face at the beach'. [Honda C-RV, 2002].<sup>65</sup>

By then, rival brands were becoming increasingly menacing: 'Kick derrière'. [Lincoln Navigator].<sup>66</sup>

'Tread lightly, and carry a big V-8'. [Dodge Durango, 1998].<sup>67</sup>

At more than two tonnes, I don't believe anyone could accuse Dodge of treading lightly.

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<sup>61</sup> Vaknin (2008), 140.

<sup>62</sup> In *Gentlemen's Quarterly*, August 2000. Quoted in Gunster (2004).

<sup>63</sup> Abhirami Jayara (2019), '(MIS)APPROPRIATIONS OF NATURE: POLITICAL AND POSITIONAL ASPECTS OF THE "NATURE" IN SELECT ADVERTISEMENTS', *Navajyoti, International Journal of Multi-Disciplinary Research*, Vol 4, No 1, Aug.

<sup>64</sup> James Farrell (2010), *The Nature of College: How a New Understanding of Campus Life Can Change the World*, New York, Milkweed, 133.

<sup>65</sup> Gunster (2004)

<sup>66</sup> Los Angeles Magazine, January (1999)

<sup>67</sup> Ebay (2021), 1998 Dodge Durango Tread Lightly And Carry A Big V 8-Original Print Ad  
<https://www.ebay.com/itm/1998-Dodge-Durango-Tread-Lightly-And-Carry-A-Big-V-8-Original-Print-Ad-8-5-x-11-/184062557068>

'It's like a monster in a horror movie. It keeps coming back meaner and stronger'. [Honda CRV, emerging from a swamp, 2001].<sup>68</sup>

Like the Blazer above, campaigns for Hummer and Jeep were increasingly shot from a position just below the front bumper: we are made to feel prostrated before the vehicles.



Dodge Durango "Tread lightly" V-8 print ad, 1998; Lincoln Navigator "Kick derrère" print ad, 1999.

<sup>68</sup> Adweek, November 08 (2001), *Honda Campaign Touts Power, Reliability*  
<https://www.adweek.com/brand-marketing/honda-campaign-touts-power-reliability-52880/>

These are more than just empty threats, after all. That feeling of aggressive safety will undoubtedly translate into more aggression from other road users. It is in fact a self-defeating message. These up the ante on the streets, perhaps deliberately.

In fact, investment in psychology in the marketing of SUVs had led to clear demarcation between different personality types between, for example, SUVs and minivans:

"A growing body of research by automakers is finding that buyers of these two kinds of vehicles are very different psychologically. Sport utility buyers tend to be more restless, more sybaritic, less social people who are "self-oriented," to use the automakers' words, and who have strong conscious or subconscious fears of crime. Minivan buyers tend to be more self-confident and more "other-oriented" – more involved with family, friends and their communities."<sup>69</sup>

In his book, Bradsher looks at the encouragement of violence through the consumer psychology of Clotaire Rapaille, a French anthropologist who has played a consulting role in the design and marketing of SUVs. People's reactions to consumer items, or so Rapaille says, can be divided according to a number of psychological reactions, one of which he calls 'reptilian'. He argues that SUVs are "the most reptilian vehicles of all because their imposing, even menacing appearance appeals to people's deep-seated desires for 'survival and reproduction'."

"I think we're going back to medieval times," said Rapaille. "And you can see that in that we live in ghettos with gates and private armies. SUVs are exactly that, they are armoured cars for the battlefield."<sup>70</sup>

The implication is that advertising these cars may actually be encouraging this 'reptilian' state of mind.

## How risk extends risk

The UK geographer John Adams became fascinated by risk in motor transport because, the more he studied it, the more he realised how our statistics are too crude to capture it.<sup>71</sup> Why should we be three times more likely to be injured in a built-up area, for example, than on an A road? The answer,

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<sup>69</sup> Keith Bradsher (2000), *New York Times*, Jul 18.

<sup>70</sup> Bradsher (2002), 67.

<sup>71</sup> John Adams (1987), 'How pedestrians can make roads safer,' *Town & Country Planning*, Apr.

said Adams, is not that the A road is somehow safer – it is far more dangerous – it has more to do with the perception of risk. Vulnerable people get out of the way.

That means that safety measures can “shift injury rates and fatality rates in opposite directions”. That would explain, for example, why it was that – although death rates in traffic accidents went down among car drivers once seat belts became compulsory, death rates among pedestrians and cyclists went up. Presumably, the drivers felt safer and compensated by taking more risks.

There are important implications of this for SUVs which make drivers feel safer, regardless of whether they are. It means that drivers will tend to ‘export’ their risk, putting other road users at greater risk. It is hard to pinpoint this because the UK does not make figures for accidents involving SUVs easily available. But in theory at least, this is the case. It means that these SUV adverts directly put other road users at greater risk.

“Most arguments about road safety turn out, on closer inspection, to be arguments about who should defer to whom in situations of potential conflict,” wrote Adams in 1987. In those circumstances, the marketing of SUVs has as much effect on those who don’t buy as it does on those who do. It implies that we are supposed to defer to them. They may make their own drivers safer and more cocooned, but they will also tend to make other road users feel less safe – as indeed they are.

## **Come on in – the environment’s lovely**

‘SUZUKI LIKES NATURE.’ Emblazoned on the spare-tyre cover of a Grand Vitara, these words imply that nature is of interest for the owners and manufacturers of 4-wheel drives – a Japanese take on Ford’s original ‘back to nature’ messages.

A host of marketing slogans soon accompanied different SUV brands:

‘Leave the city behind. Leave everything behind’ – Infiniti QX4 [1999]

‘Whenever and everywhere, we can meet our best friend nature.’ – Nissan Terrano tyre cover

These are virtually meaningless slogans written for the Australian and New Zealand market by Japanese marketing departments. Did they actually believe them when they wrote them? Or when Toyota covered their back wheel cover with



an outline of a whale's tail? Or when the Mitsubishi RVR tyre cover includes a family trio of penguins, above the statement:

"As environmentally conscious people, we are striving to preserve the antarctic region and all of it's [sic]creatures"  
"This cover appears to make unsubstantiated claims about the company's activities," wrote Gunster. "A cursory search of available sources revealed only two instances of Mitsubishi having anything to do with the Antarctic: one is an allegation of abetting illegal overfishing of the Southern Ocean, and the other is its interest in commercialising rare biological resources of the frozen continent."<sup>72</sup>

But the real question is what the environmentalists who had been convinced by this message must have felt – presumably they were as muddled and conflicted as the car companies. As William Rollins says of Ford: "It churned out hundreds of thousands of Explorers alongside even bigger models such as the Ford Excursion/Lincoln Navigator – a 6,000-pound leviathan that only an advertising executive could claim "treads lightly" on the earth."<sup>73</sup>

So Ford, in that sense, have been deluding buyers partly by deluding themselves. The creative teams at advertising agencies are brought in to market that delusion to the public.

## Morality and double standards

In 1998, environmental organisation the Sierra Club kicked off a wave of anti-SUV sentiment with a contest to rename Ford's mammoth Excursion: "Ford Valdez – Have you driven a tanker lately?" was the winning slogan, driving home the blatant discrepancy between ads for SUVs and their real ecological impact.<sup>74</sup>

'What car would Jesus drive?' – a television ad campaign in the Midwest – followed in 2002. The Rev Jim Ball, of the Washington-based Evangelical Environmental Network, said: "Most folks don't think of transportation as a moral issue, but we're called to care for kids and for the poor, and filling their lungs with pollution is the opposite of caring for them."<sup>75</sup>

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<sup>72</sup> Gunster (2004)

<sup>73</sup> Rollins (2006)

<sup>74</sup> Gunster (2004).

<sup>75</sup> The Guardian, November 14 (2002),

'What would Jesus drive?' gas-guzzling Americans are asked

<https://www.theguardian.com/world/2002/nov/14/usa.oliverburkeman>

The campaign was greeted with rage of a kind that seems pretty inexplicable to a European audience. But then in Europe, we have a system of permit-trading that has its own kind of perversity, and seems to encourage the kind of doublethink that has the American SUV manufacturers in its grip. European regulations say that 95 percent of a manufacturer's fleet must meet emission standards. But crucially, for the time being, they can buy credits from rival manufacturers.

And so it is that the electric car manufacturer Tesla has been selling credits to SUV manufacturer Fiat Chrysler, which has to spend up to £500m a year just to buy so-called 'supercredits'.<sup>76</sup> They are doing so because the SUV market remains highly profitable. It means that buyers of Tesla cars are inadvertently giving license to the sale of gas-guzzling monsters.

Toyota, Citroen and Nissan offset the sales of their most polluting vehicles against the Nissan Leaf, for example, which is simply putting off the 'evil' day. As one columnist from Autocar put it, the only way forward is to make their SUVs more fuel efficient.<sup>77</sup>

Partly because of this, the average emissions/km travelled has been rising per car sold. It went up by 5 grams between 2017 and 2018, which would normally earn European manufacturers a fine of 3.2 billion euros in total next year (2021) when the 89.8 gm limit per car/km comes into effect.

The other way manufacturers are trying to avoid the letter of the regulations is by reducing their fleet emissions by inserting the small electric motors known as 'mild hybrids'. This is a small 48 volt lithium battery which allows for up to 12 percent better fuel economy by starting the petrol engine in a more fuel efficient way. But these are not true hybrids – and fleet emissions are still rising because the petrol SUV market still dominates.

The other problem is the sheer size of the SUV cars – especially since big wheels are now regarded as luxury items. Big wheels means big tyres which are more polluting than smaller tyres, because small pieces of rubber go more easily into the atmosphere.

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<sup>76</sup> The Wall Street Journal, April 08 (2019), *Tesla Won't Solve Fiat Chrysler's Problem for Long*

<https://www.wsj.com/articles/tesla-wont-solve-fiat-chryslers-problem-for-long-11554734539>

<sup>77</sup> Jim Stodder (2020), *Autocar*, 28 Aug.

Part of the problem here is that battery technology makes for heavier cars – increasing the rate at which tyres wear. Volkswagen took their small electric e-Up cars off the UK market after only a few months and only 400 sales. Unfortunately for the air we breathe, the Audi e-tron is 2.6 tonnes – when the average car is only half that.

### **“Well, at least it’s safe!”**

In 2018, advertising agency BBH London won an award for their ‘clown’ campaign, persuading viewers that their Audi could help them navigate the peculiar hazards of other drivers.<sup>78</sup> One Los Angeles Hummer driver was asked why he bought it. He replied: “I call this my urban escape vehicle,” he answered. “Fires, earthquakes, riots. I’m ready.”<sup>79</sup>



A selection of Hummer ads referencing survival in the rugged outdoors.

But when it comes to marketing to women, advertising messages tend to lose their macho edge. Instead, the advertisers simply concentrate on the risks out there – on the grounds that you can add an extra cocoon by driving a big car – despite evidence suggesting that the opposite is the case.

<sup>78</sup> D&AD (2018), *Clowns*

<https://www.dandad.org/awards/professional/2018/film-advertising/26547/clowns/>

<sup>79</sup> Gunster (2004).

Toyota was the pioneer of this idea, when they used New Zealand mountaineer Sir Edmund Hillary's quotation to sell cars – 'Everest can be a ferocious place'. [Toyota].<sup>80</sup>

But this was turbocharged by a series of ads for the Lexus 470: 'Let nature worry about you for a change', involving an unlikely pack of crocodiles escaping. [Lexus, 1998. There were others with charging bulls, white sharks, cougars, etc].<sup>81</sup>

Unfortunately, if it seems obviously true that you and your children are safer in an SUV, this is not in fact the case. Partly because of their weight and momentum and partly because of their higher centre of gravity, they are too big for crash barriers, which seem likely to flip them over rather than stop them.

We have also known for some time what happens when SUVs hit other cars, mainly because of the efforts of New York Times reporter Keith Bradsher, whose book 'High and Mighty' was written after he was asked that question by the New York Times Detroit correspondent Glenn Kramon in 1997.

Bradsher was able to use US accident records to demonstrate that SUV drivers certainly don't make other drivers safer (see above). The fact that sharing the road with ever-growing numbers of SUVs demonstrably increases the danger of death and serious injury for all other road users may go a long way to explaining how SUVs came to appeal to a much broader consumer constituency than the niche originally attracted to the faux-military glamour of the early SUVs. Thanks to SUVs, an arms race is underway on our streets; one in which only the biggest, baddest cars will survive.

But Bradsher also found, less predictably, that people are even less safe inside SUVs. He soon stirred up a storm in the motoring world. "The criticisms of SUVs infuriated auto executives, who denounced me in speeches and in interviews with other reporters," wrote Bradsher later.<sup>82</sup>

Bradsher found that the occupant death rate was 6 percent higher in SUVs than conventional cars, and 8 percent in the biggest ones.<sup>83</sup> Studies in Arkansas and Utah suggest that

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<sup>80</sup> Gunster (2004).

<sup>81</sup> Leonard Nolt, March 05 (2008), *Letters from 1998*  
<http://leonardnolt.blogspot.com/2008/03/letters-from-1998.html>

<sup>82</sup> Bradsher (2002), ix.

<sup>83</sup> Bradsher (2002), 169–70.

rollovers are rare, even in SUVs, but they still account for more cases of paralysis than all other causes combined.<sup>84</sup>

These figures from a decade and a half ago suggest that SUVs were probably killing around an extra 3,000 people in the USA a year at that time – more than died at 9/11. Roughly a third of those died in SUV rollovers, and another third from being hit by one. The final third are killed by respiratory problems because of the extra pollution caused by SUVs.

If similar patterns hold in the UK, then we may face 500–700 extra deaths a year here. It is true that European SUVs are typically smaller and more aerodynamic than American ones, but there are some natural laws that apply everywhere. For example:

- 4x4 driving makes it safer when you are accelerating, but makes it no safer at all in poor driving conditions.<sup>85</sup>
- SUVs are heavier and so they have longer stopping distances. Most people think they brake faster. They don't.<sup>86</sup>

And if you survive the rollovers, watch out for the air quality. Ford have now produced 7m Explorers, but – since the 2011 version – they have received over 2,700 complaints about carbon monoxide seeping into the car, including some from police patrols.<sup>87</sup> The complaints include 80 injuries and 11 crashes after drivers lost consciousness.

In short, SUVs are no safer for their occupants, and by some measures may be a good deal more risky than other cars. So why have they been marketed as safer?

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<sup>84</sup> Bradsher (2002), 163–4.

<sup>85</sup> Only a minority of models marketed as SUVs in Europe now have 4 wheel drive capability anyway.

<sup>86</sup> Bradsher (2002), 141.

<sup>87</sup> Bloomberg, March 20 (2019), *Ford Explorer owners say their SUVs are making them sick*  
<https://www.bloomberg.com/graphics/2019-ford-explorer-owners-say-suvs-making-them-sick/>

## Conclusions



The cultural historian William Rollins summed up the green paradox of SUV marketing like this:

“What makes the SUV so outrageous is that it is a twisted expression of that developing environmental consciousness, a perversion of energies that might, collectively, have built something far more sustainable by now.”<sup>88</sup>

That statement is a condemnation of the motor manufacturers who created these monsters, but also of the advertisers who lend their creative skills to sell them. Of course, we no longer expect advertisers to tell the whole truth about the products they sell. But there is something about the way that creatives have gone about selling SUVs which flies in the face of the truth in ways that stretch credulity.

In fact, the way that SUVs have been sold has been so entirely misleading that it really has approached lying – pretending that SUVs were safer or greener could not have been further from the truth.

This provides us with an insight into why people have bought these unsafe, planet-bashing cars in such numbers. The automobile industry is the heaviest advertiser in the United States by a large margin; it spent close to a billion dollars advertising SUVs each year through the 1990s, to establish these untruths in the public mind.

There is no sign of this slowing down. The Australian media in 2017 was reporting that – as SUV sales began to overtake passenger cars – the advertising spending for SUVs by manufacturers had risen by 86 percent in only one year.<sup>89</sup>

It is clear that, on both sides of the Atlantic, car marketing departments and ad agencies have employed psychologists to help them sell cars that would otherwise not be sellable. In the UK, the British Psychological Society (BPS) has a clear

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<sup>88</sup> Rollins (2006).

<sup>89</sup> AdNews, September 26 (2017), *How SUVs are driving auto advertising spend*  
<https://www.adnews.com.au/news/how-suvs-are-driving-auto-advertising-spend>



ethical code, including the following section on 'responsibility'.

<sup>90</sup>

"3.3 ... Psychologists value their responsibilities to persons and peoples, to the general public, and to the profession and science of Psychology, including the avoidance of harm and the prevention of misuse or abuse of their contribution to society."

We would urge the BPS to investigate whether their members are in breach of this section of the code, and to act accordingly.

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<sup>90</sup> The British Psychological Society, July (2018), *Code of Ethics and Conduct*  
<https://www.bps.org.uk/sites/bps.org.uk/files/Policy%20-%20Files/BPS%20Code%20of%20Ethics%20and%20Conduct%20%28Updated%20July%202018%29.pdf>

## Recommendations



This report forms part of the campaign by the Badvertising alliance, and helps to underpin the rationale for its first demand: that advertising should be immediately banned for the most polluting SUVs, and those which are so large that they burst out of average car parking spaces. But there are also some other vital elements that need to be put in place by key stakeholders, in order to tackle some of the abuses set out here.

### Recommendation 1:

#### **An end to SUV advertising**

In keeping with its climate commitments, and as 2021 host of the climate conference COP 26, the UK government must initiate an immediate ban on advertising for at least the dirtiest third of most polluting vehicles.<sup>91</sup> New sales of diesel, petrol and hybrid vehicles are due to end by 2030 in the UK. Ending advertising for all internal combustion engine vehicles well in advance of this deadline would complement this policy measure; and prevent a final surge in sales of these polluting vehicles in the 2020s which will then stay on the road for an average of 6 to 11 years after purchase.<sup>92</sup>

### Recommendation 2:

#### **A renewed commitment to tackling climate change from the Advertising Standards Authority implemented with new codes of practice**

The Advertising Standards Authority (ASA) is the UK's self-regulation body. Its purpose is to ensure that advertising is not misleading or harmful. Given the tactics used by marketers and the harms caused by the growth of SUV ownership, the ASA has not fulfilled these objectives with regards to car advertising. The ASA must be re-structured to show less bias towards advertising industry interests, and must be far more proactive in addressing climate change. We recommend that the ASA and its sister organisation the

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<sup>91</sup> See *Upselling Smoke* (2020) for more information:

<sup>92</sup> Autolist, September 11 (2019), *How Long Should a Car Last?*  
<https://www.autolist.com/guides/how-long-should-car-last>

Committee on Advertising Practice immediately consult on, and implement, new advertising codes that would end advertising for high carbon products.<sup>93 94</sup>

### Recommendation 3:

#### **Reject the brief: advertising agencies must stop selling pollution**

Some of the world's best creative talent, skilled communicators and professional persuaders are employed by advertising firms across the world. As this report has shown, the ad industry is culpable along with car manufacturers in causing the social and environmental problems of rising SUV ownership, just as it was once culpable in promoting tobacco products and smoking.

We call on creative agencies and their media partners to right this wrong by rejecting future advertising work for polluting SUV vehicles – again as more ethical practitioners once rejected tobacco clients. Many ad industry workers are hugely concerned about climate breakdown and are transferring their communications skills to promote sustainable behaviour change. Recent initiatives in the UK such as #AdNetZero and #ChangeTheBrief<sup>95</sup> mark important steps forward for the industry to clean up its own emissions and promote attitudes and behaviours that build the low carbon transition. This good work is undermined, however, by the continued promotion of high carbon lifestyles by other parts of the advertising industry.

Many agencies and individual creatives are pledging not to work on fossil fuel company briefs<sup>96</sup> and to disclose what proportion of their work comes from other high pollution sectors.<sup>97</sup> These steps are to be applauded and should be integrated into the industry's mainstream initiatives such as #AdNetZero. Given the huge rise in SUV ownership today, we

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<sup>93</sup> For a definition of high carbon products, please see Low Carbon Advertising Advertising Policies – a Guide for Local Policymakers (2021) <https://www.badverts.org/policymakers-toolkit>

<sup>94</sup> We support the recommendations of Adfree Cities report in to the ASA here: <https://adfreecities.org.uk/asa/>

<sup>95</sup> Change the Brief initiated by Purpose Disruptors <https://www.purposedisruptors.org/changethebrief>

<sup>96</sup> Clean Creatives – <https://cleancreatives.org/about>

<sup>97</sup> It's Nice That, July 09 (2019), *Creative agency Futerra wants the ad industry to declare a climate emergency* <https://www.itsnicethat.com/news/futerra-creative-climate-disclosure-advertising-090719>

suggest these vehicles are added to the list of products that climate-conscious advertisers refuse to promote.

## Appendix A:

### A brief history of the role of psychology in advertising



The application of psychology methods and theories to advertising can be traced back to the start of the 20th Century. Some go as far back as 1896 when Harlow Gale began with his experiments on the psychology of advertising.<sup>98</sup> At that time the focus was mostly placed on the “attentional phenomena” but while ads succeeded in capturing the public’s attention, they didn’t always translate into greater sales.<sup>99</sup> To test the effectiveness of an ad, experimental psychologists came up with a practical tool called the “order-of-merit method”.<sup>100</sup> This method compares stimuli on the basis of preference. Its application varies depending on each specific tradition it belongs to within psychology: the mentalist, behavioural or dynamic approach.

<sup>101</sup>

As its name indicates, the mentalist approach (late 1900s–early 2000s) is a tradition within the field of psychology which focuses on mental life and consciousness. Key advertising psychologist figures within this tradition include Harlow S. Gale and Walter Dill Scott, who defined “advertising as an attempt to influence human needs”. Their focus was on mental processes generated by advertising such as perception, association of ideas, decision processes etc..

The behavioural approach (early 1900s) (whose application to advertising was led by Hollingworth and Cattell) placed itself in opposition to the mentalist tradition, by focusing on

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<sup>98</sup> Kuna, D. P., October (1976), *The concept of suggestion in the early history of advertising psychology*

<https://onlinelibrary.wiley.com/doi/epdf/10.1002/1520-6696%28197610%2912%3A4%3C347%3A%3AAID-JHBS2300120406%3E3.0.CO%3B2-M>

<sup>99</sup> Kuna, D. P., January (1979), *Early applications of the Gale-Cattell order-of-merit method*

[https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(197901\)15:1%3C38::AID-JHB S2300150105%3E3.0.CO;2-B](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(197901)15:1%3C38::AID-JHB S2300150105%3E3.0.CO;2-B)

<sup>100</sup> *Ibid.*

<sup>101</sup> *Ibid.*

[https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(197901\)15:1%3C38::AID-JHB S2300150105%3E3.0.CO;2-B](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(197901)15:1%3C38::AID-JHB S2300150105%3E3.0.CO;2-B)



objective, quantitative methods. Hollingworth developed a behavioural formula for advertising where characteristics of advertisements themselves were studied for their impacts on consumer behaviour.

The dynamic approach (1900–), mostly led by H. L. Hollingworth and E. K. Strong in its application to advertising, began to portray man as an impulsive being. Theories of experimental psychology started to embrace theories of human behaviour whereby instincts and needs took a more central role.

Psychologists using the “order of merit method” embraced it regardless of which tradition they came from. For psychologists in the mentalist tradition, they tested the reasoning processes involved in advertising.<sup>102</sup> Those from the behaviourist approach looked at the selling potential of certain advertisements’ features.<sup>103</sup> Psychologists in the dynamic approach interpreted these results as to what needs or wants were stimulated in response to advertising.<sup>104</sup> Back then, the “order of merit method” was the most efficient tool for psychologists to assess the effectiveness of an ad before its introduction.<sup>105</sup>

Next to pioneering advertising psychologists Harlow S. Gale and Walter D. Scott, John B. Watson is another important figure who, from the 1920’s onwards, specifically put behaviourism to serve the development of advertising.<sup>106 107</sup> Behaviourism distinguished itself from other traditions in advertising psychology through its focus on the “malleability of human behavior” (p.213).<sup>108</sup> In the eyes of John B. Watson, behaviourism was a science which could be applied to many different professions, thus appealing to corporate interests.<sup>109</sup> For Watson, the application of psychology should be directed

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<sup>102</sup> Kunda, D. P., January (1979), *Early applications of the Gale-Cattell order-of-merit method*  
[https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(197901\)15:1%3C38::AID-JHBS2300150105%3E3.0.CO;2-B](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(197901)15:1%3C38::AID-JHBS2300150105%3E3.0.CO;2-B)

<sup>103</sup> *Ibid.*

<sup>104</sup> *Ibid.*

<sup>105</sup> *Ibid.*

<sup>106</sup> *Ibid.*

<sup>107</sup> Buckley, K. W., July (1982), *The selling of a psychologist: John Broadus Watson and the application of behavioral techniques to advertising*  
[https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(198207\)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(198207)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8)

<sup>108</sup> *Ibid.*

<sup>109</sup> *Ibid.*

towards social control; the aim of psychologists being to organize human society not only predict behaviours.<sup>110</sup>

With the creation of the advertising industry in the 1920's, advertisers turned to psychologists in particular for methods that could help rationalise the distribution and marketing process.<sup>111</sup> John B. Watson went on to work for the advertising industry, at the J. Walter Thompson Company (now the Wunderman Thompson company is behind ads for banking giant HSBC), where he developed a technique to give advertisers the power to influence mass markets on a global scale to distribute the goods created by mass production.<sup>112</sup> This approach coincided with the industrial economy of the times, during which different brands selling similar products were competing on the market.<sup>113</sup> Until 1910, advertisers mainly considered individuals to respond to "common sense".<sup>114</sup> John B. Watson's entry into the advertising world led to a fundamental shift in the design of sales campaigns.<sup>115</sup> This psychologist believed that humans were organic machines whose behaviour it was possible to control, and that advertising's role ought to create "a society of consumers" (p.212).<sup>116</sup>

As an academic discipline, psychology's links with advertising and marketing can be traced back to the 1950's with the birth of consumer research as a field of study.<sup>117</sup> This period also coincides with a distancing from economic theories of rational choice to psychological theories around emotions.<sup>118</sup> In 1962, the APA opened up a whole division for the study of consumer psychology which was later to act as a separate entity under the Association for Consumer Research.<sup>119 120</sup> But it

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<sup>110</sup> *Ibid.*

<sup>111</sup> *Ibid.*

<sup>112</sup> *Ibid.*

<sup>113</sup> *Ibid.*

<sup>114</sup> *Ibid.*

<sup>115</sup> *Ibid.*

<sup>116</sup> Buckley, K. W., July (1982), *The selling of a psychologist: John Broadus Watson and the application of behavioral techniques to advertising* [https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696\(198207\)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8](https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6696(198207)18:3%3C207::AID-JHBS2300180302%3E3.0.CO;2-8)

<sup>117</sup> Helgeson, J. G. et al. (1985), *Consumer Research: Some History, Trends, and Thoughts* <https://www.acrwebsite.org/volumes/12135/volumes/sv05/SV-05>

<sup>118</sup> Jagdish Sheth, March 08 (2018), *The Future History of Consumer Research: Will the Discipline Rise to the Opportunity?* <https://www.jagdisheth.com/marketing-research/the-future-history-of-consumer-research-will-the-discipline-rise-to-the-opportunity/>

<sup>119</sup> Society of Consumer Psychology, (2016), *Historical Timeline* <https://myscp.org/pdf/SCP%20Timeline.pdf>

<sup>120</sup> Jagdish Sheth, March 08 (2018), *The Future History of Consumer Research: Will the Discipline Rise to the Opportunity?*

is not until the 1970's onwards that we see the introduction of academic journals specifically dedicated to these fields of research such as the "Journal of Consumer Research" (1974) or "Advances in Consumer Research" (1971).<sup>121</sup> Later additions include the "Journal of Consumer Psychology" (1992) and the "Journal of Consumer Behaviour" (2001).

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<https://www.jagsheth.com/marketing-research/the-future-history-of-consumer-research-will-the-discipline-rise-to-the-opportunity/>

<sup>121</sup> Helgeson, J. G. et al. (1985), *Consumer Research: Some History, Trends, and Thoughts* <https://www.acrwebsite.org/volumes/12135/volumes/sv05/SV-05>

## Appendix B:

# Who is buying all the SUVs?

## Analysis of Department for Transport new vehicle registration data for 2019



### Methodology

#### Registrations Data

The data for this analysis was obtained from the Department for Transport (DfT). The data set included:

- Year of first registration (2018 to 2020)
- District
- Generic make (including model e.g. Volkswagen Golf)
- Type of keeper (private, business and unknown)
- Number of registrations

A further set of data provided by DfT included the urban or rural address classification in addition to the above fields.

In a number of cases, where the number of registrations of a particular permutation of generic make and type of keeper in a given district numbers 1 to 4, the actual number of registrations has been replaced by an asterisk in order to avoid the possibility of data protection issues.

Replacing these asterisks with a value of 1 brings the total number of registrations to within 5% of the true number so in order to improve the estimate we sourced the total number of registrations by generic model in 2019<sup>122</sup> and then we used this to estimate how many registrations each asterisk represented on average.

For example if a generic model had a total of 100 registrations across all districts in 2019, the total number of registrations

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<sup>122</sup> UK Government, December 09 (2020), *Statistical data set*  
<https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01>

that could be definitively identified in the DfT data set (i.e. non-asterisked entries) was 80, and 10 districts had one asterisk each then the average number of registrations per asterisk would be  $(100 - 80)/10 = 2$ .

A similar approach was adopted for the dataset that includes the rural/urban split, but in this case the anonymised data was calibrated to match the total registrations for each permutation of generic model and district so that the two sets of data are consistent.

While there is a degree of uncertainty as to exactly how many of a given vehicle were registered in each district, the potential variance is small and it does not materially affect the results presented.

## **SUV Segmentation**

The SUV segmentation used in our original analysis of the European Environment Agency's database was adapted and augmented to cover all of the entries in the DfT's database. The segmentation was based on the classification found on the car review website What Car?. This classification divides SUVs into Small (with an overall length up to about 4.3m), Medium (between about 4.3m and 4.5m) and Large (over 4.5m).

## **Developing the Rankings**

When looking at vehicle registrations by district there are a number of considerations that need to be addressed.

First, the district that is home to a given registration is the district where the registered keeper's address is, and not necessarily where the vehicle is typically located. There are a number of districts across the UK which are home to businesses which register large numbers of vehicles. These could be businesses that operate large fleets or lease vehicles to other companies or individuals. For this reason, and because of the different drivers for private and commercial vehicle purchases, we have focused on private sales in this analysis, which we expect to be much more representative of the cars that citizens are purchasing in the UK.

As we are looking at the proportion of vehicle registrations, another consideration is the total number of private vehicles registered in the district. Districts with low numbers of registrations can see relatively high proportions of particular types of vehicles. For example, when ranking the proportion of



SUVs, districts in Northern Ireland feature particularly high up the rankings, but their contribution to new car registrations is small.

In order to address this issue, we filtered out districts with private registrations numbering fewer than 1,000 in 2019. Having done this we still have the remaining 95% of the private car market remaining but we see rankings that offer a much clearer picture of where private SUVs are being registered.

Finally the DfT data's Generic Model categorisation, which combines information about the vehicle manufacturer along with a simplified model description into one field (e.g. Volkswagen Golf) has merged some distinctly different vehicle models together. For example all Range Rovers are combined into a single generic model when they are in fact a range of different vehicles, one of which, the Evoque, falls into the Medium SUV segment. Similarly, all Land Rover Discoveries are grouped together when the Discovery Sport is a slightly shorter vehicle that also falls into the Medium SUV segment. For the purposes of the rankings below we have had to include all Range Rovers and Discoveries as it is not possible to disaggregate the different models. This means that the figures here diverge slightly in places from those in our original analysis in summer 2020.

## Results

### Large SUVs by district

The top 20 districts for the proportion of new vehicles registered which are large SUVs is predominantly made up of affluent districts, with the richest London boroughs taking up 6 of the top 10 slots. Around 1 in 3 private car registrations in the top three districts, Kensington & Chelsea, Hammersmith & Fulham and Westminster, are large SUVs.

Table 1. Private Registrations of Large SUVs as a Percentage of Total Private Registrations by District.

Rank	District	Large SUV Registrations	All Private Registrations	% Large SUV
1	Kensington and Chelsea	563	1,555	36%
2	Hammersmith and Fulham	355	1,195	30%
3	Westminster	552	1,885	29%
4	Richmond upon Thames	601	2,259	27%
5	Cotswold	679	2,582	26%
6	Elmbridge	762	2,916	26%
7	Wandsworth	615	2,400	26%
8	Camden	302	1,181	26%
9	South Bucks	348	1,537	23%
10	Sevenoaks	501	2,237	22%
11	Derbyshire Dales	246	1,149	21%
12	Windsor and Maidenhead UA	577	2,784	21%
13	Aberdeenshire UA	1,154	5,579	21%
14	Epping Forest	586	2,897	20%
15	Ribble Valley	269	1,342	20%
16	Barnet	929	4,677	20%
17	Stirling UA	301	1,549	19%
18	Stratford-on-Avon	718	3,726	19%
19	Merton	359	1,879	19%
20	St Albans	537	2,824	19%

## Highest carbon SUVs by district

In our first report, 'Upselling Smoke', we identified the best selling vehicles which have average CO<sub>2</sub> emissions in the top 10% of the market (the threshold for this upper tranche was any range that had average CO<sub>2</sub> emissions of 193gCO<sub>2</sub>/km). This includes Range Rovers and Land Rovers, the Mercedes-Benz GLC, BMW X3 and X5, Jaguar E-Pace and F-Pace and the Audi Q5. Kensington & Chelsea are the clear

front-runners in terms of these high CO<sub>2</sub> emission vehicles, with one in five new private registrations falling into this category.

Table 2. Private registrations of top selling vehicles with average emissions that fall into the top 10% of the UK market as a percentage of total private registrations.

Rank	District	High CO <sub>2</sub>	All Private Registrations	% Top 10
1	Kensington and Chelsea	319	1,555	21%
2	Westminster	322	1,885	17%
3	Hammersmith and Fulham	193	1,195	16%
4	Elmbridge	471	2,916	16%
5	Aberdeenshire UA	885	5,579	16%
6	Richmond upon Thames	352	2,259	16%
7	Wandsworth	367	2,400	15%
8	Stratford-on-Avon	569	3,726	15%
9	Epping Forest	421	2,897	15%
10	South Bucks	223	1,537	15%
11	Derbyshire Dales	164	1,149	14%
12	Ribble Valley	191	1,342	14%
13	Sevenoaks	319	2,237	14%
14	Windsor and Maidenhead UA	394	2,784	14%
15	East Dunbartonshire UA	254	1,802	14%
16	Stirling UA	216	1,549	14%
17	East Renfrewshire UA	247	1,803	14%
18	Harborough	238	1,763	14%
19	Harrogate	445	3,315	13%
20	Bromsgrove	320	2,396	13%

## Longest SUVs by district

In our original report we identified a set of the top selling 25 vehicles which do not fit into a standard UK parking space of 4.8m in length. These include the BMW 5 Series and X5, Mercedes-Benz E Class, the Land Rover Discovery, Range Rover and Range Rover Sport, the Audi A6 and Q7 and the Volvo XC90.

As noted previously, the DfT data set combines all Range Rovers into one generic model and the Land Rover Discovery and Discovery Sport into another. The numbers below therefore include the shorter Evoque and Discovery Sport, both of which fall into the Medium SUV market segment. We can reasonably expect that the longer (and more expensive) Range Rovers and Discoveries will be well represented in the districts which comprise the top ten as these are almost all very high income London or Shires region. But we cannot determine this with the available data, so we would caution that the values in this table are subject to a higher uncertainty range than the other findings in this analysis.

It is particularly notable that the areas where extremely large cars are most popular correspond closely with those places where road space is most scarce; TfL data shows that over 18% of road space in Wandsworth and Hammersmith & Fulham is taken up by on street parking (with 17% in Kensington and Chelsea and 10% in Westminster)<sup>123</sup>. They are also amongst the London boroughs where the highest proportion of cars are parked on the street.

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<sup>123</sup> Travel in London Report 12, TfL (2020), Figure 4.23 Proportion of road space taken up by vehicles parked on-street, LTDS 2016/17  
<http://content.tfl.gov.uk/travel-in-london-report-12.pdf>

Table 3. Private registrations of vehicles that are longer than a standard UK parking place.

Rank	District	Long	Total	% Long
1	Kensington and Chelsea	339	1,555	22%
2	Westminster	379	1,885	20%
3	Hammersmith and Fulham	222	1,195	19%
4	Wandsworth	387	2,400	16%
5	Camden	168	1,181	14%
6	South Bucks	218	1,537	14%
7	Stratford-on-Avon	527	3,726	14%
8	Elmbridge	401	2,916	14%
9	Richmond upon Thames	306	2,259	14%
10	Derbyshire Dales	152	1,149	13%
11	Harborough	228	1,763	13%
12	Aberdeenshire UA	706	5,579	13%
13	Stirling UA	191	1,549	12%
14	Ribble Valley	164	1,342	12%
15	Epping Forest	355	2,897	12%
16	Sevenoaks	271	2,237	12%
17	South Northamptonshire	272	2,265	12%
18	Windsor and Maidenhead UA	335	2,784	12%
19	Doncaster	1,605	13,569	12%
20	Harrogate	391	3,315	12%



## Range Rovers by district

It is also possible to use the data to identify the Range Rover capital of the UK, with Kensington and Chelsea and Westminster, where 1 in 10 new cars are Range Rovers, clearly in the lead.

Table 4. Private registrations of all Range Rovers as a percentage of total private registrations.

Rank	District	Private Range Rover Registrations	All Private Registrations	% Range Rovers
1	Kensington and Chelsea	168	1,555	11%
2	Westminster	161	1,885	9%
3	Hammersmith and Fulham	75	1,195	6%
4	Derbyshire Dales	66	1,149	6%
5	Epping Forest	160	2,897	6%
6	Stratford-on-Avon	204	3,726	5%
7	Ribble Valley	73	1,342	5%
8	Wandsworth	130	2,400	5%
9	South Bucks	82	1,537	5%
10	South Staffordshire	110	2,147	5%

## SUVs by rural / urban location

When looking at the urban and rural classification data of private registered new SUVs we find that there is a greater propensity for large SUVs to be found in rural areas than the average for all cars, but medium SUVs are registered in urban locations as much as the average car.

Table 5. Private registrations of SUVs by rural and urban classification.

Segment	Rural	Urban
Large SUV	33%	67%
Medium SUV	26%	74%
Small SUV	24%	76%
All SUV	27%	73%
Other cars	24%	76%
<b>All Private Registrations</b>	<b>26%</b>	<b>74%</b>

Of the large SUVs with more than 500 private registrations in 2019 the vehicles with the greatest propensity to be registered in urban locations were as follows:

Table 6. Private registrations of large SUVs by rural and urban classification.

Rank	Generic Model	Rural	Urban	Urban to Rural Ratio	% Urban
1	Lexus NX300	548	1,838	3.4	77%
2	Nissan X-Trail	386	1,302	3.4	77%
3	Peugeot 5008	271	886	3.3	76%
4	BMW X4	566	1,772	3.1	76%
5	Mitsubishi Outlander	243	745	3.1	75%
6	Mercedes-Benz GLC	2,214	5,931	2.7	73%
7	Ford Edge	174	456	2.6	72%
8	Jaguar F-Pace	1,608	4,004	2.5	71%
9	BMW X5	1,531	3,729	2.4	71%
10	SEAT Tarraco	267	648	2.4	71%