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**Creators:** Uba, C. D. and Chatzidakis, A.

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Accepted Copy – Transportation Research Part A: Policy and Practice (2016)

**Understanding engagement and disengagement from pro-environmental behaviour: the role of neutralization and affirmation techniques in maintaining persistence in and desistance from car use**

Chijioke Dike Uba<sup>a</sup> & Andreas Chatzidakis<sup>b</sup>

<sup>a</sup>Northampton Business School, University of Northampton, UK

Email: [Chijioke.uba@northampton.ac.uk](mailto:Chijioke.uba@northampton.ac.uk)

<sup>b</sup>School of Management, Royal Holloway, University of London, Egham Surrey, UK

Email: [andreas.chatzidakis@rhul.ac.uk](mailto:andreas.chatzidakis@rhul.ac.uk)

## **Abstract**

Despite mounting evidence that car use is a prime culprit of global warming, our love affair with the car persists. General awareness of the environmental consequences of car usage is high but fails to correspond to moderated car use. This paper contributes to an understanding of how university students' environmental beliefs affect decisions to engage in continued car use (persistence) and/or to discontinue or reduce car use (desistance). The aim of the research presented here was to explore the range of neutralizations and counter-neutralizations (affirmations) employed by students and to examine the ways in which they are used to justify and maintain either persistence or desistance in car use. The research consisted of six focus group sessions with thirty-four UK-based Higher Education students. Analysis of the study's data highlights the range of neutralizations and counter-neutralizations employed by students in social settings. The article discusses the usefulness of neutralization theory in accounting for actual and/or intended non-environmentally friendly behaviour such as car use. In addition, the study's findings are discussed in relation to prior research and to potential implications for public policy interventions which favour moderating car usage.

## 1.0 INTRODUCTION

Carbon emissions from the transport sector constitute a major source of household carbon footprint – outranked only by construction and food production (Lorek & Spangenberg, 2001; Klockner & Friedrichsmeier, 2011). It is argued that since such emissions are responsible for a high percentage of overall carbon dioxide emissions, there is a need to attain drastic reductions (World Watch Institute, 2004; Gardner & Abraham, 2007; Beirao & Cabral, 2007; IPCC, 2007; Klockner & Friedrichsmeier, 2011). Private car use is, in turn, a major contributor to overall emissions from the transport sector (Klockner & Friedrichsmeier, 2011). It constitutes the primary mode of daily commuting, especially for people living in the industrialized world (Bergstad et al., 2011). There is strong potential for reducing overall carbon emissions if individuals reduce use of the car; the persistent use of cars by individuals jeopardizes the attainment of maximal carbon reductions from the overall transport sector (Steg & Tertoolen, 1999; Thornton et al., 2011). However, car use as a specific travel behaviour is very resistant to change (Thorgesén, 2004).

Numerous studies have found that people are generally aware of the environmental externalities associated with dependency and overreliance on the use of private cars (Gardner & Abraham, 2007). However, few are willing to switch to alternative modes of transport and/or reduce the number of trips they make (Scottish Executive, 2003; King et al., 2009). Policy makers recognize that more needs to be done. Investments into transport infrastructure, petrol taxes, R&D subsidies, congestion charges and bus/taxi lanes are all part of the set of regulatory tools that have been used in attempts to change the behaviour of car users. The aim is not to eradicate car usage but to reduce its environmental impact to levels that are acceptable and compatible with a sustainable economy (Wright & Curtis, 2005; Hensher & Button, 2003; Stradling et al., 2000). However, due to the limited efficacy of these measures, there is a growing realization that more profound changes in the way individuals

think about the car must be explored. In particular, it is argued that a deeper level of understanding of the complex dynamics underpinning car use by individuals and specific traveller segments is necessary for the design of effective interventions in favour of more sustainable commuting (Anable, 2005; Bamberg & Moser, 2007; Axsen & Kurani, 2012; Uba, 2013).

The purpose of this paper is to gain a deeper understanding of the reasoning techniques employed by car users and non-users when opposing normative expectations are made salient. Section 2 summarizes relevant literature in the area and defines the specific focus of the study. Section 3 presents our theoretical framework, which builds on the existing theory of neutralization (Sykes & Matza, 1957). The research methods used in the study are discussed in Section 4, and the study's results are presented and analyzed in Section 5. Section 6 discusses our theoretical contribution(s) vis-à-vis prior literature as well as potential policy implications.

## **2.0 LITERATURE REVIEW AND FOCUS OF STUDY**

Current literature highlights that individuals' car user behaviour is neither mechanistic nor solely dependent on utility, i.e. getting from point A to point B. Rather, decisions to use the car are largely dependent on a complex range of factors (Bamberg et al., 2011; Uba, 2013). These include: instrumental or utilitarian reasons for commuting by car (Guiver, 2007) such as travel time and travel costs (Zahavi & Ryan, 1980); the import of the built environment and accessibility measures (Reutter & Reutter, 1996; Manaugh & El-Geneidy, 2013); affective motivations such as the pleasures of driving, or feelings of power or superiority over others (Steg & Tertoolen, 1999); and psychosocial benefits relating to mastery, self-esteem and feelings of autonomy, protection and prestige (Ellaway et al., 2003; Wright & Curtis, 2005). On the other hand, trip satisfaction with alternatives such as cycling may negatively

affect decisions to use the car (see Willis, Manaugh & El-Geneidy, 2013) whilst a key role is also played by situational factors such as car availability (Dieleman et al., 2002), weather variability and strikes (Klockner & Friedrichsmeier, 2011; Uba, 2013).

Such motivations and/or arguments for car use are well-documented and comprehensively reviewed elsewhere (e.g. Gartman, 2004; Sheller, 2004; Guiver, 2007; Beirao & Cabral, 2007; Wright & Curtis, 2005). More recent studies emphasize the multiplicity of contexts and considerations that may affect commuting choices (Manaugh & El-Geneidy, 2013; Willis, Manaugh & El-Geneidy, 2013). However, as Hagman (2003) argues, the majority of existing research focuses on motivations and factors per se rather than on “how they are presented so as to make sense” (p.5) as part of people’s everyday accounts and narratives of transport dilemmas.

The few studies that have delved into individuals’ accounts of car use suggest that while the advantages of car use are largely known and are deemed to be unquestionable, the negative aspects of car use – particularly the environmental damage caused by car use – are often subject to negotiation (Gartman, 2004; Thorgesen, 2004). This is consistent with findings highlighting that engagement in pro-environmental behaviour is largely determined by whether individuals perceive acting in such a manner as congruent with their sense of self and/or with their perceptions of others (including perceptions about roles, events and/or the social world) as well as how these become embedded in everyday practices (Thorgesen, 2004; Whitmarsh & O’Neil, 2010). Because such cognitive representations underpin beliefs and sense-making about the way things work or are supposed to work (Crittenden, 1983; Fiske & Taylor, 1991; Maruna & Mann, 2006), they also underpin behaviour. Furthermore, individuals may employ accounts – explanations and justifications for their behaviour – as a means to maintaining a coherent sense of themselves (Shotter, 1984; Crittenden, 1983) and/or resolving everyday dilemmas (Orbuch, 1997).

In the context of car usage, such justifications may serve to alleviate potential feelings of guilt over environmental considerations and may therefore facilitate persistence in current travel habits (Jain & Guiver, 2001; Uba, 2013). However, car usage is a context which is potentially underpinned by different sets of normative expectations, and these could point to different courses of action. As we explain below, although acknowledged as environmentally harmful, car usage for university students is also viewed as a rite of passage. There are thus strong normative pressures in favour of, rather than against, the use of cars. Focusing on the justification accounts of individuals and groups and on how these accounts serve the purpose of negotiating different normative contexts has, therefore, the potential to facilitate understanding of how individuals and traveller segments are able to either persist in or desist from car use.

The foregoing explication of the role of accounts in understanding car use behaviour underpins the initial point of departure for the current study. We argue that a good approach to understanding how individuals are able to reconcile attitude-behaviour discrepancies in car usage is by exploring the justification accounts that result in persistence and desistance in use of the car becoming the individual's chosen course of action.

### **3.0 THEORETICAL FRAMEWORK**

The majority of studies on car user behaviour (and even pro-environmental behaviour in general) have relied on rational choice models such as the Theory of Planned Behaviour (Ajzen, 1991). This theory suggests that knowledge of a person's attitude is crucial in understanding any behavioural context; insofar as attitudes influence intentions, which in turn affect final behaviour (Ajzen & Fishbein, 1980; Ajzen, 1991). Many studies on car usage have found support for the predictive utility of the variables derived from Ajzen's (1991) Theory of Planned Behaviour (TPB) (see Gardner & Abraham, 2008; Stradling et al., 2000).

However, whilst rational choice models and theories offer explanations for car usage and behaviour, they are not without limitations. Specifically, they fail to account for the “attitude-behaviour gap”; attitudes may be consistently opposite to behaviour.

Normative approaches offer alternative insights into modelling and understanding car user behaviour. Normative models often focus on outlining or prescribing some kind of moral imperative that it is assumed will direct and guide behaviour under certain circumstances. Schwartz’s (1977) Norm Activation Model (NAM) is, perhaps, the most popular normative theory that has been applied to understanding car user behaviour (see Bamberg et al., 2011). This theory assumes that values and beliefs will lead to a consciousness of inherent problems or consequences that derive from performing certain behaviour(s). This resultant awareness will motivate individuals, via the activation of personal norms, to act in a manner that addresses the problem(s). This argument has been used to account for how car usage may be reduced (see Nordlund & Garvil, 2003). However, empirical findings highlight that environmental values and beliefs do not always lead to corresponding reductions in car usage (Kollmus & Agyemang, 2002). It can therefore be concluded that this model shares a similar limitation to those with a rational choice underpinning. More recent studies have attempted combinations of these models as a means of addressing their individual weaknesses. For instance, Bamberg et al. (2011) have included constructs from both the TPB and NAM in their study’s model, while Klockner & Blobaum (2010) have attempted a “Comprehensive Action Determination Model” (CADM). The CADM has been applied in the understanding of pro-environmental behaviour (see Klockner & Blobaum, 2010, on travel mode choice; and Klockner & Oppedal, 2011, on waste separation). However, even such attempts have limitations and do not offer a fully comprehensive account of attitude-behaviour inconsistencies (see Uba, 2013, for a detailed explication).



To summarize, decisions to use or not use the car are tied to a complexity of factors, and there may not be one best approach towards the deeper understanding needed for effective intervention aimed at encouraging reductions in use of the car (Beirao & Cabral, 2007). Accordingly, we suggest that more comprehensive understandings of car user behaviour would benefit from the application of theories that are specifically suited to capturing the essence of what is being left underexplored and under-theorized; that is, the inability of pro-environmental norms or attitudes to guide behaviour. The theoretical framework applied in the current study is underpinned by neutralization theory (Sykes & Matza, 1957) and its more recent extension, affirmation techniques (Copes & Williams, 2007). They both aim at understanding how inconsistencies between an individual's actions and beliefs are negotiated (and ultimately rendered less problematic) and accounted for (Hazani, 1991; Maruna & Copes, 2004).

In their original explication, Sykes & Matza (1957) argued that individuals who engage in norm-violating behaviour (crime) do not necessarily dissociate themselves from conventional norms. However, they may learn and appeal to a set of justifications or rationalizations which can insulate them from guilt, self-blame and blame from others prior to or after engagement in norm-violating behaviour. Although rooted in criminology, neutralization theory has been applied widely to various other areas such as the practice of dangerous sports (Brannigan & McDougall, 1983), the holding of stigmatized occupations (Thompson & Harred, 1992), the performance of environmentally relevant behaviours such as short-distance flights and recycling (Schahn et al., 1995, Schahn & Bertsch, 2003), consumer misbehaviour (Cohn & Vaccaro, 2006; Rosenbaum & Kuntze, 2003; Strutton et al. 1994) ethical consumerism (Chatzidakis et al., 2004; Chatzidakis et al., 2007; Hansmann et al., 2006; McGregor, 2008) and alcohol consumption among university students (Piacentini et al., 2012). The theory has

yet to be applied to car use with a view to explaining how pro-environmental cognitions may or may not influence alternative travel behaviour.

Applications of neutralization theory typically employ Sykes and Matza's (1957) taxonomy of neutralization mechanisms. These include: (i) denial of responsibility, (ii) denial of injury, (iii) denial of victim, (iv) condemning the condemners, and (v) appealing to higher loyalties. Further applications of the theory have discovered new techniques, including: the (vi) defence of necessity (Benson, 1985), (vii) the claim of normalcy (Coleman, 2002), (viii) justification by comparison, (ix) postponement (Cromwell & Thurman, 2003), (x) the claim of relative acceptability, (xi) the claim of individuality (Henry & Eaton, 1994), (xii) denial of the necessity of the law (Coleman, 1994), (xiii) the metaphor of the ledger (Klockars, 1974), and (xiv) the claim of entitlement (Conklin 2004). Through the use of these techniques, social and internal controls that normally prevent "deviant" behaviours are suspended, allowing the individual to commit the behavioural act or justify the intended action without damaging his or her "self-image" (Sykes & Matza, 1957; Bandura et al., 1996; McGregor, 2008). Provided that these justifications remain relevant for the individual, favoured behaviour can be repeated with few or no consequences, even if it is inconsistent with normative expectations and/or attitudes (McGregor, 2008). Correspondingly, neutralizations are avenues of maintaining persistence in current and/or intended behaviour (Maruna & Copes, 2005).

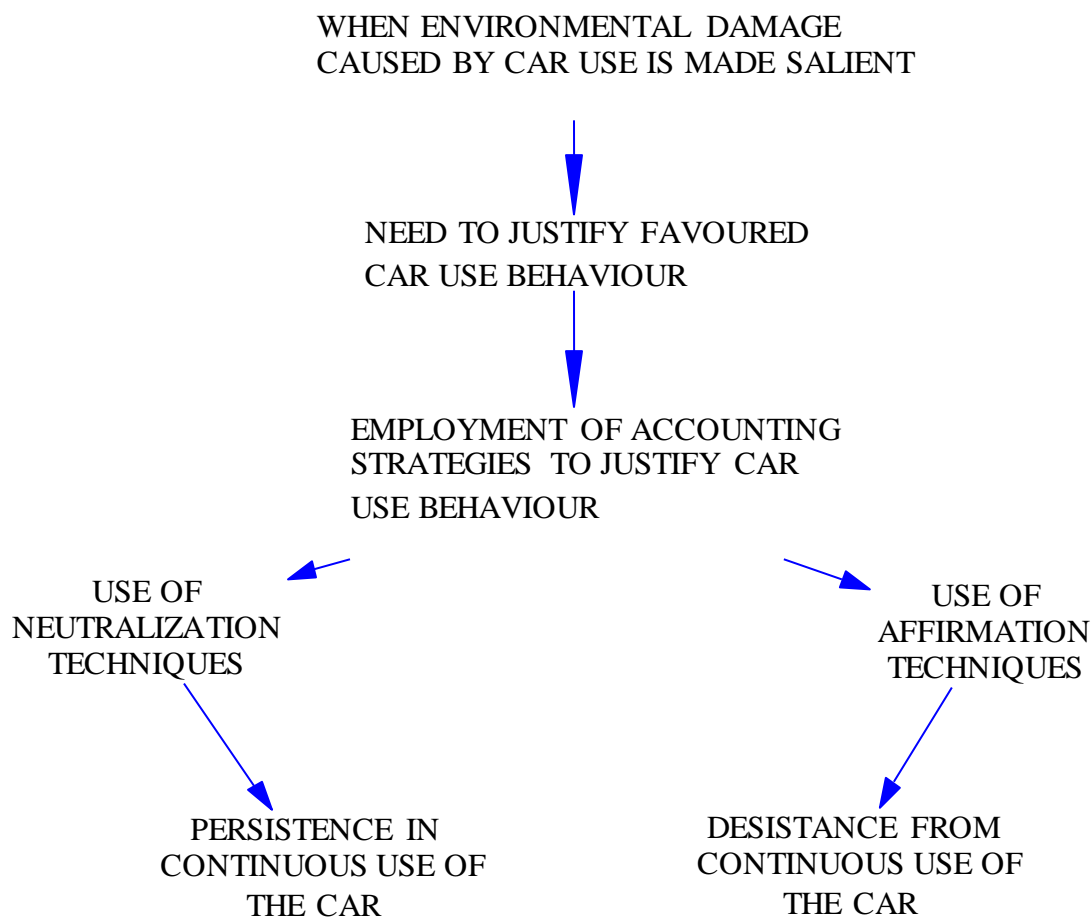
Whereas car users are likely to employ a range of neutralizations to justify the environmental damage caused by their car use, those who favour desistance (reduction or discontinuation) from car use for environmental reasons may also need to account for why engagement in desistance makes sense. In the context of an abstention-based ("straightedge") subculture, Copes & Williams (2007) have identified "affirmation techniques" that serve the specific purpose of justifying *not* performing behaviours that are in line with social norms expectations. The recent study by Piacentini et al. (2012) on how university students make

sense of drinking uncovers how, by turning neutralizations on their head, affirmation techniques may be employed as logical opposites of neutralization techniques. University students who choose not to consume alcohol, for instance, were found to employ affirmation techniques that counter rationalizations used by drinkers (e.g. that alcohol use is the norm; that it is not that harmful for health when done in moderation etc.) in order to maintain high levels of alcohol consumption. Similarly, university students who abstain from or moderate car use for environmental reasons are likely to employ rationalizations that counter those in favour of car use.

Copes & Williams' (2007) original formulation identifies the following counter-arguments to Sykes & Matza's five techniques: acknowledgement of responsibility, acknowledgement of injury, acknowledgement of the victim, discounting condemners and reference to priority relationships. Since affirmations are logical opposites of neutralizations, it makes sense to assume that people who employ affirmations may counter any of the neutralization techniques as long as this serves the purpose of justifying desistance from car use.

The focus of this paper is on the import of environmental concerns for persistence in and/or desistance from car use, recognising that they represent a significant – yet not the only – factor in explaining car use behaviour and/or broader travel mode choices. The diagram below summarises the process and the role of neutralizations and affirmations for negotiating persistence in or desistance from car use when environmental damage caused by car use is made salient.

**Figure 1: Study's Theoretical Framework**



Source: Authors

#### **4.0 RESEARCH METHODS**

Since accounts of behaviour are generated and modified during social interactions, the method of data collection most appropriate for the study should facilitate the exploration of language in action (discourse) from inter-subjective and social interactional perspectives (Orbuch, 1997). Focus groups were therefore preferred over other interview methods because they are more suited to capturing the interactional negotiations and constructions that highlight individual and group perspectives on behaviour (Kitzinger, 1994; Kitzinger, 1995; Krueger & Cassey, 2000; Braun & Wilkinson, 2003).

The study focuses on university students as a traveller segment. The rationale for focusing on university students goes beyond the obvious practicality of doing so. Consistent with previous findings (see Kingman & Donohoe, 2002, on the attitudes of young people towards commuting), young university students would have absorbed some of the societal stereotypes about certain modes of transport. However, these stereotypes and views are reinforced and changed through interaction with peers at school and/or by the media (Baslington, 2008). It is expected that normative expectations in favour of car usage may be more prevalent in the university context, not least because of specific challenges to socialization and identity-building during this difficult rite of passage (cf Piacentini et al., 2012). In other words, the social benefits of car usage (e.g. status, admiration etc.) may be more pronounced for young adults as opposed to older populations with more consolidated identities, thus offering us a particularly suitable context for examining two distinct and opposing sets of normative expectations (i.e. pro-environmental versus pro-driving). Pro-driving here refers to traditional car driving only, as the use of more sustainable cars may be underpinned by pro-environmental motivations. Moreover, as potential industry and political leaders, social decisions-makers and parents (Feldman, 1972; Kaufman & Feldman, 2004), the attitude towards car usage and the habits that university students develop are likely to impact upon many more outside the confines of the campus. Although there is a growing recognition and focus on university students as an important subgroup to investigate when it comes to transport related issues (Kim et al., 2013), few studies focus specifically on university students' attitudes towards car use – despite the fact that members of this traveller segment view their time in university as crucial in determining their future commuting choices (Lyons et al., 2008).

Thirty-four UK-based Higher Education students at a campus university in the outskirts of London participated in six focus groups. This sample size is sufficient in terms of exploring

in-depth a specific issue with a specific sample category (university students) (Kitzinger & Barbour, 1999). All respondents were enrolled on a full-time basis, and the majority resided on campus. Twelve of the respondents (five females and seven males) were first-year undergraduates. The remaining respondents (fourteen males and eight females) were Master's students. The age range of participants was 18 to 30. All respondents (except one MSc student – MR) reported being car users in the sense that they had regular access to private cars as drivers and/or passengers. In addition, all respondents (except MR) had acquired driver's licences and considered themselves regular drivers. However, while all MSc students (except MR) reported owning cars, only a few undergraduates reported the same. The majority used cars belonging to their parent(s) and/or siblings. Consistent with Rabiee (2004), the study's sample was purposive; it consisted of university students who had shared socio-cultural characteristics but who were engaged in different levels of study (see Clarke & Trow, 1996 on university student culture). Although we also tried to achieve some variation in terms of subject of study, the particular method of recruitment (and the fact that some participants were in already-formed friendship groups; see below) did not allow maximum variation. Nonetheless, the students were roughly representative of the particular university's degree and subject structure, comprising mostly students of Economics and Management (N=14), followed by students of other Social Sciences (N=12) and some Humanities students (N=8).

Initial contact with prospective focus group respondents was made at various locations on campus. These included three different student cafeterias and the library area. The researchers briefed prospective students on the study's aim and collected contact details of first-year undergraduates and Master's students who expressed willingness to participate in the study. Establishing this initial contact ensured that participants were aware of the topic prior to the focus group sessions and would thus have something to say about the topic. Moreover,

focusing on both first-year undergraduate and Master's students allowed us to consider if level of study underpinned students' accounts. Subsequently, invitations to participate in the focus group sessions were sent to the students via email. Time slots and dates were included in the invitation, and students were advised to book sessions according to any pre-existing friendship groups. The aim was to facilitate a friendship-based focus group approach (Kitzinger, 1994). This approach has an advantage over other focus group approaches in the sense that it allows for more "real" conversations (Kitzinger, 1994; Piacentini et al., 2012). It also enables access to authentic conversations and an increased likelihood of developing accounts that are authentic (Golden-Biddle & Locke, 2007).

As researchers, we used a semi-structured interview guide. We did not rely entirely on the guide; rather we let the conversations flow in a natural, conventional way (Piacentini et al., 2012). The focus group sessions lasted between 50 and 90 minutes. All focus group sessions were tape recorded, transcribed and uploaded into the Nvivo software program for subsequent analysis. To ensure complete anonymity, we adopt a naming convention in line with McLellan et al. (2003). Respondents were assigned interviewee identification labels during transcription to reflect gender and level of study (see the Appendix 1 for respondents' identification labels). We analyzed respondents' accounts of their car use from content (what is communicated in accounts) and latent or function (what is implied in the communicated content) perspectives (Braun and Clarke, 2006).

We started with the proposition that environmental cognition of the detrimental impact of car usage is necessary but may not be sufficient to provoke satisfactory actions (King et al., 2009). Thus, initial focus group questions focused on exploring respondents' awareness of climate change, its causes (greenhouse gas emissions) and car use as a major source of greenhouse gases such as CO<sup>2</sup>. Following confirmation that they were aware of the link between car use, CO<sup>2</sup> emissions and climate change, respondents were subsequently asked

direct questions that required them to account for why they would embark on continued use of the car (persistence) despite the possession of pro-environmental cognitions, the imperatives of which recommend reduced or discontinued use of the car (desistance). The use of direct questions allowed us to call the behaviour of respondents into question. In line with the assumption of neutralization theory (McGregor, 2008), responses to questions that call individual behaviour into question qualify as justifications for favoured behaviour (neutralizations or affirmations).

We adopted Braun & Clark's (2006) "theoretical thematic analysis" approach, with themes identified at both semantic and latent levels. We started by documenting content, i.e. identifying responses to direct questions that required respondents to account for why they would continue to use cars despite reporting pro-environmental beliefs on the need to reduce car use. Consistent with theoretical thematic analysis (Braun & Clarke, 2006) the coding system used in the identification of the neutralization techniques was primarily deductive, although some additional techniques and their interconnections were identified on an inductive basis. The full data set was explored for attributional statements (Massey, 2010) and for comments that reflected the definitions of specific neutralization or affirmation techniques. The following excerpt from the data set illustrates the strategy that was used for the coding of data extracts:

Denial of a victim	... there was a girl jogging next to those cars ... she was running and was inhaling a lot of it in her lungs. That's when I realized, yeah, that's an issue. Then I find fault in her; instead of running in a park, she is running in a road – so that's her fault (AMM1).
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In the case of this quote, the respondent's main argument was that the girl jogging in the park was responsible for her own exposure to vehicular emissions. In line with Sykes & Matza's explication on this neutralization technique (1957), this quote was coded as a "denial of the victim". The coding approach focused on interpreting content and was applied to the entire



data set in order to identify and document the different neutralizations and affirmations used by respondents.

This initial level of analysis (content level) allowed us to address the first study objective: uncovering the different justifications (neutralizations and affirmations) that are employed to maintain persistence in and desistance from car use. Analysis at the latent level was then applied in order to address the second objective: how neutralizations and affirmation are used, and the purposes they serve for the users. During analysis at the latent level, we revisited specific neutralizations and affirmations within the broader context of the discussions in which they were used. The aim was to uncover overarching themes across the entire data set rather than merely within specific focus group sessions (Braun & Clarke, 2006, 82). Consistent with theoretical thematic analysis, the prominence of each theme that is uncovered and discussed is “not necessarily dependent on quantifiable measures – but in terms of whether it captures something important in relation to the overall research question” (Braun & Clarke, 2006, 81) and, we would add, in relation to the adopted theoretical framework.

## **5.0 FINDINGS AND ANALYSIS**

The study's findings are presented under three sections: (1) the neutralization techniques used by *persisters*, i.e., students who favoured continued use of the car despite acknowledgement of the environmental harm caused by their car use; (2) the affirmation techniques used by *desisters*, i.e. students who favoured reduced/discontinued use of the car for environmental reasons; and (3) the interplay of these techniques by both groups. A guide to the use of quantifying words (i.e., most, some, few etc.) in the findings and discussion sections is provided in Appendix 2. This clarifies how many respondents are behind each issue being talked about.

In most focus groups (four out of six), participants were roughly equally divided between persisters and desisters. One group (Group 4) was comprised of mainly persisters. Another group (Group 6) was comprised of mainly desisters. As expected, the use of neutralization and affirmation techniques followed the pattern of desistance/persistence, with affirmation techniques being used in the desister group and neutralisation techniques being used in the persister group. There were no specific differences noted in relation to level and subject of study.

### **5.1 Techniques of neutralization: persisters' justifications for continued use of the car**

Students who favoured continued use of the car (persisters) employed a range of neutralization techniques to justify their commitment to continued use of the car despite its harmful effects on the environment. Evidence on the frequency of use of the different neutralization techniques is consistent with views that they may not all be equally represented in different contexts (Grove et al., 1989). The prevalent techniques used by persisters are denial of responsibility, claim of normalcy, defence of necessity, denial of injury, the claim of relative acceptability and the claim of entitlement. We also identify a new prevalent technique (change – locus of control argument) not previously identified in past studies. Denial of victim, claim of individuality, appeal to higher loyalties, the metaphor of the ledger and condemnation of the condemners were less dominant, while justification by comparison, justification by postponement and denial of the necessity of the law were not used at all.

**Table 1: Neutralization techniques and typical examples used by persisters**

Prevalent NTs	Typical examples used by persisters
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Denial of responsibility	<p>“I think what is stopping more people buying these fuel-efficient cars are because they are expensive. They are more expensive than normal cars, so why should you be paying more for electric cars?” (MM3)</p> <p>“Yeah, green cars, just like the Roadstar, the designs are just bland.” (MM5)</p>
Claim of normalcy	<p>“When I was small I travelled in a car and when I grow I want to have a car.” (MF2)</p> <p>“I think it (car use) is also a culture... It is a way of life” (BMM3).</p>
Defence of necessity	<p>“I am living at the border of the city. I often go to the countryside. There is just no public transport ...” (BSF7)</p> <p>“It’s like a part of my life. It’s like the way we have to dress to go out; otherwise it is not the way it should be.” (MMF2)</p>
Denial of injury	<p>AMM1: “It’s just individually we don’t see it (environmental damage from car use).” AMF3: “Yeah, it’s insignificant to us.” AMM2: “It’s so small.”</p>
Claim of relative acceptability	<p>“Fair enough, I use it (the car) mainly to get to university, but for some people it’s their livelihood. It informs whatever kind of jobs they do and things like that”. (MMB)</p>
Claim of entitlement	<p>“First of all, I need a car. And then, it is a belief and I kind of agree with it. I mean, if you are the boss something has to show you are the boss, you know.” (MM5)</p>
Change – locus of control argument	<p>BSF6: “You may stop, but every other person won’t.” MD: “You feel like you alone won’t make a difference?” BSF6: “Exactly, exactly! It is very difficult seeing you alone making a difference.”</p>
<p style="text-align: center;"><b>Less prevalent NTs</b> <span style="float: right;"><b>Typical examples used by persisters</b></span></p>	
Denial of the victim	<p>“There was a girl jogging next to those cars, and I was thinking ‘not a good place for running’ ’cos there was a lot of emissions coming from those cars, and she was inhaling a lot of it in her lungs. That’s when I realized, yeah, that’s an issue. Then I find fault in her; instead of running in a park she is running in a road – so that’s her fault.” (AMM1)</p>
Claim of individuality	<p>“I am gonna drive and I want everyone else to drive. I don’t care about the environment.” (ASM3)</p>
Appeal to higher loyalties	<p>“It is my mum, she expects me to take her shopping, and I have no choice.” (BSM10)</p> <p>“... they (friends and relatives) expect you to drive a good car.” (MM5)</p>
Condemnation of the condemners	<p>“They (government) just say “we gonna charge you tax, charge you, charge you and get money from you,” expecting we raise the money. And if you can’t pay the money you don’t drive. All they do is get the money.” (AMF3)</p>

	<p>“Together with the companies who sell the cars to us. If they (government) don’t want us to drive cars by having all this CO<sup>2</sup> tax, then why don’t they just shut down the companies so they stop producing cars? (AMF2)</p>
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Respondents who denied responsibility placed the burden of blame for their use of the car on influences somewhat beyond their control (Sykes & Matza, 1957). They often presented themselves as being left with no choice other than to persist in car usage. Typical justifications included arguments that alternatives to the car, especially buses, were expensive, time-wasting, lacking in security and unable to cater for adverse weather conditions. Respondents also blamed governments for not providing viable alternatives, blamed employers for often making driving a prerequisite for job roles, and viewed EFCs (environmentally friendly cars, e.g. hybrids) as bland and lacking contemporary aesthetics.

In the defence of necessity, respondents justified persistence in car use by arguing for its necessity. Consistent with the literature on why people use cars (see Gartman, 2004; Guiver, 2007; Wright & Curtis, 2005; Bamberg et al., 2011; Klockner & Friedrichmeier, 2011; Uba, 2013), necessity was justified mainly by emphasizing the benefits of car use (e.g. reductions in travel time and travel money, comfort, safety, protection from adverse weather conditions and impression management status enhancement).

Respondents who employed denial of injury claimed that environmental damage caused by car use is insignificant, minimal or not readily experienced (threat trivialization). By trivializing the threat, students effectively denied the negative consequences that might result from their car use. When employing the claim of relative acceptability, some persisters compared their car use to that of others, arguing that theirs was acceptable relative to that of others (Henry & Eaton, 1994).

On the other hand, students who employed the claim of individuality emphasized their right to choice, often by adopting an “I don't care” attitude (McGregor, 2008). Interestingly, the two students (AMM1 and ASM3) who employed this technique were the only ones to also employ the denial of the victim defence. In the denial of the victim defence, the victim (rather than the car user) is blamed for any harm they experience from the car user's behaviour. The fact that the same students used these two techniques concurrently echoes the view of McGregor (2008) that the use of these techniques suggests a selfish (“I don't care”) and uncaring (“It's the victim's fault”) disposition towards others. Those who appealed to higher loyalties argued that meeting the mobility needs of their small group (e.g., friends or family) took precedence over any other considerations, while respondents who employed the claim of entitlement argued that the use of the car was the entitlement of certain categories of people.

Respondents who condemned the condemner deflected attention directed at them back to the ones they perceived as calling their car use behaviour into question (e.g., by presenting arguments that governments and car manufacturers care only for tax revenue and profits, and care less about the environment).

Our findings revealed the use of a new neutralization technique that we termed the change – locus of control argument. The underlying rationalization here is that a single individual's desistance from car use does not make a difference. Similar to the denial of responsibility, this technique is based on the individual's interpretation of the extent to which they believe they can control the course of events (locus of control). However, it differs from denial of responsibility (and denial of injury) in that the emphasis is not on whether the individual can control their car use or the harm caused by their use of the car. Rather, the emphasis is on the potential effect of an individual's desistance from car use. As highlighted in the exemplar quote in Table 1, the argument is that an individual's efforts to reduce or to desist from car

use has no effect in addressing environmental damage caused by cars and as such is not worth embarking upon.

## **5.2 Techniques of counter-neutralization (affirmation): desisters' justification for reduced or discontinued use of the car**

Students who favoured discontinued or reduced use of the car (desisters) employed a range of counter-neutralizations (affirmation techniques) to justify their commitment to desistance. In line with Copes and Williams' analysis (2007), the techniques used by desisters opposed typical neutralization techniques, enabling these desisters to align their views with the pro-environmental frame of reference and corresponding imperative to reduce environmental damage caused by car use.

**Table 2: Counter-neutralization techniques (affirmation techniques) and typical examples used by desisters**

<b>Prevalent ATs</b>	<b>Typical examples used by desisters</b>
Acknowledgement of responsibility	"When I spent time in Italy in Milan – well, Milan is actually worse than Madrid. You could actually see the smog, the pollution ... and I realized people had to not use their cars and use the train. These kind of day-by-day situations." (MR)
Acknowledgement of injury	"I think everyone is aware of that (environmental externalities caused by car usage); but what can you do?" (AMF2)
Acknowledgement of the victim	"... and now the ice is melting faster and faster every single day, and we see how many natural disasters are happening, how many tsunamis and how many are dying throughout Asia. These (car use and manufacturers) are the main reasons why these things are happening, they should not happen." (ASM1)
Discounting condemners	"... and also it (car usage) is a waste of time. I mean, even if it seems contradictory, maybe you take ten minutes with the car, but then you are stuck in traffic doing nothing, while if you use train or bus you will use the time for relaxing or reading or studying. I use the train to come here from Madrid but I am studying on the train ... in the car, you can only listen to radio." (MR)

Reference to priority relationships	“I just started reading and thinking about (car use and environmental damage) ... oh well, it’s not about me, or it’s for my kids, if someone wants to get kids. So thinking about them or their kids. Maybe it’s something also because I am a woman and maybe that’s kind of such things that you care – I mean, will be more in your thoughts.” (FFA)
Condemnation of individuality	MD: “What do you think are the main reasons why people don’t think the way you think?” MR: “Yeah, because we are in greed (laughing). Yeah, I mean we don’t care about others. We don’t care about the environment, we just care about ourselves.”
Recourse to contrary necessity	“And also it (car usage) is a waste of time. I mean, even if it seems contradictory, maybe you take ten minutes with the car, but then you are stuck in traffic doing nothing, while if you use train or bus you will use the time for relaxing or reading or studying. I use the train to come here from Madrid but I am studying on the train ... in the car, you can only listen to radio.” (MR)

Similarly to persisters, desisters contended that other parties (e.g., governments and companies) are not doing enough in encouraging the adoption of alternative travel modes. However, unlike persisters, they accepted and acknowledged responsibility for possible harm caused by car use. They acknowledged environmental externalities caused by car use and, correspondingly, argued for reduced or discontinued car use as a means of reducing environmental damage.

Consistent with their acknowledgement of injury, desisters also acknowledged the victim (Copes & Williams, 2007). Desisters distinguished between two sets of victims: the natural environment that suffers degradation, and individuals who are affected by environment-related problems (e.g., the effect of tsunamis on the natural environment as well as individuals who reside in tsunami-hit area). Desisters’ views that car use ought to be reduced or discontinued were also underpinned by their rationalization (condemnation of individuality) that persistence justifications are underpinned by persisters’ selfishness and their lack of concern for the victim (i.e., that persisters fail to acknowledge the victims of their car use because they are selfish)

The rationalization underpinning the discounting of condemners and condemnation of individuality (Copes & Williams, 2007) is implicitly aligned to the reference to priority relationships (Copes & Williams, 2007). The implicit logic here is that desistance ensures not being selfish and/or causing harm to the natural environment on which the existence of significant others depends.

In addition, our analysis uncovered the use of two other dominant affirmations that were not included in the original formulation by Copes and Williams (2007). The condemnation of individuality draws from the logic underpinning the reference to priority relationships. Desisters suggested that the “I don’t care” attitude of persisters is what underpins harm to individuals and the natural environment. Consistent with this view, the typical desister assumed an “I do care about the environment” stance in opposition to the persister’s “I don’t care” attitude towards the environment and/or the victim.

In the recourse to contrary necessity argument, desisters countered persisters’ neutralizations by emphasizing the perceived advantages of the alternatives to car use. While persisters argued that car use is necessary (because it saves time, costs etc.), desisters, in using the recourse to contrary necessity argument, countered such claims. The typical counter-argument was that alternative commuting modes (such as trains) offer more student-friendly benefits (e.g., being able to read and relax).

In addition to uncovering the specific neutralizations and counter-neutralizations employed by respondents to justify persistence in and desistance from car use, analysis also confirmed that the use of neutralization (and counter-neutralization) techniques relied on specific explanatory styles, i.e. patterns of accounting for behaviour (Maruna & Copes, 2005; Maruna & Mann, 2006). The key pattern uncovered pertains to the manner and extent that



neutralizations and counter-neutralizations were employed to enable engagement or disengagement from the pro-environmental imperative to reduce car use.

Generally, persisters acknowledged the environmental imperative to reduce car use. They all accepted responsibility for externalities caused by their actual or intended car use. However, they were able to disengage from the pro-environmental imperative to reduce car use by appealing to a range of neutralization techniques. Interestingly, a few persisters did not fit within this broad pattern of disengagement. This minority category adopted extremist rationalizations that allowed them to disengage completely from the environmental imperative to reduce or discontinue car use. In line with this divergence, we categorized persisters as being hard-line (strong) or non-hard-line (weak), depending on the extent that their use of neutralizations allowed them to disengage from the pro-environmental frame of reference. The two students (AMM1 & ASM3) who employed the denial of the victim and claim of individuality arguments constituted the minority hard-line category. Over half of the overall sample were identified as weak persisters, making this a majority category.

Similarly, analysis uncovered a hard-line and non-hard-line categorization for desisters. All desisters tended to engage with the environmental imperative to reduce or discontinue car use. This was achieved by countering the neutralizations techniques used by persisters. However, they differed in their degree of disengagement from persistence-oriented frames of reference. Hard-line desisters adopted extremist positions, framing their affirmations in manners that allow them to engage deeply with the pro-environmental frame of reference. On the other hand, non-hard-line desisters' rationalizations were framed in a milder manner, allowing them to disengage slightly from the environmental imperative to reduce car use. Similarly to hard-line persisters, two desisters (MR & MMA) fell within this category. The remaining (about a third of the sample) were categorized as weak desisters; a major but less common category compared to weak persisters.

Framing justifications for car use in absolute or extremist terms serves the purpose of closing the door to considerations of alternative behaviour for both hard-line persisters and hard-line desisters. It is likely that the more neutralizations and affirmations are employed successfully to justify persistence, the greater the chance that the individual who uses them consistently will become deeply embedded or disengaged from the pro-environmental frame of reference and its corresponding imperative to reduce car use. Specifically, the continued use of specific neutralizations to justify persistence in use might increase embeddedness in car use up to the point that considerations of alternatives to the car are eliminated. This view resonates with those of Sykes & Matza (1957) that some delinquents may not employ neutralization techniques if they become too disengaged from conventional societal norms. The resonance with Sykes & Matza (1957) lies on the assumption that the user of neutralization techniques seeks to neutralize norm imperatives that conflict with those of the behaviour they favour. In this case of car use, persisters' attempts at disengagement are not from conventional social norms, as argued by Sykes & Matza (1957), but from the environmental norm imperative that they acknowledge and seek to neutralize.

**Table 3: Persister and desister categorization based on explanatory styles**

<b>HARDLINE (STRONG) PERSISTERS (Minority Category)</b>	<b>HARDLINE (STRONG) DESISTERS (Minority Category)</b>
Assume extremist positions when employing use of neutralization techniques.  Tend to disengage completely from wider environmental norms, e.g.:	Assume extremist positions when employing use of affirmative techniques (counter-neutralizations).  Tend to disengage completely from normative imperatives favouring car use,

<p>“We can’t live without cars”;</p> <p>“I don’t care about the environment ... I will keep using the car”.</p> <p>Justifications are strict in terms of car use; arguing for total indulgence in car use.</p>	<p>e.g.:</p> <p>“I don’t think anything will make me change my opinions, unless I am forced to use the car (laughs). If I must use a car, I will buy like a hybrid car, like Prius”.</p> <p>Justifications are strict in terms of car use; arguing for total abstinence from car use.</p>
<p><b>NON-HARD-LINE (WEAK)</b></p> <p><b>PERSISTERS</b></p> <p><b>(Majority Category)</b></p>	<p><b>NON-HARD-LINE (WEAK)</b></p> <p><b>DESISTERS</b></p> <p><b>(Prevalent but not Majority Category)</b></p>
<p>Assume non-extremist positions when justifying persistence.</p> <p>Tend to disengage by lowering the moral imperative of environmental norms.</p> <p>Justifications are less strict; acknowledging environmental imperatives but arguing for continued car use:</p> <p>“I agree we are harming the environment, but what can you do? You have to use the car”.</p>	<p>Assume non-extremist positions when justifying desistance.</p> <p>Tend to engage with environmental imperatives.</p> <p>Justifications are less strict; arguing for reduced car use or use of alternatives to conventional cars:</p> <p>“I would take it (hybrid vehicle) because I think about my pocket”.</p>

### **5.3 The interplay of neutralizations and counter-neutralizations: university students' negotiations of normative contexts and corresponding identities**

The manner in which neutralizations and counter-neutralizations are used involves strategic negotiations around conflicting normative contexts (the pro-environmental versus the pro-driving) within a student subculture. The student subculture reflects the frame of reference adopted by respondents when they attribute car use behaviour to the fact of their nature as young university students. Key themes that emerged from the latent level analysis of focus group data are presented in the following sub-sections.

#### **5.3.1 Car use as a symbolic tool for managing impressions of self**

There was unanimous agreement that car use offers distinctive advantages to the university student. Specifically, desisters' and persisters' views on how the car is used to manage or control peer impressions and relationships on campus reflected the conflict between the frames of reference underpinning the use of neutralizations and affirmations to justify persistence and desistance.

Reflecting on car use and impression management in his undergraduate years, a Master's student commented as follows:

I mean, most of the guys that had cars, they could afford to just wear t-shirts and shorts and slippers and drive around. If you are walking with a girl and he drives by, I mean that's it, she is gone. It's that whole status thing ... when you don't drive then you have to make up for it. (MM5)

In addition to offering distinctive advantages for managing or controlling peer impression, car use was seen by most respondents as an ideal means of communicating status on campus.

This was confirmed in the following focus group excerpt as a majority view:

BSF6: I think that we all want to get a driving licence and we all want to drive. I think that getting a car is like a kind of status. If you get the car then you are, like, better than the other person who gets a bus to school, you know what I mean, I think?

MD: (cutting in, addressing the rest of the group amidst laughter) Is it?

(Spontaneous response of “Yes” and laughter from all focus group members)

Similar views were expressed by most respondents across all the other focus groups. The spontaneous response of “Yes” highlights the group’s agreement with the individual’s opinion. The two quotes above indicate that although universities have become sites of sustainability education and environmental issues have become a lot more salient for students, traditional views of the university students’ culture as characterized by dates, cars and campus fun (see Clark & Trow, 1966) are still relevant. As such, the views regarding car use are reflective of widespread subcultural norms in favour of car use. Interestingly, findings also highlight that the extent of advantages offered is tied to the type of car that is used.

BMM6: I can do a link between people and the car they have. For example people who are businessmen who are over 40 or over 35 may like Mercedes, but people who are younger – like 25, 20 – who are rich, they prefer BMW, and people who do not want to pay a lot who are well off, they buy Audi A3. People who are middle class, they would go for a Volkswagen Golf.

MD: What's the basis for this categorization?

BMM6: It's my own life experience (causing a lot of laughter). This experience comes from the University of Life.

MD: Who believes in this University of Life?

BMM5: Everyone believes in it.

(Affirmations of 'yeah' from others)

Most respondents (desisters and persisters alike) agreed that car use in general, and specific types of car in particular, are perceived as offering distinctive advantages to students. However, in keeping with their view that car use ought to be reduced, the two hard-line desisters challenged this perception. The following quotes reflect typical arguments they used to negotiate this popular symbolic attribute of the car:

But actually I don't want to get involved in this kind of atmosphere because if people like you because of your money, because of your car or because of the clothes you wear, these are not friends, so I don't really care, I am not interested in this. I don't want the friendship that comes from the cars you use because it is not reality. It is not real friendship. Let's say you have a car, you have a Ferrari, you have glamorous life, one day you go bankrupt you have nothing, so what's gonna happen? All these people will disappear.

(MMA)

In addition, the hard-line desisters – in keeping with the extremist positions adopted in justifying persistence – close the door for any further consideration of whether to use or not use the car, in line with the dominant subcultural norms in favour of car

use. In the words of the other student categorized as hard-line desister: “I don’t think it (status) will affect me ... I don’t think anything will make me change my opinions. Unless I am forced to use the car (laughing)”. (MR)

### **5.3.2 Identity conflicts and the negotiation of conflicting normative contexts**

In addition, the broader contexts within which neutralizations and affirmations are used highlight students’ negotiation of conflicting normative contexts and their alignment to corresponding environmental values and identities (pro-environmental versus non pro-environmental).

The following extensive excerpt from one of the focus group sessions sheds light on how students’ views and constructions of “normalcy” and green vehicles (hybrid vehicles) reflect possible negotiations of conflicting environmental values and identities:

BMM1: Who goes on a date in a hybrid car, man? Get a taxi.

BMM5: At the end of the day, she will eat the food, hire a taxi and leave.

MD: What’s in the other car that is not in the hybrid car?

BMM1: Status.

BMM2: Performance and style, too.

BMM5: Yeah, green cars, just like that Roadster, the designs are just bland.

BMM4: They (manufacturers and government) expect that because it is hybrid they don’t have to put anything – any effort – in the design, because people just take it because it is hybrid.

BMM6: I would take it because I think about my pocket.

BMM2: It's not cheap, it is more expensive.

BMM1: I would rather hire a cab or something else. Personally I would never go on a date in a hybrid car, that's it. I don't mind owning it, like keeping it in my garage.

BMM6: Why, man? Why won't you go on a date in a hybrid car?

BMM1: Because it is different.

BMM4: Yeah! (Causing laughter from others) Hybrid car? It's too controversial for a date. It shows that you are too extreme (causing laughter and "yeahs" of agreement).

Consistent with our initial discussions of the neutralizations and counter-neutralizations used by persisters and desisters, the students who listed the disadvantages and qualities lacking in hybrid cars (bland design, expensive, lacks status and performance) are frequently those previously identified as persisters. The same car qualities mentioned here underpinned the neutralizations used in the claim of normalcy and defence of necessity, confirming that this category of students (persisters) tends towards the adoption of the non-pro-environmental frame of reference. An interesting finding from the excerpt pertains to how persistence and desistance are negotiated in interaction. We see this in the dissent expressed by the weak desister (BMM6) who favoured use of hybrids. This respondent attempted to make a case for the use of hybrids, arguing that hybrids are not as bad as the majority claim. Following the persister's labelling of hybrid users as "extreme", the student (BMM6) was silent for a while. Perhaps this was due to his interpretation of being considered different or extreme by others. However, he later opened up again and contributed to subsequent discussions. Our opinion is that this might be because he was familiar with other group members, making it easier for him to re-join the group discussions. Thus, had the focus group session not been built around



a friendship-based group, the respondent's voice might have been suppressed further by the dominant views being expressed that were inconsistent with his. We infer from this case that in addition to aiding the development of plausible and authentic accounts (Golden-Biddle & Locke, 2007), friendship-based focus groups can facilitate continued engagement among respondents even when personal and/or sensitive issues are raised.

Framing the use of hybrid vehicles as extremist indicates that most persisters may not have wished to associate themselves with what they constructed as socially awkward (use of hybrids). The views of self ("non-extremist") they favoured were in conflict with the environmental imperative to reduce car use. Hence, persistence was tied to the traditional pro-driving imperative. Consistent with their use of counter-neutralizations, typical hard-line desisters' (MMA and MR) accounts were inclined towards the adoption of pro-environmental identities. This was confirmed in the views of one hard-line desister: "I don't think anything will make me change my opinions, unless I am forced to use the car (laughs). If I must use a car, I will buy like a hybrid car, like Prius". (MR) This view highlights a consistent alignment with the pro-environmental imperative in the sense that the hard-line desister's prime stance is that of discontinued (as against reduced) use of the car. Situational factors (i.e., "if forced") may result in pro-environmental driving (use of hybrids) but are not considered enough reason to embark on traditional driving. In other words, situational factors are not likely to affect choice and decisions to desist from car use for hard-line desisters. However, as we discuss in the following section, the contrary appeared to be the case for weak desisters.

### **5.3.3 The import of salience for self and identity negotiations**

The analysis highlights that the manner in which respondents' accounts are used to negotiate identities and selves is tied to their process of becoming; that is, their perceptions about their evolving senses of self (see Allport, 1955; Worth, 2009) and how these may, in turn, affect

their car use behaviour. The counter view posited by BSF7 in the following excerpt is illustrative of how situational factors may affect choice and decisions to persist and/or desist from car use:

BSF6: You know when you said you wanted to understand why people really like cars and stuff? I think that we all want to get a driving licence and we all want to drive. I think that getting a car is like a kind of status. If you get the car then you are, like, better than the other person who gets a bus to school, you know what I mean, I think?

MD: (cutting in addressing the rest of the group amidst laughter) Is it?

(Spontaneous response of “Yes” and laughter)

BSF7: But also, in my case, I often go to the countryside – I am living at the border of the city. I often go to the countryside. **There is just no public transport** (emphasis on bold), so I don't even have a choice. I take my bike or I go by car and mostly I go for the car, just because there is no public transport.

MD: So what you mean is that it is absolutely necessary?

BSF7: Yes.

MD: Does anyone agree with this sort of thought? I want us to share experiences about these things.

(Unusual silence).

While the views of this particular (female undergrad) respondent did not categorically counter popular views that car use serves students' specific self-image and self-promotion purposes, it suggests that situational factors could be assigned a higher place in the hierarchy of motivations for car use. It is also possible that had the same respondent (BSF7) resided in an area with easy access to reliable transport modes, the attribution of car use to necessity may not have been applied. This is justified by a different student's argument that: "... if you go to a place where there are no options, then car transport is a need ... it depends on the location". (AMM2)

The subsequent reaction from other students following this respondent's (BSF7) dissonant perspective is particularly interesting. Following the dissonant views, other respondents made no further comments. The focus group moderator used probes (asking respondents to justify again why they aspired to drive) to stimulate discussions around the dissonant view. Responses to the probes drifted from initial focus on impression management to considerations of situational factors in line with the dissonant perspective.

An interesting finding tied to the dissonant perspective relates to how BSF7's response cued alternative considerations from other respondents. The alternative considerations did not imply the rejection of already-expressed views. They did, however, highlight how alternative issues may become more salient based on the availability of fresh information or related interventions.

Following the dissent from BSF7, most respondents who initially subscribed to weak persistence weakened their perspectives. This weakening of persistence reference frames occurred in response to cues that made other frames of reference more salient. For instance, the same female respondent who argued that students would love to drive in order to present themselves as being "better off" than non-drivers subsequently wondered why people use

4x4s and “gas-guzzlers”. She then remarked that she would always opt for low-emission vehicles; a choice that de-emphasized the symbolic role of the car she initially subscribed to. Similarly, the views of most weak desisters in all focus groups fluctuated, often weakening, in response to different situation cues and question frames. The process of re-negotiating views is consistent with the theory of LeBoeuf et al. (2010) that respondents’ views can change in response to alternative points of views that are made salient in a dialogical process. For example, when the moderator asked what their car user choices would be if they became wealthier in the future or attained top managerial positions, the views of many weak desisters and weak persisters drifted towards hard-line persister frames of reference (not caring about the environment), suggesting that subscriptions to persistence or desistance could be influenced by later changes in individual circumstances and/or situations. The overall implication is that trends in students’ car use behaviour are likely to be subject to fluctuations (drift) in line with their evolution of self (e.g. from young person to adult, from student to worker) or in relation to their level of income; and thus to corresponding interpretations of circumstances and/or situations. Although persistence appeared to be motivated by impression management, the apparent drift highlighted that university students’ overall perceptions of self and others in relation to car use as young people are fluid and susceptible to fluctuations. As such, their future car use behaviour may be underpinned by factors that characterize the contexts (e.g. situations, circumstances, social and professional group affiliations, etc.) in which they find themselves at specific points in time. In other words, their future car use will be determined by their future traveller segment characteristics (Frandsberg & Wilhelmson, 2011) as well as their physical environment (Reuter & Reuter, 1996; Manaugh & El-Geneidy, 2013). However, it is important to note that this may not necessarily be the case for the minority of hard-line desisters, since they are less affected by normative expectations and situations that are in opposition to their adopted pro-environmental frame of reference.

## 6.0 DISCUSSION

This study explored university students' justification accounts for persistence in and/or desistance from car use. Its findings uncovered a range of neutralizations and counter-neutralizations employed by university students to justify and maintain persistence in (continued use) and desistance from (reduced and/or discontinued) car use when the pro-environmental norm imperative is made salient. Persisters employed neutralizations to downplay the environmental impact of their actual and potential actions; they did this as part of compromising strategies (Ahuvia, 2005). These were often accompanied, in the case of weak desisters, by partial disengagement from the environmental imperative to reduce car use. All participants employed a range of neutralizations in the course of their interactions in a focus group setting. These neutralizations served to protect self-interest points of views (Uba, 2013); incorporating both specific circumstances and interpretations of travel mode choices as well as how these were tied to respondents' overall situation as young university students.

Previous literature on car use behaviour suggests that individuals would normally account for why they use the car by focusing on their interpretations of the advantages and benefits provided by the car (Guiver, 2007; Uba, 2013). Our findings illustrate that persistence and/or desistance may be further justified, and therefore maintained, by interpretations of situations and/or contexts that go above and beyond reference to perceived advantages and benefits of car use. Specifically, they highlight that specific forms of behavioural accounts (e.g., that the individual's own pro-environmental behaviour is not enough to address environmental issues), by justifying continued engagement in behaviours that are not consistent with existing pro-environmental beliefs, may become motives for such behaviour. As such, focusing on justification accounts set within different contexts (e.g., as we focus on the import of environmental beliefs in this case) may help uncover context-specific motives for

car use, and along this line better extend our understanding of the drivers of car use and/or non-car behaviour.

The current findings also confirm that neutralization theory (neutralization and affirmation techniques) is a useful framework for understanding the cognitive representations that (de)legitimize decisions to maintain continuance or discontinuance (or reduction) from car use for environmental (and possibly other) reasons. Neutralization techniques enable the user to free themselves from ethical restraints as well as to “drift in” and “drift out” of contexts of consideration. Specific to car use, the extremist positions adopted by hard-line persisters and desisters imply that these categories of students are not likely to experience as much drift as weak persisters and desisters. This is because continuous involvement or deep-level embeddedness in a behavioural act may lead to a hardening process (Hirschi, 1969) or graduated desensitization (McCarthy & Stewart, 1998) whereby there is a strong approval for car use and, hence, less need to employ neutralizations or counter-neutralizations. On the other hand, weak persisters and desisters are likely to employ neutralizations and counter-neutralizations, in keeping with their less “graduatedly desensitized” character. The possibility of drift demonstrates, in at least two ways, the usefulness and limitations of existing segmentation approaches, and underlines the need for more complex and comprehensive mobility style frameworks (Prillwitz & Barr, 2011). First, this theoretical framework allows for categorizations similar to Anable’s (2005) die-hard drivers (strong persisters), aspiring environmentalists (strong desisters), malcontent motorists (weak desisters) and complacent car addicts (weak persisters). Second, the possibility of altering normative focus and drifting from one frame of reference to another (e.g., hardliner to non-hardliner and vice versa) highlights the limitations of models that assume that car users fall consistently into set or fixed categories. In sum, the possibility of drift highlights that categorizations of individuals, e.g. as hardliner or non-hardliner, are not as clear-cut or fixed

as they are often made out to be. The implication is that categorizations of car-user types need to account for, or at least factor-in, the possibilities and implications of “drifting” by individuals in different traveller segments.

Specific to university students and car use, weak persisters and/or weak desisters “drift” is tied up with the individual’s intentional state – the meanings and interpretations that construct a field for action (Richardson et al., 2009) – and perceptions of self and identity. Intentional states can highlight present and future constructions of self and others in relation to persistence or desistance, and are reflected in the manner in which neutralizations and counter-neutralizations are used. For example, the drift instance whereby non-hard-line desisters drifted towards non-hard-line persistence – when their future car user behaviour was considered from the perspective of being wealthy or managers – is a reflection of how perceptions of self and identity are negotiated in response to future scenarios or contexts that are made salient. Given the weak economic positions of students (Hossler & Schmit, 1999; Bourn, 2008), it might be that this current situation, i.e., not being able to afford specific car brands associated with desired symbolism, is what drives some respondents to identify with the non-hard-liner desister frame. This may account for why they drifted towards more hard-line positions when the context required them to assume possession of material wealth or the status of manager.

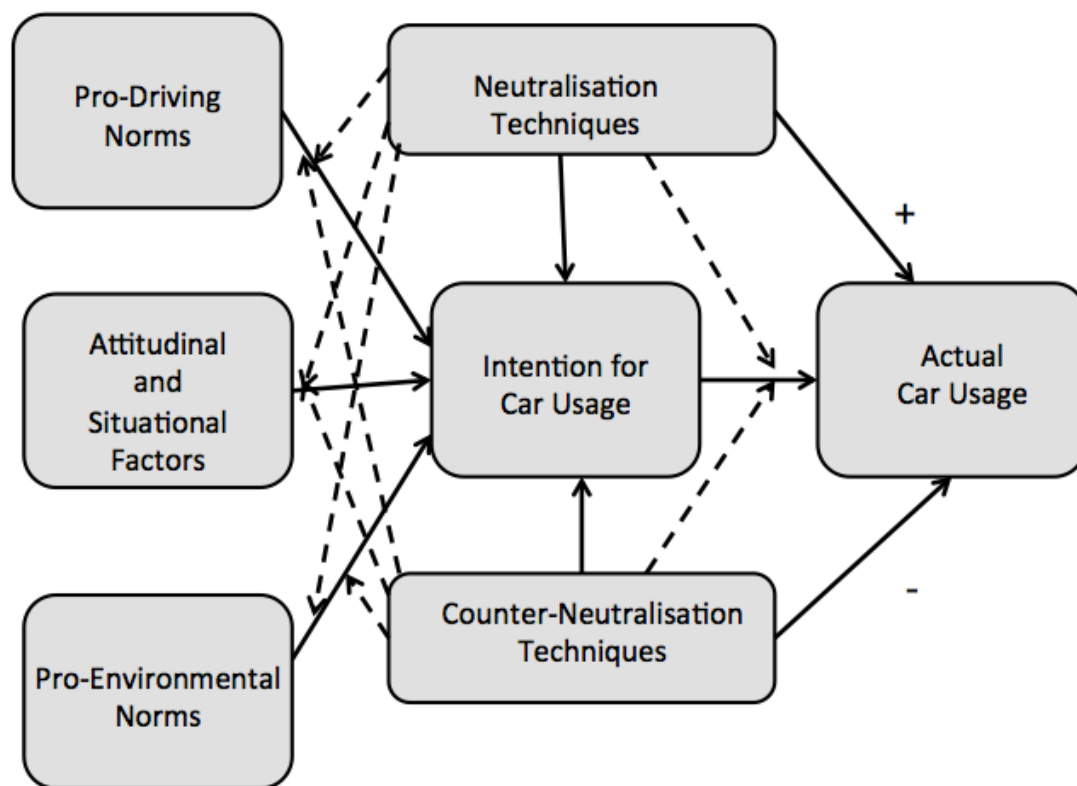
Figure 2 summarises our theoretical observations within a model that draws on both the TPB and NAM. Specifically, we postulate that alongside more traditional attitudinal and situational considerations (as postulated in the TPB, e.g. price, convenience, traffic situation etc.), car usage is a context underpinned by two distinct sets of pro-driving and pro-environmental norms – therefore contrasting with both TPB and NAM – which point to car usage and non-car usage respectively. Neutralization techniques are expected to strengthen the relationship between pro-driving norms and car usage (both intentional and actual) and to

weaken the relationship between pro-environmental norms and car usage. Counter-neutralization techniques are, in turn, expected to strengthen the relationship between pro-environmental norms and car usage and to weaken the relationship between pro-driving norms and car usage. Both neutralization and counter-neutralization techniques are also expected to moderate the effect of attitudinal and situational factors on intention. Specifically, we expect neutralization (counter-neutralization) techniques to strengthen (weaken) the effect of attitudinal and situational factors favouring car usage.

In addition, we postulate direct effects, i.e. neutralizations (counter-neutralizations) positively (negatively) affect intended and actual car usage. Specifically, neutralizations reinforce persistence in actual or intended car use, while counter-neutralizations reinforce desistance from actual or intended car use. On the basis of our observations, these positive (negative) effects are likely to hold stronger for hard-line persisters (desisters), given that they are less affected by opposing normative expectations. This echoes what Hirschi (1969), drawing on Sykes and Matza, describes as the outcome of “hardening processes”, but is here applied to both phenomena of (hardened) persistence and desistance. The moderating effects of neutralization and counter-neutralization techniques are, in turn, more in line with Sykes and Matza’s (1961) notion of “drifting” and are more likely to apply to softer desisters and persisters.



**Figure 2: Neutralization and counter-neutralization techniques within the context of TPB and NAM**



In addition to theoretical implications, our findings are of potential relevance for interventions (policy and practice) aimed at enhancing sustainable commuting among specific traveller segments.

First, our findings illustrate that the majority of university students may possess strong emotional and symbolic associations with car use (Clark & Trow, 1966; Uba, 2013). This highlights the need to ensure consistency between traveller segments' interests and intervention strategies aimed at getting them to reduce use of the car. Students or any other traveller segment can be made to feel good about reducing car use if alternatives to car use are aligned to their self-interest points of view. For instance, when it comes to the possibility of adopting green vehicles (hybrid vehicles specifically), our findings are consistent with

those of Schuitema et al., (2013), that the rejection of green vehicles is linked to perceptions of limited symbolic attributes and a negative social identity. This suggests that student persisters are more likely to adopt green vehicles if these possess specific symbolic properties (e.g., they are “flashy” and affordable); properties which are seen as lacking in existing green vehicles. To encourage desistance, policy makers and car manufacturers can make this category of traveller segment (and indeed young people) feel good about adopting desistance frames of reference, for instance, by aligning the design of “green” vehicles to the tastes of this specific traveller segment (i.e. by making them “flashy” and affordable). A key implication is that effective policy proposals should, therefore, attempt to move beyond the provision of alternative transport and incentive schemes for reductions in car usage. While providing alternative means of commuting is indeed useful, we argue that understanding and acting upon the cognitive representations underpinning persistent use of the car provides, in addition, an effective way going forward.

Second, an important feature of applying neutralization techniques theory to behavioural studies is its ability to identify areas where positive behaviour can be achieved (Maruna & Copes, 2005). The current findings indicate that not all neutralization techniques are used equally in the student context. The study also identifies specific techniques that may be dominantly used by both persisters and desisters. Specific to intervention, the identification of dominant techniques can be seen as key points for intervention focus. For instance, while the findings of Kim et al., (2013) suggest that university students who understand that their own behaviour is part of the problem are more likely to understand that effective policies need to be introduced to solve the problem, our findings show that even this level of understanding may not be sufficient to reduce use of the car. In cases where the majority of individuals assume that their own behaviour in terms of desistance does not make a difference (change – locus of control argument), acceptance of responsibility may not necessarily lead to actual

desistance. More creative and joined-up approaches to intervention are required. For instance, university gym instructors could encourage registered gym members to use – for free, during lovely summer days – bikes provided as part of the university cycling scheme, rather using the gym (even if cycling is done only around campus). Recipients of this incentive, if made aware that such exercise is fun and offers health benefits similar to those acquired in the gym, are more likely to adopt cycling than they are where bikes are merely made available on the assumption that students will use cycling schemes. The benefits of this sort of joined-up approach tie into a key feature, identified by students, of a healthy university as one that provides reasonably priced exercise facilities (Holt et al., 2015). Such joined-up approaches also may increase the likelihood of previously non-cyclists to adopt cycling. In addition, the benefits can provide the subsequent motivation for continued cycling. This argument is consistent with self-perception theory (Bem & McConnell, 1970; Bem, 1972); that a counter-attitudinal behaviour (e.g., when a desister cycles rather than using the car) may become interpreted as consistent with the individual's values and self-interests (e.g. fitness and health) following reflection after the behavioural act.

Furthermore, the current study's finding that neutralization techniques may differ in terms of magnitude is relevant for intervention. Some techniques are more malleable (i.e. can be altered), while some – particularly those employed by hard-line persisters – are more extreme (less malleable) (McGregor, 2008). Identifying these can provide useful insights to policy makers on ways of working around such malleability using joined-up approaches similar to the “gyiming” versus cycling example above. Finally, the possibility of drift underlines that desistance orientations can be substituted by persistence frames of reference. Thus, besides focusing on getting more people to adopt sustainable modes of commuting, it is equally important that interventions consider ways of reinforcing desistance-oriented lifestyles.

Although the current study sheds light on the nature of the justifications for persistence in and desistance from car use, its focus on the role of pro-environmental cognitions for persistence or desistance implies that other determinants of car use may have not been made salient in the data. For instance, desistance from car use is dependent on factors that are non-pro-environmental, e.g., the proximity to workplaces and/or social amenities, the reduction barriers to using active modes, residence in car-free developments, presence or absence of infrastructure such as road access, etc. (Guiver, 2007; Shannon et al., 2006; Frandberg & Wilhelmson, 2011; Erickson & Garling, 2008; Melia et al., 2011). On this basis, this study cannot claim to have adequately captured the phenomenon of desistance in its entirety. Finally, our findings are limited in terms of representativeness of the wider student population.

In sum, the current study uncovers the dominant techniques of neutralization and affirmation employed by students to justify favoured car user behaviour within the context of the environmental imperative to reduce car use. In addition, it identifies the different roles and functions served by these techniques; in line with previous findings that car use serves different purposes for different individual users (Guiver, 2007; Wright & Curtis; Bergstad et al., 2011; Klockner & Friedrichsmeier, 2011). Our study also makes significant theoretical contributions, for example, by expanding the range of neutralization techniques (e.g. introducing the change – locus control argument and expanding the range of affirmations) and offering insight for policy and practice interventions aimed at moderating car use at local (university) and public levels.

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## APPENDICES

### Appendix 1: Focus group respondents' groups and ID codes

FOCUS GROUP	MALE STUDENTS' CODES	FEMALE STUDENTS' CODES
GROUP 1 (AS) – UNDERGRAD STUDENTS  (1st Yr UG) Distribution: Male (3), Female (1)	ASM  (Group A, UG Student, Male)	ASF  (Group A, UG Student, Female)
GROUP 2 (BS) – UNDERGRAD STUDENTS  Distribution: Male (4), Female (4)	BSM  (Group B, UG Student, Male)	BSF  (Group B, UG Student, Female)
GROUP 3 (AM) – MASTER'S STUDENTS  Distribution: Male (4), Female (4)	AMM  (Group A, Master's Male)	AMF  (Group A, Master's Female)
GROUP 4 (BM) – MASTER'S STUDENTS  Distribution: Male (8), Female (2)	BMM  (Group B, Master's Male)	BMF  (Group B, Master's Female)
GROUP 5 (MM) – MASTER'S STUDENTS  Distribution: Male (2), Female (0)	MMA and MMB  (Master's Male, A and B)	NONE
GROUP 6 – MASTER'S STUDENTS  Distribution: Male (0), Female (2)	NONE	FFA and MR  (Abbreviated from respondents' real names)
Focus Group Moderator (Researcher) is assigned code MD		

**Appendix 2: Persisters and desisters reported in the sample and guide to the use of quantifiers in presenting and discussing focus group findings**

<b>NUMBER OF PERSISTERS AND DESISTERS REPORTED IN THE FINDINGS</b>			
	<b>Page Reported</b>	<b>PERSISTERS AND DESISTERS AND THEIR RESPECTIVE CATEGORIES</b>	<b>Number of respondents</b>
1	23, 24	Persisters that are hard-line (Strong persisters)	2
2	23, 25	Persisters that are non-hardline (Weak persisters)	18
3	23, 24	Desisters that are hard-line (Strong desisters)	2
4	23, 25	Desisters that are non-hardline (Weak desisters)	12
<b>GUIDE TO THE USE OF QUANTIFIERS IN PRESENTING AND DISCUSSING FOCUS GROUP FINDINGS</b>			
	<b>Page reported</b>	<b>QUANTIFIERS USED IN REPORTING AND DISCUSSING FOCUS GROUP FINDINGS</b>	<b>Number range of respondents</b>
1	27, 28 & 33	“most respondents”	25 - 32
2	31	“most persisters”	10 - 18
3	34	“most weak desisters”	7 - 10
4	18	“some persisters”	5 - 10
5	37	“some respondents”	10 - 15
6	12	“few undergraduates”	3 - 5
7	22	“few persisters”	3 - 5
8	12, 30	“the majority”	25 -30
9	27	“majority view”	25- 30