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Chapter X Multiplier and Transfer Effects of Car Sharing in Australia

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1 Abstract

It is often assumed that members of car sharing organizations (CSOs) observe voluntary simplicity as a way of life, and that their philosophical and moralistic values revolve around avoiding unnecessary consumption. This paper presents some evidence showing that this conjecture is plausible. Almost 300 members of GoGet, Australia's first and largest CSO, participated in an online survey that showed, among others, that 18% gave up their only car before joining and 74% of them do not consider to buy a car after joining. Sign-up data from the over 700 members also show that they have a significantly lower annual VKT (vehicle kilometers travelled) compared to the average Australian, and that their car travels have reduced since becoming a car-sharer. Email interviews further indicate the presence of two phenomena resulting from their car sharing experiences, which we refer to as "multiplier effects" and "transfer effects". We found that indirect sustainability gains flow from using car sharing that are beyond the sustainability of the specific domain the PSS was designed to make more sustainable; for instance, car-sharers tend to walk more and local shops benefit from car-sharing because people drive less. Moreover, there are signs that the skill and attitude changes learnt from the use of car sharing are somehow exported to other aspects of everyday life; thus, those who sign up for car sharing because of lack of capital or parking facilities find themselves more agreeable to sharing products in other aspects of their life, such as sharing toys and tools in special "libraries".

2 Car sharing in Australia

In 2006 there were an estimated 14.4 million passenger vehicles in Australia, each traveling an average of 13,900 km in the last year and collectively consuming a total of 17,831 million liters of fuel (ABS, 2006). Passenger vehicles accounted for exactly three-quarters of the total distance traveled by all registered vehicles in Australia. Personal and other use accounted for 52% of the total kilometers traveled, while travel to and from work (29%) and business use (19%) accounted for the remaining kilometers traveled by passenger vehicles (ABS, 2006).

Australia is the world's third largest producer of transport-related carbon dioxide emissions per capita; passenger cars contribute to 55% of these transport emissions (ABS, 2003b). Transport energy consumption and emissions are linked to the longstanding automobile dependency and the "car culture" norm, with Australians enjoying one of the highest rates of car ownership in the world, about 537 cars per 1,000 resident population (ABS, 2006). Almost 9 out of 10 of households have one or more cars (ABS, 2003a).

Car sharing is proposed as a strategy for reducing the number of motor vehicles on the road, and consequently emissions. Although car sharing has been around since 1987 in Europe, car sharing in Australia is a much younger venture, having started in Sydney only as recently as 2003 (Ramirez & Nawangpalupi, 2006). There are now an estimated 2,860 members in 6 car sharing organizations (CSO) in Australia (Figure 1), up from 1,300 in 3 CSOs last year (120% rise). The number of available car sharing locations has also increased 2.75 times from 62 in 2006 to 171 in 2007 (Table 1).

GoGet (www.goget.com.au) is the first and largest CSO in Australia, operating in 80 location in Sydney and Melbourne, Brisbane (in partnership with GWhiz) and Perth (in partnership with Nexus). An estimated 47% of car sharers in Australia subscribe to GoGet.

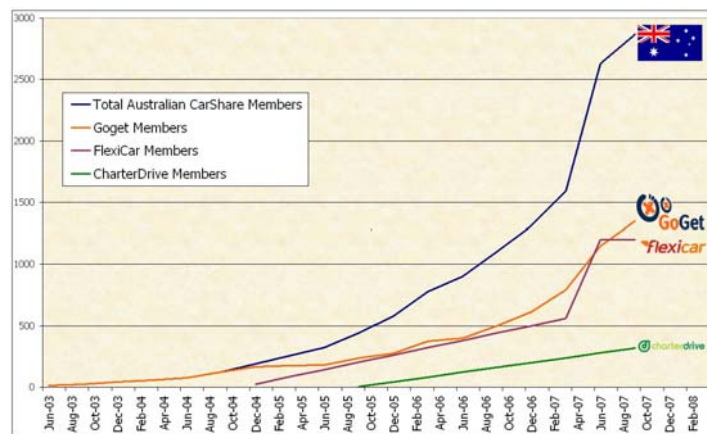


Figure 1. Total members of car sharing organizations in Australia, 2007
(Only GoGet supplied accurate monthly data; figures for Flexicar and CharterDrive are estimated projections from intermittent data appearing in their websites; data for Nexus, GWhiz and SmartDrivers are unavailable).

Table 1. Car sharing locations in Australia, 2007

City	CSO	Operating since	No of locations, 2007	No of locations, 2006
Sydney		Jun 2003	61	30
Melbourne		2004	46	17
Sydney		2007	13	-
Melbourne		2007	13	-
Melbourne		Nov 2004	12	7
Sydney		Sep 2005	9	8
Brisbane		2007	8	-
Brisbane		2007	5	-
Perth		2007	4	-
Total			171	62

3 Research Methodology

GoGet, Australia's first and largest car sharing organization, cooperated with researchers at the University of New South Wales and University of Technology Sydney in further understanding the environmental and social sustainability impacts of car sharing in Australia. One of the researchers worked as a volunteer at GoGet and was allowed access to their membership database for research analysis purposes. GoGet also deployed the researcher's web-based survey to its members. This paper extracts data from various sources of primary information collected by the authors from GoGet members in 2007.

- A. GoGet member usage data. This database summarized the annual car sharing usage of each member, which was based on their billing information. For analytical purposes the data was annualized: vehicle kilometers traveled (VKTs) from those who had less than one year of membership were extrapolated to 12 months to estimate their yearly use. This database contained records for 716 members who have been active for at least for 4 months before August 2007.
- B. Web-based survey. An online questionnaire was distributed to 791 members and 294 responded (37%). This survey focused on user satisfaction and environmental perception of members. Some of the questions asked were:
 - What is your reason for joining GoGet?
 - On average how often do you use a GoGet car?
 - Have you been inconvenienced by another member and if so how many times? If you have you been inconvenienced, were you treated fairly by GoGet?
 - How does GoGet compare to a rental service in terms of convenience? Pricing?
 - What is your most disappointing experience with GoGet Car Share? Your best experience?

- What is your recommendation to improve the GoGet service?
- C. Emailed questions. Three short open-ended questions were emailed to the 258 members who responded willingness to be interviewed further during the previous web-based survey; 124 responses were gathered. The questions are as follows:
- For which activities do you use a GoGet car the most? – social activities (meeting friends, relatives, colleagues, etc) – leisure activities (doing sports, holidays, day outings, etc) – maintenance activities (shopping, health treatments, etc) – productive activities (working, studying, etc) – other activities (please describe briefly).
 - Have you participated in any community-based sharing facilities before OR after joining GoGet (for example: toy libraries, tool libraries, tool sharing clubs, book sharing, clothes swapping, bike sharing, backyard sharing, community gardens)?
 - Please indicate if your usual driving behaviours changed after you joined GoGet. For example: do you use a car more or less often, do you travel different distances (in terms of mileage)? After joining GoGet, have you changed your shopping behaviours? For example: do you shop more locally than before, do you shop in a mall or supermarket farther away or more often?

4 Findings and Analysis

4.1 GoGet member profiles

From the 294 responses to the web-based survey, Nawangpalupi (2007) profiled the sample of GoGet car share members as being (Figure 2):

- a. equally male or female (50%-50%)
- b. mostly renting (59%)
- c. almost half are from couple households without children (48%)
- d. mostly in the 31 to 40 year old age bracket (48%)
- e. mostly are high income earners (81%)
- f. overwhelmingly satisfied with the GoGet experience (62% very satisfied + 36% satisfied)

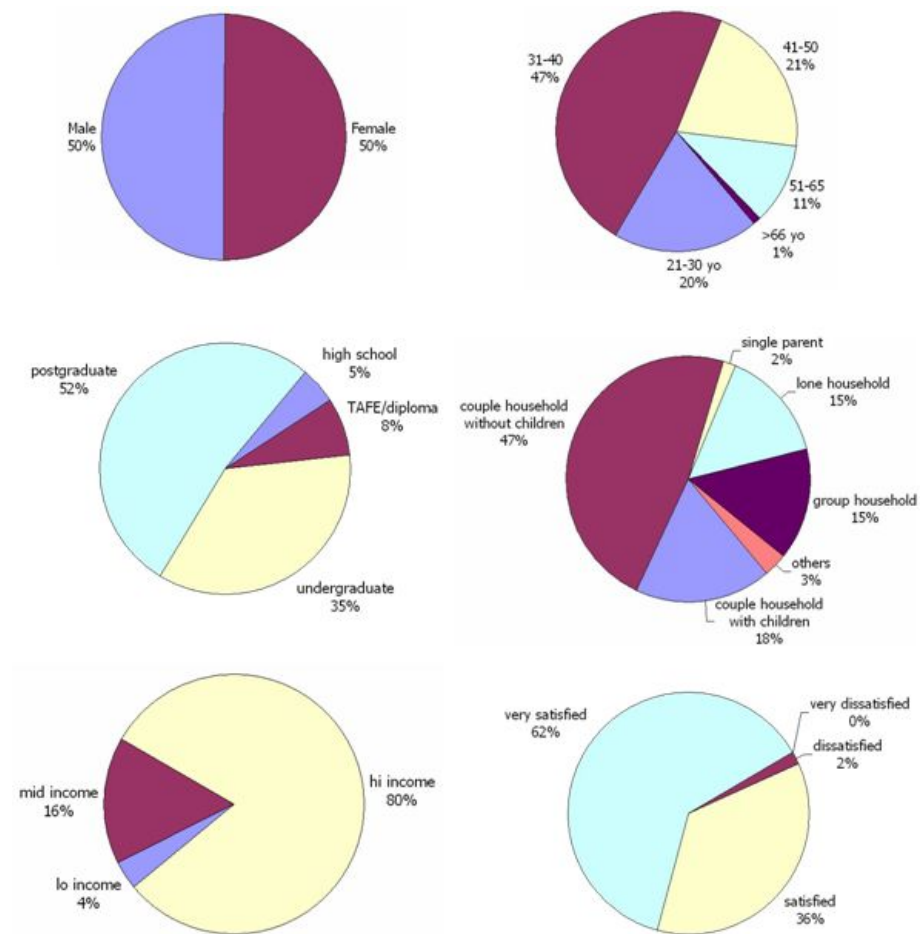


Figure 2. Profiles of GoGet car share members, from a 37% sample of the population.
Graphed from data in Nawangpalupi (2007).

The total VKT of the 67 GoGet cars was 890,222 km for the 12 months before November 2007; this amounts to about 13,288 km per year per GoGet car, which is 4.4% less than the 13,900 km per year traveled by the average Australian passenger vehicle in 2006 (ABS, 2006). While this reduction may not be visibly significant, it must be remembered that this VKT is the annual usage of 716 member drivers sharing 67 cars; this amounts to only 1,243 km per year per driver. In contrast, the average Australian passenger vehicle would be used by 1 or 2 drivers, and so the average 13,900 km per year per Australian car would be between 6,950 and 13,900 km per year per driver. Therefore the annual VKT per GoGet driver compares as being only 8.9% to 17.9% of the annual VKT of the average Australian driver.

4.2 Typical Usage

On the question of which activities members use GoGet cars most, 88% responded that they use it for social activities most of the time, closely followed by 85% for leisure activities and then 78% for maintenance activities. Only a small proportion used the GoGet car for productive activities (30%).

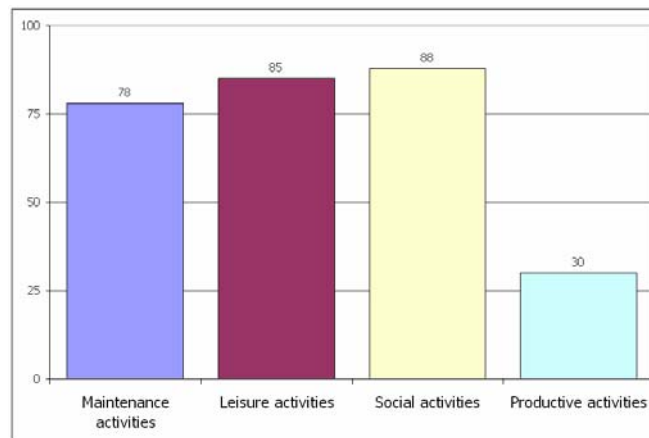


Figure 3. Members' usage of GoGet cars.

Social activities that the GoGet cars are used for included meeting family and friends, dinners in suburbs difficult or impractical to get to by public transport. Some reported using it to attend weddings.

Leisure activity usage included family holidays, day trips or weekend getaways, especially in the countryside, coast or mountains; surfing and beach fun; taking the dog to the park or the cat to the veterinarian; bush walks and hiking; going to the gym; going to events late at night; One member commended the roof racks on the GoGet station wagon in their neighbourhood as being “great for camping and surfing”.

Maintenance activities centred on: occasional shopping for large items or lots of items not suitable for carriage on a bike or bus; going to the garden centre or hardware store; health treatments or doctor consultations;

Since GoGet has a ute (small utility truck), members tended to book this for purchasing or moving furniture pieces and heavy or bulky objects, as well as to move house. There was one member who would book the ute to deliver furniture and painted timber products as a business.

Some of the few who used GoGet for productive activities did so to go to client meetings, “especially at short notice or when public transport options are limited” or to client offices “where the cab fare would be above \$40”. One member said that the two GoGet cars parked very close to his office in the CBD were extremely handy for visiting clients. Another said she would use GoGet for “lots of little local trips where I just travel a few kilometres to pick up and drop off items”.

Some would take the GoGet car to yoga class; pick up people from the airport; transport equipment for music gigs or for filming; dropping off and picking up kids from school, especially on rainy days; Saturday house hunting; taking around friends who are visiting for the weekend; and so on. Two members mainly used the GoGet car to do volunteer or community work, particularly to areas not well serviced by public transport or when they had to carry lots of things for their duties.

4.3 Member attitudes towards car ownership and usage

The web-based survey included the following questions:

Q1. When you joined GoGet, did you – Give up your only car? Give up your second or other car? Cancel buying a car? Never had a car? Other?

Q2. After joining GoGet, have you ever considered purchasing a car? – No, not an option at the moment – Yes, but I have NOT bought any car yet – Yes, and I have bought a car.

Q3. On average how often do you use a GoGet car? – Once a week or more often – Once every fortnight – Once a month – Once every two months – Less than once every two months.

Of the 292 valid respondents to the web-based survey, 74% said that “buying a car is not an option for them at the moment”. The biggest groups are those who never had a car (36%) and those who used GoGet cars once a week or more often (39%).

A cross tabulation of the response results to Questions 1 and 2 (Table 2) showed that the biggest cluster of respondents includes those who never had a car AND do not plan to buy a car (27%). Comprising the second largest cluster are those who cancelled their plans to buy a car when they joined GoGet AND at the moment are not considering buying a car (28%). The third largest cluster comprises those who gave up their only car AND have no plans to buy a car (13%). These results imply that those who never had a car do not aspire to have their own car and are at ease with going places via walking or public transport. Moreover the majority of respondents (74%) do NOT plan to buy a car, which suggests that most car sharers do not seek personal car ownership.

Table 2. Cross tabulation of responses to Q1 + Q2

	Planning to buy a car NOT an option at the moment	Planned to buy a car BUT haven't bought one yet	Planned to buy a car AND actually bought one	Total
Gave up only car	13.0%	4.5%	0.7%	18.2%
Gave up second /other car	2.7%	0.3%	0.0%	3.1%
Cancelled buying a car	20.9%	6.5%	0.7%	28.1%
Never had a car	27.4%	7.5%	0.7%	35.6%
Other car ownership	9.9%	3.8%	1.4%	15.1%
Total	74.0%	22.6%	3.4%	100.0%

Cross tabulating Q1 with Q3 responses (Table 3 and Figure 4) also show that the biggest groups are either: those who cancelled buying a car AND use GoGet cars once a week or more often; OR those who never had a car AND use GoGet cars only once every other week.

Table 3. Crosstabulation of responses to Q1 + Q3.

	Gave up only car	Gave up second or other car	Cancelled buying a car	Never had a car	Other	Total
Use GoGet once a week or more often	9.6%	2.1%	14.8%	7.9%	4.8%	39.2%
Use GoGet once every fortnight	4.5%	0.7%	5.8%	14.8%	4.5%	30.2%
Use GoGet once a month	2.4%	0.0%	4.5%	8.6%	3.8%	19.2%
Use GoGet once every 2 months	1.0%	0.0%	1.4%	2.4%	0.7%	5.5%
Use GoGet less than once every 2 months	0.7%	0.3%	1.7%	2.1%	1.0%	5.8%

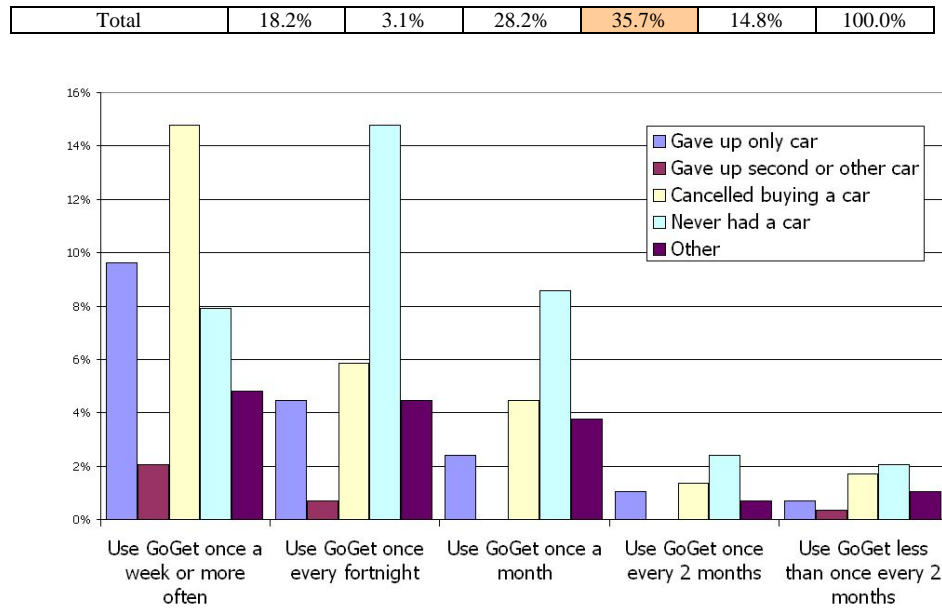


Figure 4. Distribution of GoGet usage frequency vs plans to buy a car.

One explanation for the results to the second cross tabulation set could be that those who never owned a car have not developed a culture of dependency on a private vehicle and therefore tend to use the GoGet car only relatively occasionally compared to those who have had a car in the past. It could be that those who “cancelled purchasing a car” were considering buying a second car, and they tended to use GoGet once a week or more often, since they are used to having regular access to a private car.

4.4 Transfer Effects

We borrowed the term “transfer effects” from the transfer of learning theory, which implies that previous knowledge, skills or learning related to one topic or context can help acquire information or skills in another situation that shared similar characteristics; a “transfer” occurs when the re-contextualized application of learning takes place. We questioned members on their participation in other sharing facilities available to the community, whether before OR after joining GoGet, which we considered to be “transfer effects” of their car sharing learning.

A handful of members reported some sort of transfer effect or expressed a desire to be actively involved in starting up other sharing schemes.

“Along with the people who first referred us to GoGet we have started a food co-op. Twelve households take it in turns fortnightly to go out to buy fresh fruit and vegetables from Flemington Markets, and divvy it up amongst us. Those members who are in GoGet use the car-share vehicles to do the shop when it is their turn.”

“I am in a small fruit and vegetable co-op, where we take it in turns to do the shopping at the markets every fortnight. This involves a few other GoGet members.”

“... My partner and I were already quite conscious of these things before joining GoGet, and were working on things like trying to set up a co-housing cooperative.”

“I have always advocated more sharing, but I think GoGet has given me some concrete experience of how well it can work and taken this commitment to a new level. When I have some more time, I would love to set up more of a sharing community in my street. There’s a group in another part of Westgarth that has a register of skills and equipment that people have that they are willing to loan. I’d like to do something similar.”

The great majority mentioned an increased willingness and openness, greater confidence and faith, as well as heightened interest in participating in other sharing systems, although most were unaware of the existence of other structured sharing systems like the ones listed in the question. There were many responses describing their positive experiences with car sharing and how these are influencing their thoughts on joining other sharing schemes.

“I don't currently participate in other sharing activities, but I think that from my experience in car sharing I would be more confident to do this in the future.”

“...I do think my experiences with GoGet have positively impacted my belief in similar sharing schemes being successful.”

“...I haven't really heard of the sharing schemes you list above, but they all sound like excellent ideas and if I had a need to use those items I certainly would support the service. Using GoGet has increased my awareness of the impact of cars on the environment and I can see how much easier getting around the city would be if more people made use of the GoGet scheme.”

“These things are naturally occurring in my life at around the same time. I guess it has given me faith in paid cooperatives, think it's fantastic to share resources.”

“I don’t find that it increases my willingness to share other products, but rather probably confirms a position I’ve always had that sharing products works well for me.”

Many said they have always practiced sharing, or are predisposed to or have advocated sharing or multiple ownership ideas, even before becoming a GoGet member.

“I have shared all sorts of things throughout my life, to save money and the environment, and as a socially enjoyable activity. I have participated in a toy library in Bondi (before GoGet).”

“I joined toy libraries before joining GoGet. I think I was willing to participate in sharing things before I joined GoGet and GoGet was an extension of my enthusiasm for pooling resources within communities. I

would be even more enthusiastic after my great experiences with GoGet.”

“I am very willing and probably more so because I see how well people look after and deal with the whole share process. I have naturally and always shared books and clothes anyway. I think this has opened my eyes to the possibilities. I’d like to find a tool share club.”

“I think it’s made me more interested in finding out about other possibilities for sharing resources e.g. tool libraries, community gardens, but there doesn’t seem to be that much of this sort of thing happening at the moment that I’m aware of.”

“I have always been a believer, advocate and user of communal services, for example libraries, public transport and co-operatives. GoGet fitted in with this pre-existent life philosophy.”

“Before becoming part of GoGet, we were part of a toy library, and still are. Has made me think about other possibilities, such as backyard sharing but haven’t done anything about it!”

“I’ve always shared its part of the way I was brought up. Clothes swapping, bike sharing, we share amongst our friends or family things that we don’t need to buy ourselves. Why buy a power drill when my friend has two in the garage?”

Most were emphatic in saying that they were “not against the idea” of further sharing and would certainly support those which fit well with aspects of their lifestyle. A few listed some of their criteria for joining future sharing schemes as practicality, convenience, economic reasonableness, and a properly managed system.

“... Would be open to toy sharing if it was more convenient. Would always be open to such activities provided that they were convenient, competitive and all items to share were provided by someone else.”

“As web-based facilities grow for sharing views or products, I am more and more willing to do this, e.g. book sharing.”

“We haven’t participated in any other sharing products, clubs, groups, etc. However, with our experience of GoGet we would probably consider most things, within reason.”

“I think being a member of GoGet has encouraged me to investigate these options further before buying and I think my decision then depends on how frequently I will be using the ‘object’ and how convenient is it for me to pick up a shared ‘object’.”

Many also emphasized that even before they joined GoGet they have already been sharing by informally swapping with family, friends and neighbors as much as practical. Several reported having experienced clothes swapping, as well as book swapping in local cafés.

“Before joining GoGet, I have done clothes swaps, and I also use the local library. No more than I did previously, but I do find my experience with GoGet has made me think more about things that could be shared.”

“Unofficially book/clothes/resources sharing with friends I have always done. I don’t know of any other official sharing organisations – but I would now be more likely to look for them if required.”

“I had never participated in any formal sharing arrangement before or since joining GoGet, but with a 4-year-old I have done a lot of baby-clothes and related item swapping/giving away – e.g. car seats, books, toys etc.”

“(I share) Not as a result of car sharing but just because I hate waste. I book share prior to GoGet. I haven’t heard of other types of sharing but would consider them.”

“We share tools and clothes etc. with family and friends nearby informally. And plan to do the same after our baby is born with baby stuff.”

“I did join a book club after joining GoGet, but that’s more of a sharing of ideas and bottles of wine than actual tools or usable resources since we all get our own copies of the book. I have always been a recycler/sharer of resources whenever possible, must be that commune I grew up on.”

A couple of respondents suggested that any form of hiring should be considered as “sharing”. For instance, bike hiring in a park could be considered as sharing. By this definition, some GoGet members think that “sharing” could encompass renting a DVD from a video shop or online, hiring a wedding limousine, hiring a pedal boat, and so on. By further extension, even common use of public facilities such as swimming pools, tennis courts, gyms, and libraries could be thought of as a form of sharing. A couple broadened the definition to include shared accommodation and shared areas in rented buildings.

“Before: yes, lived in a coop during university, so housing arrangement and duties were cooperatively shared. After: no – already doing that – have been since university days (20 years ago) – concept of car share is quite normal for me.”

Another interpretation for the sharing term was “donating” or “giving away” things no longer needed or wanted to others. Several said that even before GoGet they have been “willing sharers” in Freecycle™ (www.freecycle.org), a grassroots movement of 4,152 local email groups with 4 million members worldwide, who aim to give and get unwanted stuff for free in their own towns, thus reducing waste, saving reusable resources from the landfills while enabling people to benefit from the strength of a larger community. Donating books and clothes to charities such as the Vinnies (Society of St Vincent de Paul) and Salvos (Salvation Army) were also understood to be “unstructured sharing”.

A few members were against the idea of sharing other items, citing issues of easy affordability of other items, personal nature of the objects, and inconvenience.

“I would not do cloth swapping or bike sharing. The reason for that is these things are pretty personal and cheap when you compare it with the price of a car. But I am very easy in lending out things to friends or asking them to lend something to me.”

“No (not before or after). Sharing can be quite inconvenient. For a large item, such as a car, the effort is worthwhile but it would not be so for small items such as bikes, tools etc.”

4.5 Multiplier Effects

This time we borrowed the term “multiplier” from macroeconomics, where it is used to refer to an indicator that quantifies the additional impacts of a policy on top of those that are typically measured. In the context of car sharing experiences, we applied the term to mean changes in lifestyles or behaviours which could have resulted from becoming a car-sharer. For instance, knowing that shopping is one of the dominant reasons for using a car, we were interested in knowing whether there have been changes in members’ car-related shopping behaviours. Also, as a result of not having a car in their garage, do people actually travel less and instead frequent the local shops? The hypothesis is that an increase in neighbourhood shopping could suggest a decrease in shopping in far-away shopping centres, which could lead to less demand for road space or parking space in large malls, less petrol collectively consumed by the hundreds of cars going to and from the mega shopping centre situated several suburbs away, and so on.

Interestingly, our email survey showed that the number of respondents who felt that they actually drove less after joining GoGet was exactly the same as the number who said they drove more: 38 respondents each. The remaining 34 weren’t explicit on whether their car use increased or decreased upon becoming a GoGet member.

4.5.1 Car use reduction

Those who drove less after becoming car sharers typically said that they walked more and increased their use of public transportation; several rode bicycles to work and for other trips. Many reported purchasing a weekly, monthly or yearly public transport ticket, which encourages them to use trains, buses or ferries as much as possible. (In spite of the persistent woes besetting commuters about the poor state of public transport services in Sydney, it was amazing to find car sharers still patronizing them.)

“Absolutely. Probably use a car 60% less than I did previously and I have an annual public transport ticket – my version of commitment.”

“I definitely drive less km and make less use of motor transport overall since joining GoGet. I use public transport and bicycle travel for most trips and only use the GoGet service when these options are untenable.”

“I think I drive less because I have become used to not having a family car (after relationship breakdown and my ex kept the car)... I hate driving anywhere now, it seems evil to drive somewhere for something when there are so many things to do in the community.”

“We do not own a car in Australia yet, having moved here in Jan 06. I definitely drive less overall since moving here. We live closer to work, shop more locally, and use a lot of public transit & walking. Using GoGet has allowed us to ease ourselves into life here without the expense of buying and maintaining a car, while still having a bit more freedom than what walking and public transit allows for.”

“I do find myself using a car less often. This is mainly due to the fact that I now buy weekly bus/ferry/train tickets which, in turn, means I have unlimited access to public transport ostensibly free of charge. I now use a car most frequently to visit locations that are either not served by public transport or have difficult public transport arrangements.”

“More walking and a bit of cycling. More use of public transport – trains and buses – but buses in particular are a great disappointment – late, poor availability outside of work-related peaks, buses full when they do arrive in peaks.”

“Definitely I drive less. Now I only use the car when I absolutely have to, rather than using it whenever it's convenient. I make many more trips by bus than I would do if I had a car of my own. I walk a lot more, and I tend to walk to the local shops and do grocery shopping little and often, rather than driving to the mall. I use the GoGet car once in a while (roughly every 2 months) to drive to the big supermarket and stock up on lots of the heavy and bulky things (cleaning products, cartons of juice, tinned food).”

They tended to shop more locally, although understandably more frequently because only small convenient-to-carry quantities are purchased per shopping trip. They often book the GoGet car when purchasing large items such as furniture, for the occasional bulk shopping in supermarkets, and to get to shops which are inconvenient to access via public transport.

“I now do fewer shopping trips – I go to the supermarket every 2 or 3 weeks in the GoGet, and pick up fresh food close to home or work every few days. Previously I'd go shopping in the car every weekend.”

“When I owned a car I was more mobile and tended to shop more widely, more impulsively and be less organised in my trips. If you own a car you only use on the weekends you drive it more as you are trying to justify the cost! If you are hiring a car you tend to group trips together (i.e. visit friend, shop, drop off dry-cleaning all in one trip). I definitely shop locally from preference, buying smaller quantities and shopping more regularly. I also shop online. Not owning a car is very much a choice. I can afford to own and run a car and I have a car space but: I don't want the hassle of maintaining a car (I don't have the time); I don't like the cost of running a car (my last car cost \$9,000 in

depreciation in 3 years); Owning a car discourages you from walking/cycling (I gained weight when I owned a car). I like forcing myself to walk to the shops and the GoGet pod. I have just bought a unit and my key criteria included: Does it have safe, good public transport? Is it within walking distance of local shops for day to day needs? Is it within walking distance of a GoGet pod?"

"I drive far less and walk more. I used to live in Hobart where there wasn't good access to public transport. On moving to Sydney and experiencing GoGet, we no longer have a car, use public transport nearly every day, and walk more. GoGet encourages me to think about whether I need to use a car, whether walking down to the local shop is easier (which it is). My food shopping habits have changed dramatically – I now use a combination of specialised local food shops and an online delivery service for the bulkier items like flour/potatoes."

Many claimed that they have always shopped locally, and the inconvenience of not having a car simply caused them to support local businesses even more.

"We do our shopping on foot, down the street at our local shopping strip, but we always did that: although we'd probably have done a weekly top-up at a shopping centre supermarket once every couple of weeks when we had a car... We've always gone out locally and shopped locally – not having a car has just increased that."

Due to logistical and financial concerns, members find that they have to think twice about their car share trips and consider if a car is necessary to accomplish a task. They also need to plan and organize their trip activities to be efficient, because they have to pay for each hour of use.

"I do drive less and am more conscious of making the most of the car share time – arranging activities so the car is used for the least amount of time possible to accomplish the most tasks."

"... The cost and effort of booking a GoGet car makes us think more before we decide to drive somewhere."

"I always put all the car-requiring things into one booking e.g. shopping, doctor's appointment and visit friend – all in one go – not three separate visits."

"... We only drive when we get the GoGet car, and we restrict the number of times we do that as we can see the direct cost!"

"Prior to GoGet I hired cars commercially (24hr minimum hire period) which encouraged more travel to "get value" from the hire period. Per/hour car share charging spurs more efficient/effective use of the vehicle."

A few users mentioned that their car use reduction is partly due to the effort needed to get the GoGet car from the parking bay, which could be a bit of a distance and inconvenience for some members.

“I used car less after joining GoGet, only for the reason that it took some effort to get the car from the car port (lazy)...”

“To be honest though, sometimes I'll walk/use public transport rather than GoGet because getting the car is a bit of a pain (have to carry child car seat, and all bags for day, plus buggy & child to the pod to get the car) so unless it's an all day trip (beach etc) we won't use the car. We have also switched to internet shopping for groceries rather than having the hassle of getting the GoGet just for a few hours.”

“As it is a 5-10 minute walk to pick up the car, this discourages very casual use. If the car were closer, we would probably use it a little more, though this would be marginal.”

A good number of the respondents in this decreased car usage group formerly owned cars and have sold them since joining GoGet; almost instantly they noticed that they are capable on relying on cars much less than they were used to.

“Since disposing of our old car, we probably use a car slightly less often, and use public transport and occasionally taxi for preference. But we were substantial public transport users beforehand anyway. However, as mentioned above we tend to consolidate our car use into the times when we are using the GoGet car, e.g. if we have to pick up or deliver something we will try to do it during our shopping period.”

4.5.2 Car use increase

Of the 38 members who felt they drove more, thirty-four previously didn't own a car or had not had a car for several years, so they were in reality comparing their increase in driving or personal car use from a baseline of zero.

“Actually I drove more :). Because I have not owned a car since 1998 my main form of transport is public transport or bicycle. GoGet makes it so much easier to book a car for short trips that I found myself using a car more often than I did before.”

“Actually we probably drive more than we used to. This is because we did not own a car previously. It means though that now instead of having to go to the supermarket 4 or 5 times a week to get bits and pieces because we were limited to what we could carry home on foot, we now do one big shop (still locally) once a fortnight, freeing up more time for other activities. We still access local shops as much as we used to. And we still do as much walking and cycling as much as we used to.”

Most found that having access to a car offered a lot of convenience and access to more places which are not well serviced by public transport connections. Some reported that their enjoyment of this newfound access to

a car has caused them to start developing a liking for the car, which could riskily lead to car dependency.

“I think I probably drive more now than I joined GoGet – I realise the time saved by driving to places as opposed to catching public transport.”

“We only use GoGet maybe once or twice a month. Also we are able to access activities that were previously difficult to access, i.e. going to the beach! As an Inner West resident getting to the beach was always a MAJOR effort because of the lack of direct bus routes. This has opened up our leisure time options.”

“As compared to when we only owned a scooter, we probably drive more [as we can now travel long distances or in the rain]. We have always shopped locally so this hasn't been impacted much. We do walk to the shops more than when we owned a car.”

“Probably use a car more now. I had no car previous to GoGet. So I walked, rode my bike, caught public transport, used taxis, got a ride with friends or flatmates with cars, or borrowed friends' cars. GoGet has probably replaced some of all of these activities, and added new activities, in that it is easier for me to travel further afield on day trips now. GoGet may have deferred my need to purchase a car, but at the same time, it might be making me more car dependent. I have recently moved house, and am now far away from a GoGet pod, and am finding this very frustrating – I'm used to having access to a car now. GoGet has made little difference to where I shop. I always shopped fairly locally anyway. When I do go further afield to a mall, GoGet enables this, though has not increased my likelihood of doing this – I used to do it occasionally anyway, but public transport or sharing a ride with a flatmate or friend. I have always walked a lot. While GoGet has probably increased my driving, it has not greatly decreased my walking, rather it has allowed me to travel further afield with ease...”

“I never had a car, and do not intend to have a car. Thus rather than reducing my travel km, GoGet increases them, but also offers me higher mobility and extended social opportunity.”

For many, their shopping, social and leisure destinations increased from those which used to be limited by public transport routes to those much further away.

“Before joining GoGet I was almost exclusively local and did not drive at all. After joining I have found that I will generally shop further away by driving than I ordinarily would have.”

“I didn't own a car before GoGet, so I drive more a car more often this year. However it has stopped me buying a car, so effectively I am driving less than if I had a car. The biggest change for me is that my life has become a lot easier. Having the option of driving somewhere in 50 min (my sisters house) or catching public transport for 2.5 hours or more has made my life SO much better!”

“No, I probably drive more (I didn't own a car prior to joining), because I now take the opportunity to go places I couldn't before – for example, prior to joining, I wouldn't go to IKEA because I couldn't bring things home, now that I'm part of GoGet, I do go. I also get out of Sydney more on weekends/holidays, because I have access to the car – before I either had to take the train (which limited the places I could go) or hire a car (expense and bother).”

“My partner and I didn't have a car before joining GoGet, so if anything, joining GoGet increased our car usage, making some trips possible that wouldn't have otherwise been. But this has been OK, as our overall car usage is still very low. We were already very conscious of using alternatives to driving, such as public transport, cycling, walking and eating and purchasing things locally. We were very much into relocation before joining GoGet – GoGet is one of a number of ways that we try to put relocation into practice.”

“...I use GoGet sometimes to get to shops that have better quality and variety of produce than my local shops which are really hopeless (I live in Redfern).”

“No...I now drive a little more! But let me explain that by saying that I have chosen to NOT own a car for the past 15 years and most of my driving is in rental cars interstate for work when required. Walking to the supermarket and shops has been a constant during the past 15 years and I have chosen to live in places where I can walk to shops. I use public transport for work and at other times. The GoGet cars are great for the occasions when a car is useful, like a particular chore to do or a trip with friends and it was the main reason for me choosing to join GoGet...it gives the flexibility of being able to have a car when you need it, but you only pay for the time you use it, which is great.”

It was encouraging to know that several members were committed to not purchasing a car, and that their car sharing experiences has confirmed that they do not need to own a car to gain mobility.

“Never had a car before... but at least now I won't buy one – even when jobs have required it, I've looked for alternative employment! In one instance got the company to join GoGet!”

“I drive more because I didn't have a car before GoGet. But I might have bought one if I didn't join GoGet. I walk to most places (work and shops) and catch the train other times (late at night). I only use GoGet when there are no other options (bushwalking in places where there's no public transport or when I need to transport my cat)...”

4.5.3 Others

The rest of the respondents weren't clear on whether being GoGet members impacted on their use of car, whether positively or negatively. However, certain points can be extracted from the responses of this

ambiguous group, which resonate issues similar to those with clearly positive or negative responses.

- a. Experiencing car sharing makes people either defer or extinguish their desire to purchase a car

“My experience is that thanks to GoGet I'm probably doing more activities... things I would not do if I had to take the bus (this is for social activities). It's also stopping me from buying a car. I would have done it by now otherwise.”

- b. Car sharing is only used as an option when trains, buses, cabs, or bikes are not appropriate for the trip (such as when destinations are inaccessible or inconvenient to reach, when the trip is to be made at an odd time of day or night, or when they had to carry lots of stuff.)

“If I book a GoGet car it is because the alternatives of cycle, walk, public transport or cab are not appropriate for the task to be completed.”

- c. Car sharing members can be easily weaned from car dependency, since they get used to not having a car all the time.

“Being a member of GoGet has made me very aware of the excessive amount of driving that we all do when you have access to a car 24/7.”

- d. Car sharers do not seem to mind the increased walking resulting from not owning a car.

- e. In general car sharers have always patronized local shops, even before they have joined the CSO.

“When I used GoGet I don't think I walked more or used more local options—it's what I had always done.”

“The local shops have always been my centre and I have studiously avoided all manner of supermarkets all my life.”

“Groceries: yes I do pick up more things locally now. Being on the footpaths makes you feel more connected to your area.”

- f. Some car sharers appreciate having to walk to pickup the car from the parking bay, considering it as an opportunity to exercise.

It was evident that GoGet members – whether they drove less or more as compared to previous car mileage – rationalized on car usage and generally avoided driving motor vehicles. They resorted to using cars only when absolutely necessary. The majority commute to work by public transport or on bicycle.

Case Study: Project Green Church

The Maroubra Junction Uniting Church (MJ-UCA) embarked on a multilayered project to make the church more environmentally sustainable and to inspire others to follow their example. Accordingly this project was inspired by MJ-UCA's concern for Christian stewardship and the need to care for God's creation. Already it has installed a rainwater tank, grey water treatment, and solar hot water systems. The church has switched to 100% Green Power, and has been successful in convincing all other churches of the Uniting Church in NSW to make the switch as well. It continues to challenge all their congregants to use green energy suppliers.

In conjunction with GoGet and Randwick City Council, Project Green Church set up a car program in Maroubra. The broader vision of this program is to reduce the amount of cars on the road and to encourage community. This move was partly inspired by a biblical passage in which early Christians were called upon to relinquish their private possessions and share them with the community, and consequentially their community grew. The dedicated GoGet parking bay is located in the car park across the street from the church. It isn't just for MJ-UCA to use, but is for the whole community to share. Project Green Church has also formed a cycle club, which encourages students to ride bikes to the university to reduce emissions; they hold club fun rides to parks and beaches as well.

The church obtained three cordless electric mowers – selected because they were non-polluting – which are shared among members of their congregation. Community volunteers also use these to mow the lawns of the elderly and the infirm. The “eco-mowers” are transported using the GoGet car share vehicle. More information on Project Green Church at www.mjuniting.org.au.

5 Overall conclusion

While car sharers would generally support other forms of sharing, we find that car sharing schemes by themselves do not particularly encourage sharing behaviours. The responses show that most car sharers are already active participants in many forms of “sharing”, “donating”, “libraries” and other systems of communally using objects, products or services. Moreover car sharers are willing to be sharers of other things, within reason, and when the sharing system is made more convenient, well managed, reasonable and competitive, in such a way that the benefits of sharing outweigh those of personally owning the object.

It must be emphasized that – while many people joined GoGet because of their awareness and concern for the unsustainable number of private vehicles on the road and at the same time due to their personal interest in community participation – a great number of other people signed up for the most part because GoGet offers mobility with cost savings, practicality and convenience, without necessitating the large financial investment in purchasing and operating a car. If car sharing also aims to build community, then this other half needs to be “converted” and made aware of the benefits of neighbourhood sharing.

Shaw and Newholm (2002) argue that transport is one of the most contentious items on the voluntary simplicity agenda, as they find a significant number of ethical consumers deliberately not using or owning a car. Many GoGet members could be considered as fitting into this category of “voluntary simplifiers”, since they choose to moderate their use of private transport.

It appears that those who never had a car, whether by circumstance or by choice, are less likely to develop a dependency on motor vehicles, as evidenced by their once-a-fortnight usage of a GoGet car. In contrast, those who previously had desires to own a car but cancelled those purchase plans upon joining GoGet seem to still be reliant upon frequent car usage. The

early adopters of the car sharing concept appear to have strong faith in how pooling resources factors towards achieving community sustainability goals. Their sharing practices validate how reducing consumption and demand for private car ownership, and these behaviors appear to be multiplying and transferring to other domains of resource sharing. The Project Green Church is a testament to how a community can work together and commit themselves to resource sharing.

While there are not a lot of adopters their number is growing at a fast rate, if we are to look at the almost tripled increase in car sharing locations and members, as well as the entry of more CSOs into the market. The moderate success of the car sharing model can be viewed as a demonstration to government that the mobility needs of the community can be serviced without requiring private car ownership, without requiring more road spaces for the increasing number of vehicles, without increasing demand for more fuel, and without emitting more greenhouse gases and atmospheric pollutants. It also shows that car sharing would work well for as long as the public transport service is efficiently delivered. Car sharing could also provide an impetus for innovation among transport product manufacturers, and stimulate a rethinking of how the mobility of people could be achieved in ways other than owning individual vehicles. Government policies could also be directed towards providing more support for public transport, towards reducing the climate change impacts of transport, and towards innovating on the ways people can be transported.

References

- ABS. (2003a). *Environmental issues: people's views and practices* (No. 4602.0). Canberra: Australian Bureau of Statistics.
- ABS. (2003b). *Year Book Australia 2003* (No. 1301.0). Canberra: Australian Bureau of Statistics.
- ABS. (2006). *Survey of motor vehicle use, Australia* (No. 9208.0). Canberra: Australian Bureau of Statistics.
- Nawangpalupi, C. B. (2007). *Car sharing service in Australia: perception and behaviour of members: a report of the user satisfaction survey of GoGet CarShare members*. Sydney: University of New South Wales.
- Ramirez, M. J., & Nawangpalupi, C. B. (2006). *Assessing scenarios for sustainable transport in Australia*. Paper presented at the Sustainable Consumption Research Exchange (SCORE!) Launch Conference, Wuppertal.
- Shaw, D., & Newholm, T. (2002). Voluntary simplicity and the ethics of consumption. *Psychology & Marketing*, 19(2), 167-185.