

THE SOCIAL DILEMMA OF HOUSEHOLD RECYCLING

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ABSTRACT

This study analyses the role of subjective norm in understanding recycling behaviour and considers the likelihood of social pressures influencing recycling behaviour in South Africa. While attitude is personal in nature, the subjective norm relates to how the individual perceives the surrounding systems, e.g. what others think, what others do, what others expect. This paper, supported by qualitative data, explores how the individuals responsible for recycling in their households perceive the spheres of influence around them, which include perceptions of fellow South Africans, municipalities, their communities, neighbours and friends, as well as other household members' recycling behaviour. All these influences have the potential to impact on the individual's recycling behaviour.

The results show that the potential of social pressure to positively influence recycling behaviour in South Africa is limited. The visibility of recycling bags in areas with a street collection service exerts some social pressure. However, this effect is limited because recycling is not a discussion point between family members, friends and neighbours. Personal norm (internalised), and not so much subjective norm (what others think), appears to be the driving force of the individual in the household who takes responsibility for recycling, often without support from the other household members. In order for subjective norm to play the most effective role in household recycling, there will have to be a concerted approach between national government, local government, private recycling companies and the media to encourage households, set the example, motivate and provide the necessary infrastructure and services.

KEYWORDS

Subjective Norm, Household recycling behaviour, Social pressure, Social context of the household, Perceptions beliefs and judgements

INTRODUCTION

Subjective norm is defined as the influences – the perceptions, beliefs and judgements – of other household- and community members (Ajzen, 1985), related to the behaviour in question. In the Theory of Planned Behaviour, subjective norm is one of the variables which positively affect intention to recycle (Ajzen and Madden, 1986). In the context of the Norm Activation Theory (Schwartz, 1977), social pressure is summarised as the urge to fit in with the rest of the community, as well as with the expectations of the individuals closest to you (Jackson, 2006). Social pressures play an important role in initiating recycling behaviour, where-after the action becomes internalised (Miliute-Plepiene et al., 2016).

Scott and co-workers (2015) argue that the motivation to take environmental action can be simplified and stems from four internal factors, namely: beliefs which shape attitudes; personal norms which can also be called "moral obligation"; agency i.e. the belief in the self to be able to make a difference; and, social norms, which comprise descriptive and injunctive norms. The "social context of the household" is

important when it comes to decision-making, buy-in and the actual recycling tasks (Scott et al. 2015:5794). The social context of the household in determining recycling behaviour is largely ignored and most likely does not receive the attention it deserves when the individual is taken as “the unit of analysis” (Scott et al. 2015:5809).

Social involvement can also be explained as “a set of concentric circles, each presenting a system of social control” (Berger, 1963:74). The individual is in the middle of these circles, with the smallest circles surrounding the centre representing the control system of family, friends and other household members. Berger (1963) warns that approval in the family circle, and amongst one’s friends, should not be mistaken as a control system that is less strong than e.g. a work-related system (Berger, 1963:77).

Building on the spheres of social influence as described by Berger (1963), the aim of this study is to provide insight into how individuals in affluent suburbs in South Africa, perceive the social pressures that surround them in the shaping of their recycling (i.e. separation at source) behaviour. In this paper, the individual, as the unit of analysis is discussed as the centre within the systems of social control.

METHOD

A qualitative approach was followed to explore the role of subjective norm in determining household recycling behaviour. Participating households were selected through purposive sampling, followed by snowball sampling (Bryman, 2012). A total of 41 interviews were conducted at which point saturation was reached. The study was conducted in 2014 in two high income suburbs in the City of Tshwane metropolitan municipality, the one with a street collection service for source separated mixed recyclables and the other without such a service. Some of the households in the latter area receive a Ronnie-bag street collection service for paper recyclables.

Ethical clearance was obtained for the study. A consent form was signed before the face-to-face interviews commenced, in the preferred language of the participants. Anonymity of all the participants in the study was guaranteed and all the interviews were saved and transcribed using a code that could not be linked back to the individual respondents. Four of the 24 open-ended questions posed during the semi-structured interviews have relevance to this paper. These questions are:

1. What are your views/ opinion of recycling; should it be done and why?
2. How do you experience the rest of your households’ attitudes and recycling behaviour? What do you think are their views on recycling? Your family? Nearest neighbours? Friends? Your community?
3. Does your municipality think it is important for your household to recycle?
4. What do you think are South Africans’ perceptions about recycling in general?

The data was coded after extraction of the meaning of the responses to each of the above questions and grouped into emerging themes and sub-themes (Bryman, 2012). For uniformity in presentation, quotations used were translated into English.

RESULTS AND DISCUSSION

Following the example of Berger’s (1963) concentric circles of social control, the results are discussed under headings, each presenting a circle of control around the individual in the centre. Starting with the outer circle, perceptions of fellow South African’s recycling behaviour and how it could influence the individuals recycling behaviour is discussed first, followed by the municipality, the larger community, neighbours and friends and the inner circle presenting the household.

My Fellow South Africans

Recycling is not high on the agenda or on the priority list in South Africa (Respondents 26, 27). The majority of South Africans are either ignorant or too lazy to care about recycling, or they just don’t do enough or try hard enough to recycle (Respondent 34). Littering, energy consumption and water use are given as examples of other environmental issues which seem not to get the necessary attention it deserves from South Africans. Unfortunately, recycling is seen as something only the good guys do.

“South Africans are not on the level yet where they understand the issue, why they should recycle” (Respondent 2). “Uninformed... it is too much trouble. People are too lazy to recycle... where there are recycling bins that are clearly marked, everything is just mixed, glass and putrescible waste... negligence...” (Respondent 12). “I think there are many South Africans that do not give recycling a single thought, unfortunately... When we’re on vacation, I do not get the impression that the other people around us recycle. I did not come across anyone else... I always feel I need to apologise for the bags with recyclables... I always feel I need to explain... It is clean, but...” (Respondent 36).

“People feel there are still plenty [of natural resources], there is enough for us to use. We don’t have to worry. This is the general perception. Take electricity for example. How many people despite the current electricity crisis, put off their lights when they leave a room? Look at all the government building lights left on throughout the night...” (Respondent 33).

“The good guys in South Africa recycle... The scale on which recycling is done is still very small... it is not widely practiced” (Respondent 4). “You have your greenies, they are very active... they will make the effort to recycle. But if you are not green in your heart, then I do not know...” (Respondent 25).

The level of littering in the country is not helping to raise any expectations that the majority of South Africans would care about recycling. The perception that it is acceptable to litter because the cleaning up of litter creates jobs, is showing that recycling is not seen as a job-creating solution by a large portion of the population, yet.

“Look at our parks, our rivers, our roads and inner city littered with rubbish... there is no awareness” (Respondent 28). “At every taxi point, no matter where you are, there is always a huge amount of litter... people have the perception that if they don’t litter it deprives people of work” (Respondent 38). “Our streets [are littered]... just throwing things out of cars... so that others can have jobs” (Respondent 40). “Uninformed... we still think we need to litter, because it is someone else’s job to pick it up” (Respondent 13).

“On the pavement someone threw a can... and a plastic lid... A large part of the population doesn’t think recycling, yet...it is littering... The two [anti-littering and recycling] should go hand in hand” (Respondent 14).

The results show that fellow South Africans, as a sphere of social influence would add very little, if any, value towards encouraging recycling behaviour. Because the majority of urban South Africans (74.0% in 2010 and 66.6% in 2015) do not recycle (Strydom and Godfrey, 2016), the chance is small that an individual would experience any pressure from observing recycling behaviour of peers. In fact, the visible attitude towards littering has the opposite effect, i.e. why should I care and recycle if no-one else cares.

My Municipality

Respondents feel that the municipality directly benefits from the recycling initiatives of private companies by having less household waste to pick up and transport to landfill. But, households are not aware of any effort from the municipality to encourage kerbside recycling or to provide recycling facilities:

“Recycling is at the bottom of the municipality’s priority list” (Respondent 26). “[the municipality] do not put in any effort to assist with recycling. They don’t make it easier to recycle, there is not enough places/central points to recycle” (Respondent 2). “If they thought [we should recycle] there would have been better infrastructure in place” (Respondent 8). “If the municipality was interested in recycling, education could have been extended to the townships as well, and also us. Nobody from the municipality came to teach us or to motivate us on recycling. I only got to know about it from the school, but not the municipality” (Respondent 23).

Households feel that recycling and city cleansing is not a priority for the municipality and that they, therefore, fail to play the leadership role that is expected of them:

“They certainly haven’t done anything about it up till now. I don’t think that there have been any concerns or attempt on the part of the municipality to address waste recycling. Or just even cleaning of the city... you can just see how badly maintained the pavements are, for grass growing and sand and litter all over the place... The landfills are full... Municipalities and government should take responsibility and take the lead on this” (Respondent 38).

“Waste management should be one of the most important functions of a municipality... recycling should be done for fundamental reasons, and with fundamental reasons I mean sustainability, environmental friendliness, rather than for financial gain. It is about environmental leadership, to say: ‘this is the right thing to do’... so let us do it... rather than to say it makes economic sense... because if there is a cost to household recycling, people are not going to do it. Potentially municipalities can play a leadership role in recycling, but the dilemma is that state infrastructure is not always optimal... so you can’t rely on local government... too much politics and too little efficiency. The municipality is ideally situated to play a leadership role. But I doubt if they will” (Respondent 27).

A few respondents were more hesitant in their responses, because they “might not have sufficient knowledge about any recycling the municipality does” (Respondent 10):

“No effort from this municipality that I’m aware of... or any other municipality. It has always been private companies” (Respondent 6). “No, I don’t think so. There is no indication that [the municipality] encourage recycling. But I can be wrong” (Respondent 19).

Although municipalities can benefit if households recycle, the perception is that municipalities are not giving recycling the priority it deserves and that the municipality does not take up the related and much needed leadership role. The data suggest that no social pressure to recycle originates from the municipality as a sphere of influence.

My community

The data suggest that both churches and schools play a leading role in creating awareness about recycling as well as forming a recycling habit.

What is the role of schools?

Schools play a leading role in awareness creation about recycling amongst children and parents. Households are aware of the recycling opportunities at schools. In some instances the school is the only motivation to recycle.

“We have a recycling project at the school... From children recycle, so it becomes part of society, part of your daily routine even if you cannot recycle at home... at school there is a bin each for paper, plastic, and one for rubbish” (Respondent 9). “[The recycling idea] originated from school... they told them about recycling... to bring plastics, or whatever they are recycling, so... the kids started it... For now, that’s the only motivation” (Respondent 23).

Schools feature in the perceptions of people as a centre of learning about recycling, especially where the importance of caring for the environment is not carried over from the parents. But, unfortunately, schools are no longer seen as the centre where children learn that it is not acceptable to litter.

“If you recall how strict it was at school. After the break we were sent back to clean the play grounds if there was one piece of paper. Now I see so many

primary schools where the playing fields are a mess ... it should also be taught at home” (Respondent 3).

What is the role of churches?

Churches play an important role in recycling, especially in awareness creation and initiating household recycling, as well as in establishing a recycling habit. People also feel that they support the church through the income that the church gets from the recyclables.

“I took it to church and they got money for it... someone benefited” (Respondent 14). “It was income for the church and simultaneously we got rid of the paper. It was the first influence... we said, wait a bit, the paper needs to go to the church... I think it was the motivation to start recycling. It was not worth anything to us, but to the church it had economic value. It was somewhat of trouble to take it to the church, but it was a better option than overfilling our municipal waste bin” (Respondent 27).

However, households that got used to a collection service, see recycling at school or at church as a last resort and only when their street collection fails. Recycling at school or at church is thus not the preferred option due to the effort of sorting and transporting recyclables. Where a private (free) street collection is rolled out, households appear to prefer this more convenient recycling option. While a recycling scheme at a school or a church continues to play a valuable role in an area where there is no street collection for recyclables, the “feel good” factor of recycling for a worthy cause is not always stronger than the convenience factor:

“We started to recycle to support the school recycling initiative... to collect extra funds. Over time I stopped taking the recyclables to school and rather put it out for collection” (Respondent 19). “We recycle paper for about 20 years, from the start... first you could take it to the church and other points, and thereafter paper was collected at kerbside...” (Respondent 2). “But the church is further away. It is easier and on my way to take the recyclables to the [shopping centre]” (Respondent 37).

“At first I recycled at the school. Now I recycle at home... it is too much of a mess at the school. My recycling bags are picked up...” (Respondent 15).

“I used to go recycle my bottles there [at the school] ... But then you’ve got to separate it... you need a vehicle in which you can put the containers... how wonderful it is for [the recycling company] to try and keep up [the kerbside collection service], because WE DON’T HAVE TO SORT it. If you go to [any] school... you got to sort it, and then cart it... The [...] School make money out of it; they take in the recyclables...” (Respondent 21).

Through awareness creation and providing a recycling facility, recycling at the school or church is the place where recycling was initiated for most of the recycling households. At schools the awareness creation is broader than just recycling and includes general environmental awareness, but, it is cautioned that more can be done, especially as far as littering is concerned. In general, households are positive about their contribution towards supporting churches’ funding streams. But the convenience factor of a street collection service is most likely to overrule the desire to support a school or church initiative. The data suggest that, while a combination of social pressure and a desire to support a worthy course initiated recycling behaviour, these pressures are not always strong enough to outweigh the convenience factor of a street collection for recyclables or another drop-off facility closer to home.

My neighbours

Where there is a street collection for recyclables, households are more aware of whether their neighbours recycle or not. Because of the visibility of recycling bags out on collection day, a street collection service acts as a peer pressure to encourage recycling. Recycling as a growing initiative is also more observable in an area with a street collection. Observing recycling bags out on recycling day also acts as a reminder to recycle:

"We could see how the number of households setting out their recycling bags increased after the street collection started. At first, my one neighbour just looked at all these bags ... now she is also recycling" (Respondent 30).

"In my area about every second house now has a bag out on recycling day... [participation] is definitely growing" (Respondent 14). "If I look at all the bags in the street, their recycling bags out on collection day, then, yes, they recycle... it is a reminder to also recycle" (Respondent 22).

Where there is no street collection, respondents were more hesitant to comment on the recycling behaviour of their neighbours. If they don't see them recycling at one of the drop-off centres, then they won't know whether they recycle or not. While it is observed that some households separate and put out bags with recyclables in support of the informal pickers, an overflowing municipal waste bin is an indication that a neighbour is most probably not recycling:

"A few will take the trouble to recycle at the drop-off places... the SPAR or the garage, but it is not the norm" (Respondent 10). "One of my neighbours put recyclables out for the [informal pickers] to take ... so some of them are positive about recycling" (Respondent 33). "I see quite a few whose municipal waste bins are 'tjok-en-blok' [very] full. Both parents work... so they most probably don't have the energy to recycle" (Respondent 35).

In areas where there are regular street collections for recyclables in place, and where the majority of households recycle, a sense of cohesion and belonging has formed where a neighbour's recycling bag would remind others that it is recycling day. But influencing recycling behaviour through the examples of neighbours are limited and, as Shaw (2008) highlights, more effective in areas where there is already a sense of belonging, such as closed areas. The visibility of a recycling bag acts as a reminder to recycle and unintentionally put pressure on non-recycling households to also start recycling. In areas without a street collection a pseudo-indicator of a household's recycling behaviour is an overflowing municipal waste bin. But a municipal waste bin which is not overflowing would not have the same effect as recycling bags out on collection day, to convert non-recycling neighbours to start recycling. Subjective norm will thus have less opportunity to affect recycling behaviour in an area where there is no street collection for recyclables, compared to an area with a street collection. In areas where recycling households are in the minority, or they have to drive to drop-off points to recycle, households depend largely on their intrinsic motivation or personal norm to recycle.

Friends

Diverse responses about the attitude and recycling behaviour of friends are received, ranging from "I think we're the only ones in our circle of friends that recycle" (respondent 12), to "most of my friends recycle" or "they are positive about recycling" (Respondents 4, 33). In general there seems to be a lack of knowing whether friends recycle. In areas where there is a street collection service, it appears if friends are more aware of each other's' recycling behaviour and most probably because, similar as is the case with neighbours, they see the recycling bags on collection day.

"I don't know whether all my friends recycle" (Respondents 13, 23, 37, 40). "I think I am an average... some of my friends recycle more, and others less... some do not care" (Respondent 34).

"My friends that live in this area [with the street collection], all of them recycle. I do not know about my friends that live further away" (Respondent 18).

While some respondents would have appreciated the camaraderie of recycling friends, others acknowledge the positive effect that recycling friends have had on their recycling behaviour. Others again, without knowing, believe that their friends' recycling behaviour would be similar to their own, which could be a symptom of wishing for belonging to the same recycling fraternity:

"My friends that recycle had a good influence on me" (Respondent 16). "I would have appreciated it if more of my friends recycled" (Respondent 10). "I can't

recall that my friends specifically mentioned that they recycle. But they are very much the same sort of people that we are. If they did not [recycle], they would be easily persuaded to recycle to do it. I think people are inclined that way. They just need a little bit of a push to motivate them” (Respondent 38).

However, the reality is that those that practice household recycling are very much on their own, or considered the odd one out. Finding moral support from their circle of friends to upkeep recycling tasks is not the norm. Those that recycle most likely find their inspiration and motivation from a source other than their friends. While friends are aware of recycling it does not imply that they actually practice recycling or would interfere with another’s recycling behaviour. Thus, everyone very much leaves the others alone to believe and do what they feel is the right thing to do:

“The awareness is bigger than the recycling practice. Some recycle more and others less. Mostly they recycle paper, plastic, cans and glass. Not one of them is fanatical about recycling, but no one will also tell you to get over it. People recycle for different reasons” (Respondent 8). “I have one friend who “triangle” [recycle] everything. You will only think of throwing something in the trash when she will tell you in which recycling bin it should go. She made me aware. She is doing it for more than ten years now ... in the beginning she was very much on her own” (Respondent 9). “One of my friends do all the green stuff such as recycling, but she is the odd one out” (Respondent 26).

Do we talk about recycling amongst neighbours and friends?

Mostly, recycling is a topic that is not discussed with neighbours and friends. Households that do not recycle consider whether they recycle or not as a “personal matter” (Respondent 20), while another who recently started to recycle feels recycling is a topic that is not discussed enough (Respondent 3). A retired male, who does not participate in his household’s recycling, responds as follows:

“I do not know of other people who refuse to recycle and I have not discussed it with anybody” (Respondent 5).

But, people participating in communal recycling activities such as in a small housing estate where waste and recycling bins are shared (Respondent 7) or school initiatives, are more likely to remind each other about recycling day and share knowledge about what is recyclable and what not:

“At the school we talk a bit more about recycling, what you do with the paper or the ... so we talk a bit about recycling ... that you can get rid of your junk at the school, you know” (Respondent 30).

Households that are passionate about recycling are more likely to share the fact that they recycle with friends or family and would even ask them directly why they don’t recycle (Respondent 12). But mostly it is a silent or a once off communication:

“If we have friends over, I tell them that we recycle. They are now used to the fact that we recycle” (Respondent 15). “I don’t think my friends and I have really talked much about [recycling]...but you can see they put all the bottles together when we party. Or they would say: ‘don’t put it in the bin, put it here, we recycle.’ We see it more often...that more people recycle” (Respondent 14).

The recycling behaviour of friends mostly becomes known by observing whether they have recycling bags out, and sometimes a once-off notification of where to put recyclables when visiting. Recycling is not a conversation topic which comes up during leisure gatherings. Visiting, friends and family seem to conform to the “rule of the house” without enticing any discussion about the topic. Whether they easily conform to the house rule because they also recycle at home, or whether they just do it to please the host, is not known, because it is a question not asked amongst friends and family. Because South Africans do not talk to each other about recycling, the potential is very small to exert social pressure to recycle between friends or between neighbours.

My family

Given the fact that recycling is not a hot discussion topic, people don't necessarily know whether their wider family circle recycles or not. However, where a family member's street collection service becomes a convenient "drop-off centre", family recycling activity becomes known:

"I really don't know (Respondent 14). "I've got two daughters in [another town]. I honestly don't know [whether they recycle]" (Respondent 21). "Some of my family recycle, but very selectively... only cans. My father comes and throws his wine bottles and other glass bottles in our recycling bags" (Respondent 9).

The data suggest that influences from childhood rolls over into adult behaviour. While adult children can follow the example of a parent, the positive is that a child can also set an example for parents to start recycling. For example, grandparents can start recycling by contributing recyclables towards a school project. Unfortunately, a positive example is not always passed on from parents to children or passed on between siblings:

"It is stemming from my childhood. Way back then, my mother took her paper to a recycling depot" (Respondent 37). "My [adult] children recycle. It can be because of my influence... I feel strongly that recycling should be done... or they've made their own decision to recycle" (Respondent 33). "Grandpa and grandma had to bring paper... to take to school" (Respondent 15).

"My daughter in law made us aware of recycling. She had a positive influence on us. Now we also recycle back home. My other son does not recycle" (Respondent 36). "My mother try to recycle more items and not only the paper with the Ronnie bag, but my sister who moved back, she don't really care" (Respondent 34).

Not having friends or family that recycle can be disappointing, especially if there is not a known reason why they could not recycle.

"Gmff... If you recycle you would expect of others to recycle, but my friends and family do not recycle" (Respondent 2). "Those that have Ronnie bags recycle their paper. The other recyclables they throw away" (Respondent 30). "In some towns it is so easy to recycle. They have street collection for recyclables. But, my family who lives there doesn't recycle..." (Respondent 12).

My household

The household includes all family members living at the same address. But also implicated in this inner group is the domestic or garden worker who often plays a role in household activities, especially the handling of waste materials. The themes emerging from recycling and non-recycling households differ and are therefore discussed as two sub-groups.

Non-Recycling household

Interviewees from non-recycling households feel that once the decision to recycle is taken, the rest of the "household will co-operate" (Respondent 4). The challenge is thus to make the decision and for that to happen, "a mind-set change... [and] more awareness and know-how" (Respondent 9), as well as "buy-in from family members so that they will help" (Respondent 20) would be needed before a household will start to recycle. In households with small children the decision to recycle might be less complicated:

"The children (pre-school) will do as mommy tells them to do and when we did it, they enjoyed taking part in the separation" (Respondent 25).

Recycling household

In recycling households buy-in from all is not necessarily a given and it is often a battle to get all household members to co-operate (Respondent 18). The laziness of some household members, at the expense of another family member, is also noted:

"I think they support me [in the recycling initiative], as long as they don't have to do anything" (Respondent 15). "My [grown-up] children bring their recyclables to me [to take to the drop-off]" (Respondent 35).

Both parents share the recycling workload in some households (Respondent 12), but it is not the norm. The role of the child in a recycling household varies between a positive contribution (Respondent 12) and those that don't co-operate and just throw the recyclables in the waste bin (Respondents 2, 23, 26). Smaller children are more likely to recycle "because that is the rule in the house" (Respondent 31), while older children "are not interested" (Respondent 21) or might "see it as schlepp" (Respondent 28). In general, parents agree that "it takes time to change the mind-set of children" (Respondent 14). Children need to be constantly reminded or when they participate they want to do it their way:

"The children recycle half-heartedly... have to remind them. They put the recyclables aside, but not in the recycling bag" (Respondent 3). "The children want to throw away immediately, still dirty, or they rinse one item at a time. We are a water scarce country. We put the recyclables at the basin and the domestic worker rinse it at the end in the dishwashing water" (Respondent 6).

The main difference between the recycling and non-recycling household appears to be the lack of the one individual who is willing to drive the process of separating the recyclables and take responsibility in the non-recycling household, regardless of whether the other household members cooperate or not. Non-recycling households admit they need a mind-set change and that it will have to be a concerted effort to make a success of separation at source, with buy-in from all household members. Households that are separating their recyclables do not necessarily have the co-operation of all household members. There are households where both the husband and wife are equally passionate about recycling and both take responsibility for the recycling activities. In such cases their passion for recycling mostly rolled over to their children and they also co-operate. Thus, the data suggest that a tipping point in household participation is needed before the other non-recycling members will experience any social pressure to recycle.

I – the individual

Every person in each household has his or her own recycling experiences in relation to the rest of the household members. The interviewees' experiences and feelings they shared are discussed in more detail below, differentiating between the "I think, feel or experience" of the interviewed member of a non-recycling and a recycling household, and the type of recycling service received.

Non-Recycling households without a street collection service:

Apart from the effort it would take them to recycle, interviewees from non-recycling households without a street collection service, question whether recycling is worth the effort, whether it adds value given the carbon footprint of transporting recyclables to drop-off centres. There is also distrust in the system and doubt whether the recyclables will reach its intended destination (Respondent 1). Thus, similar to what was reported as barriers to recycling (Strydom, submitted), fundamental issues deter or discourage people to recycle. Whereas more control can be executed over what is picked up at street collections, e.g. a contaminated bag can be refused, no control over the actions of the individual who makes use of a drop-off facility exists.

"I'm positive about recycling and would like to do it, but, is the recycling process worth the carbon footprint? I know it is about the landfill space. Thus, I'm pro-recycling. My problem is: where do I take the recyclables? I need to separate at home and then take it somewhere. The SPAR used to have bins, but then they moved it out of sight. When I got there the other day there were baby nappies in the recycling bins. Now, is it worth the effort? Will someone take out the baby nappies? Or are they going to throw away everything?" (Respondent 25).

The data suggest that non-recycling households without a street collection service find excuses to not recycle in the effort needed as well as the distrust and frustrations of the recycling system which overrules any opportunities for a positive social influence.

Non-Recycling households with a street collection service:

Diverging issues comes to the fore amongst the group of non-recycling individuals who has a street collection for recyclables. Firstly, "it is effort" to separate (Respondent 20) and this perception of effort mostly stems from previous experience when recyclables were separated into all the fractions for drop-off. Closely related to this issue are the expectations of what is an acceptable recycling system, i.e. the use of bins or bags, where recycling bins appear to be considered more hygienic and tidy than bags (Respondent 4). The third issue is related to the supporting of informal pickers, on the streets or at landfill (Respondent 5). In this category are two groups, namely, those that separate to make it easy for the informal pickers and those that are too lazy to separate and soothe their conscience with the idea that someone is making a living out of their household's unsorted waste.

The fourth issue suggests that having feelings of what is the right thing to do does not make recycling happen if someone does not take responsibility and are willing to execute the necessary tasks:

"My husband feels strongly that it [recycling] should be done, but there is a practical implication" (Respondent 22). "The main responsibility to recycle and take to drop-off is mine" (Respondent 34).

Given the issues that were raised, the data suggest that social pressure to recycle is more strongly felt in the non-recycling household with a street collection for recyclables than in the non-recycling household without the collection service. In order for recyclables to be separated, someone will have to give in to this pressure and take up the task of recycling.

Recycling households without a street collection service or with Ronnie bags only:

Paper is mostly recycled via the well-known Ronnie paper recycling bags. But for those that save up their paper to be able to take bulk loads to buy-back centres to get some money in return for their recyclables, "it is not worth the effort" (Respondent 37). However, those that feel that recycling "is the right thing to do" (Respondent 8) are willing to pay an older child extra pocket money to fulfil the task of dropping off (Respondent 13), showing their willingness to support a worthy cause even if it would cost them more. The data also suggest that households without a street collection is less informed of what is recyclable and also struggle more with the concept of what it means to live a "green" lifestyle:

"I do not know what materials are recyclable... We still need to sort out the eco-friendly balance (a) using scarce water to rinse the recyclables; (b) driving out of my way to drop-off recyclables; (c) I do not make a special trip to drop-off recyclables" (Respondent 8).

In this group of recycling households without a street collection service for mixed bag recyclables, fundamental issues about the value addition of recycling in the bigger picture seem to overshadow any possible social pressure and thus prevent them from recycling more than they currently do.

Recycling households with a street collection service:

Interviewees from recycling households acknowledge that "it is effort to recycle", even those that do not actively assist with recycling tasks (Respondent 27). But some interviewees feel that recycling should be done and they are willing to take the trouble (Respondent 6), and would even go as far as to rectify where household members messed up by "fishing" recyclables from the mixed waste (Respondents 2, 14, 15, 21). Who is taking responsibility for recycling in the household and how it affects the overall recycling behaviour is an issue in many households. In some households both the parents, or adult partners, take responsibility with great success (Respondents 12, 36). In other households one member of the household feels that everyone relies on her to recycle and finds it discerning:

"It is effort to recycle, but it is necessary and I'm willing to do it... I fish recyclables from the waste bin which my family did not place in the recycling

bag” (Respondent 2). “The main responsibility to recycle is mine” (Respondent 14). “... and it is bad that this is my family’s attitude” (Respondent 18).

Given the above issues, any support which could help to alleviate the work load associated with recycling is gratefully accepted. For example, a street collection service, together with having time and space, makes it easier to recycle. A domestic worker can also help to spread the workload and with the necessary training (Respondent 6, 30, 34, 35) she plays a valuable role in the overall recycling effort of a household. The level of responsibility of the domestic worker varies, and in some households she takes sole responsibility for recycling (Respondents 9, 23). However, several interviewees noted that recycling is not the sole responsibility of the domestic worker, but a team effort of all household members with some help from the domestic worker (Respondent 8, 13, 15, 19, 34). It is noted that having a domestic worker who is dedicated with the separation of the recyclables adds much value:

“Now it is easy, the recyclables are collected at our homes... we housewives, we have the time... I have space in the garage. The garden worker put the recyclables in the bags... the most difficult part was to teach the domestic worker” (Respondent 6).

“Sometimes recyclable items slips through... we are not fanatic about recycling. But [the domestic worker] knows what goes into the recycling buckets. Many times I can see the municipal waste bin is less full ... I think she sometimes takes some recyclables [that slipped through] from the municipal bin and puts it with the recyclables” (Respondent 19).

Just fishing the recyclables out of the waste bins and putting it in the recycling bag would avoid constant fighting about recycling and what is recyclable. The person in the household who takes responsibility for recycling feels that, except for the domestic worker that is trained to assist, he/she often has to fulfil all the tasks of recycling without any support from the family. Thus, the data suggest that the individual who drives the household recycling has either succumbed to previous social pressure to recycle or has started out to recycling because of an inner motivation that recycling is the right thing to do.

Many households are not dependent on what others think – the others being friends, family or the municipality. They are thus not tapping their recycling energy from whether those around them recycle, physically such as neighbours, or emotionally such as those they care about. These findings are in line with the Schwartz norm activation theory where social norm play an important role in the start-up of recycling schemes to shape recycling behaviour, and over time becomes internalised when recycling behaviour is more likely to be determined by personal moral norms (Miliute-Plepiene et al., 2016). The implication is that the messages, explicit or implicit, that reach the households at the start-up of recycling schemes should emphasize the social belonging – the being part of the group and fitting in with this group – but the window of opportunity of this kind of message is limited. In the long run, messages that strengthens and motivates through the personal moral norm would have greater effect.

CONCLUSIONS

There are different layers of potential social influence on household recycling behaviour, which include fellow South Africans, municipalities, community initiatives, neighbours, friends, household members, and the individual. However, the social influences of most of these spheres appear to be small and the potential to influence household recycling behaviour without significant intervention is limited. Promoting household recycling behaviour by relying on social pressure via friends and neighbours would not be sufficient to mobilise recycling in South Africa. In order for subjective norm to play the most effective role in household recycling, there will have to be a concerted approach between national government, local government and private recycling companies, to encourage households, set the example, motivate and provide the necessary infrastructure and services. But this is a once off opportunity, at the start-up of a recycling scheme, when all household members can be exposed to the same social influences, before any role bias or disillusion set in. Unfortunately, once a service fails or when the perception is created that government don’t care, such an opportunity is lost. More effort from national and local government would thus be needed to encourage and support households in their recycling endeavours in South Africa and to motivate non-recycling households to start recycling.

The media can play a role in putting recycling on the discussion agenda in households and amongst friends and neighbours. Awareness creation and spreading the message that recycling is everyone's responsibility is important. But regular articles on recycling which would be interesting to read and provide discussion points and stimulate such discussions, are needed.

The moral support from friends and neighbours are valuable in encouraging continuous recycling behaviour, especially in households where recycling unwillingly becomes one individual's responsibility. But, without recycling as a discussion topic, and where there are drop-off facilities only, more effort from recycling companies in conjunction with the media would be needed to entice household recycling.

It is discerning that children are often the ones not cooperating despite awareness created at schools. The psychology behind the reluctance of children to recycle, and the impact on the youth of non-recycling role-models in the household, and role selection when it comes to the practical execution of recycling activities, needs to be further investigated.

The major role domestic workers play in household recycling activities warrants the potential for formal training in source separation of domestic workers.

It is argued that the conflict and tensions within the individual at the "point of maximum pressure" within the concentric circles of social control, as so well described by Berger (1963:75), would either result in an individual giving up on recycling, or, finding energy to continue to recycle from internal motivation and a belief that he/she is doing the right thing, i.e. personal moral norm.

ACKNOWLEDGEMENTS

The author gratefully acknowledges the CSIR for funding for this study, as well as the anonymous interviewees who so willingly shared their thoughts and experiences during the one hour interviews.

REFERENCES

- Ajzen I (1985). From intentions to actions: A theory of planned behaviour. *Action-control: From cognition to behaviour*, ed. By J. Kuhl & J. Beckman, Springer, Heidelberg, pp.11–39.
- Berger PL (1963). *Invitation to Sociology – A Humanistic Perspective*. Anchor Books, New York.
- Bryman A (2012). *Social Research Methods 4th Edition*. Oxford University Press, Oxford.
- Jackson T (2005). *Motivating Sustainable Consumption: A review of evidence on consumer behaviour and behavioural change*. A report to the Sustainable Development Research Network, January 2005. Centre for Environmental Strategy, University of Surrey, UK.
- Koo C, Chung N and Nam K (2015). Assessing the impact of intrinsic and extrinsic motivators on smart green IT device use: Reference group perspectives. *International Journal of Information Management*, 35, 64-79.
- Miliute-Plepiene J, Hage O, Plepys A and Reipas A (2016). What motivates households recycling behaviour in recycling schemes of different maturity? Lessons from Lithuania and Sweden. *Resources, Conservation and Recycling*, 113, 40-52.
- Schwartz SH (1977). Normative Influences on Altruism. *Advances in Experimental Social Psychology*, 10: 222–279.
- Scott A, Oates C and Young W (2015). A conceptual framework of the adoption and practice of environmental actions in households. *Sustainability* 2015, 7, 5793-5818; doi:10.3390/su7055793
- Shaw PJ (2008). Nearest neighbour effects in kerbside household waste recycling. *Resources, Conservation and Recycling* 52 (2008). 775–784.
- Strydom WF and Godfrey LK (2016). Household waste recycling behaviour in South Africa – has there been progress in the last 5 years? In: *Proceedings of the 23rd WasteCon Conference and Exhibition, 17-21 October 2016, Emperors Palace, Johannesburg, Gauteng*.
- Strydom WF (Submitted). *Understanding the barriers to urban household recycling in developing countries – evidence from South Africa*.