Psychological and Behavioural Science

Happy, Sustainable Birthday!

Reducing Excessive Consumption of Toys on Birthdays

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PB403 Psychology of Economic Life Summative coursework
May 2022

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1. Background

We are born into mass consumption societies where we are surrounded by a variety of entertainments associated with shopping (fast fashion, fast food, toys, candies, etc.) (Boström, 2020). Low prices have made a "*more rapid cycle of acquisition and discard" p*ossible, as increased numbers of products are made economically available to consumers (Schor, 2005a).

This essay aims to focus on toys as the entertainment element that is associated with mass consumption. More specifically, we examine and analyze the culture of excessive consumption of toys as birthday gifts. We have decided to focus on excessive consumption of toys, since they are prime examples of items that are designed to 'spark joy' but often end up as waste when a child's play interests change - children lose interest in a toy within just 36 days and have an average of four toys they have never even played with – which could add up to as many as 162 million unused toys in the UK (British Heart Foundation in Spary, 2019).

We understand that there is a multitude of situations and contexts where kids receive toys. Yet birthdays are known as an occasion where kids receive a large number of toys at once. By reducing the number of toys purchased as birthday gifts, we aim to minimize three negative consequences we have identified: environmental costs of production, toy waste, and cognitive harm.

The scope of our essay will cover Western cultures - Europe and North America, where gift giving on events, such as birthdays, is a common practice. More specifically, our solution would have a larger impact if addressed to kids aged between 5-10 years, who can make their own choices about the gifts they are interested in.

We are aware that our solutions and interventions might seem minor since we are addressing consumers rather than large manufacturers, but we believe that through changing consumer's behaviour towards reduced consumption, we can affect the production and distribution of goods and services.

2. Introduction – The Tradition of Gift Giving

To tackle the issue of excessive consumption of gifts on birthdays, we must understand the tradition of gift giving. To do so, we will present Mauss' framework (1954) and apply Installation Theory (Lahlou, 2018) to the tradition. Thereafter, we will discuss the specific tradition of buying birthday gifts which is the main focus of this essay.

2.1 Giving, Receiving and Reciprocating, Mauss (1954)

Mauss (1954) explored the process of gift-giving amongst a diverse range of primitive, secluded and ancient societies. He found that gift-giving is a self-perpetuating system of reciprocity and highlighted three obligations that sustain the tradition of gift-giving: the obligation to give, receive and repay.

Why do people give? The obligation to give may be based on moral or religious imperatives, maintaining a status hierarchy through giving or solely because of the expectation of reciprocal giving (Mauss ,1954). Bostrom (2020) argued people use rituals of consuming and giving gifts as confirmation tool of their relationships with others. An object that one procures can represent a bridge to another person (Firat et al. 2013).

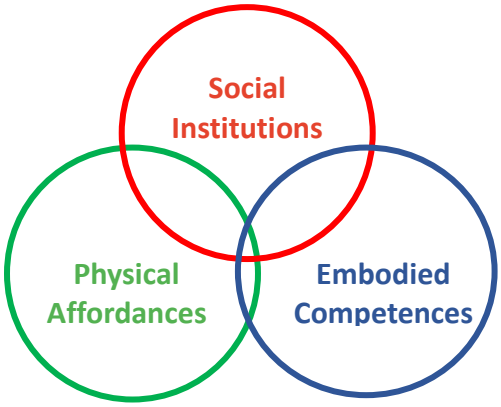
Why do people receive? Receiving a gift is also seen as equally important since refusing a gift can be seen as an unfriendly or even hostile act. The recipient's acceptance of the gift is a condition to the giver's happiness. According to Schwartz (1967), when a receiver accepts a gift, they accept, endorse and acknowledge the identity that is suggested by the giver.

Why do people reciprocate? From a social psychology perspective, gift giving has two main implications. First, it creates the mechanism for social relationships (Gouldner, 1960). Second, it creates obligations meaning receivers are in debt to the givers and it is a permanent commitment. (Douglas, 1990, p.xii in Muass, 1950, 1954)

2.2 Installation Theory, Lahlou (2018)

Gift giving can be described as an installation that has three layers:

Social Institutions – By using the term ´obligations´ Mauss' emphasized how social regulations and norms are a part of the installation of buying a gift. Gift givers are, culturally and socially, obligated to buy a gift as a giver or as a reciprocator. This social obligation is also represented in advertisements that normalize gift giving on events.



Physical Affordances – To be able to give a gift, one might need the affordances to access either an online or a brick mortar shop. For example, one might need a computer, a connection

to the internet or ability to transport and carry a gift. Most importantly, the giver should also have the financial resources to purchase a gift. While givers might buy presents based on their financial abilities, Mauss' (1954) obligation to repay and Douglas' (1990) feeling of debt might force givers to spend larger budget for the gift.

Embodied Competencies – The embodied competences may differ depending on the consumer. Knowledge about stores, a product's attributes and qualities is subject to one's previous knowledge and research abilities. Moreover, the ability to find a gift that would express the receiver's identity (Schwartz, 1967) depends on the kind of relationship the giver has with the receiver.

2.3 Gift Giving on Birthdays

One dominant example of gift giving are birthdays. Showing love and care and reinforcing relationships by giving gifts on birthdays is a long-standing tradition that has become customary in modern societies and turned into a social institution (Lahlou, 2018).

While gift giving on birthdays is relevant to all age groups, our focus will be children's birthdays. Most parents, especially in western cultures, celebrate their children's birthdays by giving presents. In addition to parents, children receive a large amount of presents from their family members and friends. Most commonly gifts given to children are toys and games.

Receiving a large number of toys as birthday gifts confirms the relationship guests have with the birthday kid and their family. At the same time, this behaviour expands the market, contributes to the culture of excessive consumption and normalizes the consumerist culture we live in.

3. Defining The Problem - Excessive Toys Consumption

3.1 What are Mass and Excessive Consumption?

"The consumption of consumer products on a large scale. Mass consumption implies that a large percentage of the population purchases or consumes the same products or services because large manufacturers produce and distribute their products widely" (Sullivan, 2009).

On the supply side, mass consumption has become possible due to "artificially cheap" goods, meaning declines in the prices of goods and labor caused by the organization of the global political economy (Schor, 2005a). On the demand side, consumption produces subjective meaning and lets us experience social confirmation (Schor 2005). The meaning we derive from consumption reinforces our consumption habits and expands the market even further.

Boström (2020), distinguishes between mass and excess consumption *b*y using Callmer's definitions:

"Excess consumption is not synonymous with mass consumption but refers only to that share which exceeds sufficiency. What though is sufficient? Any assessment ought to include both (inter)subjective criteria (relating to perceptions and social constructions) and objective criteria (relating to ecology and health), and apply them flexibly to unique social and cultural circumstances" (Callmer,2019).

3.2 Is toys-gift-giving considered excessive consumption?

Inter-subjective Criteria - In the social construction we live in, a kid owns on average a total of 236 toys with parents reporting that their child only played with 12 of their 'favorite' toys on a daily basis. This translates to only 5% of toys being played with (The Telegraph, 2010).

A survey conducted in the UK by the British Heart Foundation (in Spary, 2019) found that children lose interest in a toy within just 36 days and have an average of four toys they've never even played with – which could add up to as many as 162 million unused toys in the UK. More than a quarter (28%) of UK parents admit to discarding toys that are in perfect working order (Spary, 2019).

Despite owning a large number of toys of which the kid will only focus on a few, children keep receiving toys, mainly on occasions. This indicates how parents and gift givers' perception of toy consumption is flawed.

Objective Criteria – The small number of toys played with, the length of interest in a toy and discarding toys in a perfect state leads to the result that an estimated 80% of all toys are ending up in landfills, incinerators or the ocean (Spary, 2019). In the next section, we will further elaborate the additional negative consequences that objectively cause the consumption of toys as presents to fail the sufficiency test.

4. Consequences of Excessive Toys Consumption

The large number of gifts received on birthdays has a negative impact on the environment as well as on the recipient's cognitive development. The focus of this paper is to find a way to reduce excessive toy consumption on birthdays. And as a result, prevent three negative consequences of this phenomenon:

4.1 Production's Environmental Cost

Toys are made of plastic, rubber, fabric, glue, dyes, and other chemicals all of which require the extraction of raw and virgin materials. According to UNEP's Valuing Plastic report, the toys industry is among the top three sectors that use the most plastic in products per US$1 million in revenues (Raynud, 2014). The plastic manufacturing process releases a variety of toxic emissions into the atmosphere.

Additionally, plastic toys are made of unrecycled plastic due to the uncertainty of the chemical composition of recycled plastic. This process requires using fossil fuels, which contributes even further to the environmental crisis. One of the main by-products of fossil fuel combustion is carbon dioxide (CO2). CO2 behaves as a greenhouse gas—the substantial CO2 increase in the atmosphere is a major contributing factor to human-induced global warming (Britannica, n.d.).

Additionally, toys are mass produced, thus outsourcing the production to China is a common practice in this industry. This also implies that once toys are out of the production line, they need to be distributed and transported across the world to reach their destination market. This requires a large amount of fuel, hence even further contributing to environmental pollution.

Another factor that should be considered as part of the environmental costs is packaging. A massive quantity of virgin resources is used in producing the packaging materials, the instruction booklets, and any circuitry in the toy (Stewart, 2021).

4.2 Toy Waste

Toys are not considered a single use plastic, some toys stay in a household for approximately 10 years and tend to then be passed on to charities, friends and families. Many toys will last between 15-20 years but will eventually enter the waste stream (Brown, 2019).

Since toys are typically composed of different materials, the recyclable components cannot be separated and thus become prohibitive for recycling centers (Krosofsky, 2021). An estimated 80% of all toys end up in landfills, oceans or incinerators (Spary, 2019), which results in toxic fumes being released into the air and increases the amount of carbon in the atmosphere.

4.3 Cognitive Development of Children

Generally, toys were found to be important elements in children's cognitive development, since play was recognized as a learning mechanism, by which children learn new skills. Play changes how they encounter the world and embody new ideas, meaning that play is fundamental for children (Paley, 2004).

However, Dauch, Imwalle, Ocasio & Metz (2017) tested the effect of the number of toys on kids' behavior, and showed that with fewer toys, longer durations of toy play occurred, and that kids played with toys in a greater variety of ways and thus had more cognitive-development benefits. They also found that youngsters were far more creative when they had fewer toys to play with and thought up more uses for each toy.

Additionally, owning too many toys might prevent kids from exploring nature or playing games outside which also has consequences since playing in nature has advantageous effects on children's self-esteem, capability to focus (Griffiths, Elniff-Larsen & Jones, 2010, in Raith, 2018) and generally on cognitive development (Raith, 2015). Research also found that cognitive development is heavily influenced by the children's boundary conditions during early ages. Not

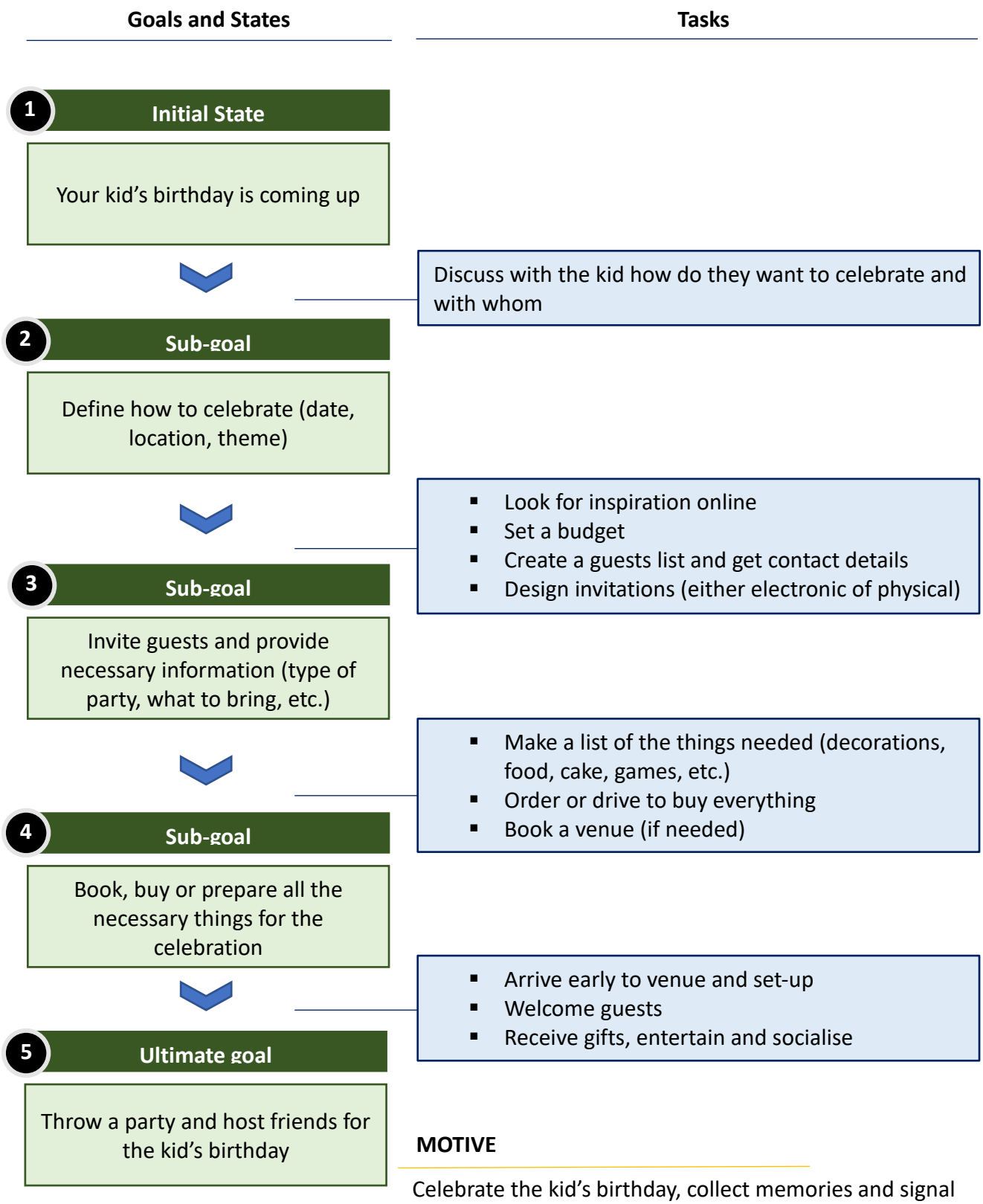
giving children enough opportunities to satisfy their innate fascination for nature might result in biophobia (White & Stoecklin, 2008). This in turn might result in viewing nature as an expendable item (Dutcher et al., 2007) and hence influence their consumption behaviour during their adult life, meaning they might not engage in sustainable consumption.

5. Stakeholder Analysis – Activity Theory

The negative consequences mentioned are a result of the actions of many stakeholders involved in the value chain of toys production and consumption (Appendix 1). Yet, since the scope of this essay is reducing excessive consumption of toys on birthdays, the main stakeholders we are going to focus on are the party planners and guests of the party. We believe that implementing change in the behaviour of these two stakeholders would result in the largest impact.

To change the stakeholders' behaviour in a way that would reduce the number of toys given to children on birthdays, we need to first understand their activities and motives. To do so, we will use Activity Theory:

5.1 Party Planners



5.2 Guests/Gift Givers

Goals and States	Tasks
1 Initial State Getting invited to a kid's birthday party	
	Add the event to calendar (electronic/physical)
2 Sub-goal Set a time to buy a gift	
	▪ Set a budget range ▪ Look for gifts ideas online ▪ Ask the kid's parents for ideas ▪ Ask for someone's advice (e.g. specific person, group chat, etc.) ▪ Noticing toys ads (TV, online, etc.)
3 Sub-goal Have in mind 2-3 gift options gifts for the birthday kid	
	Go to an **online** store to search and compare your gifts ideas **OR** Choose a **brick & mortar** store to go to, search for a gift and compare prices
4 Sub-goal Get the birthday present before the party	
	Drive to the venue and join the party
5 Ultimate goal Attend the birthday party and give the present as a signal of caring	

MOTIVE

Celebrate the kid's birthday, make them happy, and strengthen the relationship with their family

6. Suggested Solutions

To reduce the number of toys brought as gifts to birthday parties, our solution is going to mainly address the guests' sub-goals of thinking of a gift and buying one. In order to change guests' behaviour we first need to change the behaviour of party planners.

More precisely, we suggest creating an app that includes end-to-end functionalities that would serve as interventions for both party planners and guests and that in turn would lead to a more sustainable birthday celebration. It´s competitive positioning will include collaborating with some reference groups and influencers that will help to effectively promote it and position it as a trending social norm (Sparkman & Walton, 2017).

The app will include several functionalities:

6.1 Sending e-invites

Party planners can use the app to create an event and a guest list. The guest list could sync with the phone numbers and send the invites as a text message that entails: first a message describing that they have been invited to a birthday party and second, a link to the app/webpage for further details.

As this intervention is a convenient solution for sending birthday invites, this would scaffold invitees to use the app. Downloading and using the app would result in a more sustainable behaviour when choosing and buying a gift.

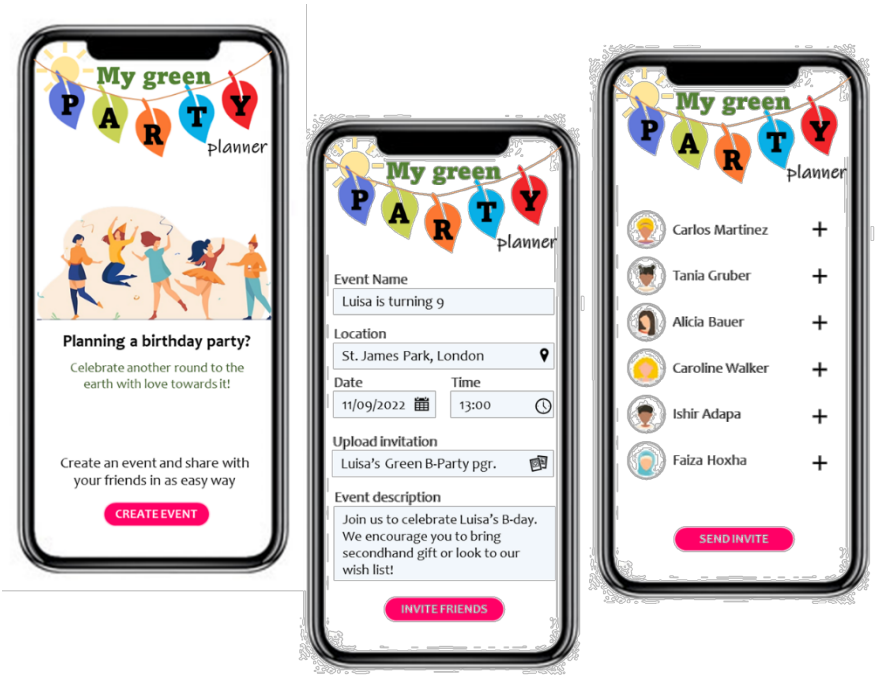


Figure 1. App invitation functionalities

6.2 Creating a Virtual Wish List

One of the guests' sub-goals is to think of a potential gift. Ideally, gift givers want to find the right gift that will maximize the enjoyment experienced by the recipient (Belk, 1979). In practical terms, people usually struggle with choosing gifts for others (Wooten, 2000).

Parents, together with their children, could use the app to create a virtual gift wish list of items and experiences the kid would like to have. This minimizes any deliberations the guests might have and ensures that guests do not purchase gifts the kid is not interested in or that have been already purchased by others.

Creating a wish list aligns with the assumption in mainstream economics that only the receiver knows their own taste thus gifts are insufficient. Waldfogel (1993) argued that gift-giving is a potential source of deadweight loss since it is more likely a gift will leave the recipient worse off than if they made their own consumption decision with an equal budget.

From a social-psychological perspective, gifts are a way in which the picture that others have of the recipient in their minds is transmitted (Schwartz, 1967). In cases where the giver's ideas as to what the recipients' desires and needs are wrong, the recipient rejects the gift and the identity the giver suggests. Creating a wish list would help the giver to correctly form the broad idea of the recipient's identity while still having the option to use one's judgment to choose a specific gift.

The virtual wish list would include three types of possible gifts: Second-hand toys, a shared gift and experiences. These three options would help in reducing the environmental harm caused by toys production, lessen toy waste and would have benefits for the kids' cognitive-development.

6.2.1 Promoting the use of Second-hand Toys

With the app, we aim to intervene by promoting the purchase of second-hand toys. The wish list will be linked to a second-hand toy marketplace. The marketplace gives both users and brick and mortar shops the opportunity to sell second-hand toys. In the early stages, the second-hand-toys marketplace would depend on the collaborations made with retailers and small shops that sell used toys. Retailers and shops would benefit from bigger exposure that would result in an increase in sales.

Ideally, once the network of app users grows bigger, users will be able to add toys they own to the marketplace and sell them as second-hand toys. Toys will be categorized based on a rating criteria (e.g., quality, faults, period that the toy has been used). Offering this option to users ensures the circulation of toys, reduces the production of new toys through decreased demand and prevents toy waste.

A long-term result of this intervention could be the reduction in the number of "artificially cheap" toys purchased, hence reducing the excessive consumption of toys. Consumers may start

considering future uses of the toys they buy and their resale value. As a result, quality and durability would become key criteria for toy purchases.

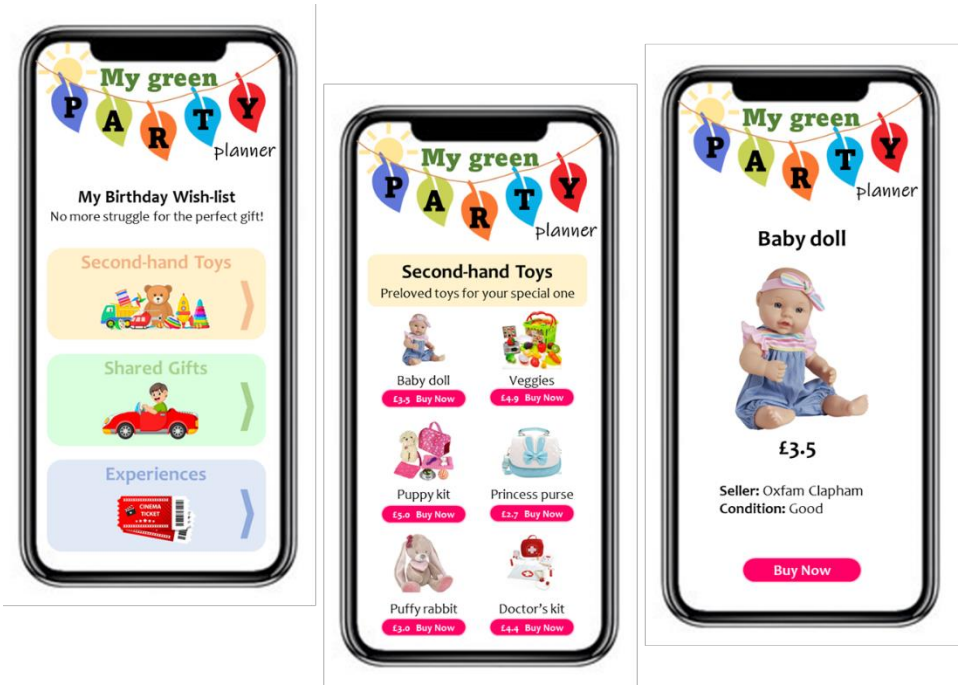


Figure 2. Birthday kid's wish list and secondhand market place

6.2.2 Sharing a gift

The app will also include a feature for guests to split the cost of a present with other guests – as some gifts might be more expensive than others and there might be more guests than presents on the wish list. By sharing the cost of one expensive gift, instead of buying several cheaper ones, we reduce the amount of gifts and toys bought for a birthday celebration.

Choosing the option to split the cost of a gift might be perceived as a monetary gift where guests gift their money to the kid celebrating. Webley, Lea & Portalska (1982) found the money as a gift is less acceptable mainly because people expect the gift giver to spend time and effort on selecting a present. Furthermore, Webley & Wilson (1988) found that money is unacceptable as a present no matter what the relationship. This is based on the idea that gift-giving is a form of social exchange and symbolic communication.

To avoid framing the shared gift as a monetary one, toys would be used as the app's currency. When deciding to opt in, the guests will be asked how many small toys they would like to contribute instead of money. Besides, the app will highlight that doing this will prevent toys from getting into landfills. The number of toys would eventually be translated into monetary value for the guest to confirm. The gap until guests reach the target would be displayed in terms of toys and the monetary value of each contribution would be available to the contributor solely. When receiving the gift, party planners and the kid celebrating the birthday would see the number of small toys that guests avoided buying and the names of the contributors.

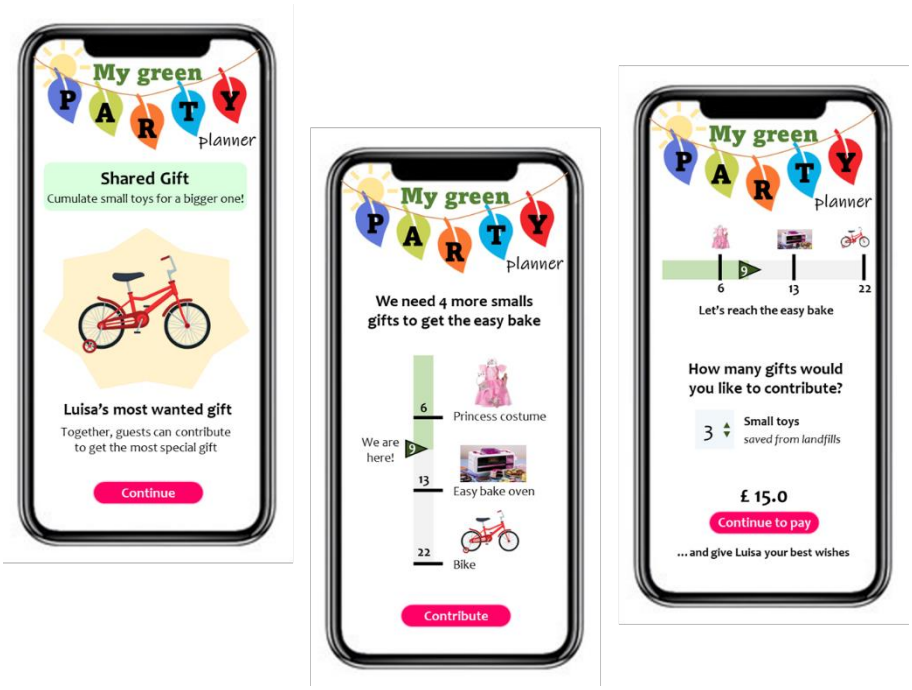


Figure 3. Shared gift app functionality

Using toys as currency has several advantages. First, it conceals the use of money thus the gifts would be more acceptable. Second, it would require the guest to spend time and effort thinking about the number of toys they would like to opt in. Lastly, it would symbolically communicate to the party planners that their guests appreciate their eco-friendly goal.

6.2.3 Experiences as a Gift

In addition to the material gifts offered in the marketplace and the feature of sharing a gift, the list would also include experiences as a gift. For example, tickets for theme parks, musicals, treasure hunts, outdoor experiences, and other children friendly experiences. These gifts are worth as much in terms of monetary value and do not create any waste.

Generally, some evidence shows that when spending money on oneself, experiences lead to more happiness and satisfaction than material goods (Gilovich, Kumar & Jampol, 2015). Satisfaction is derived from the evidence that experiential purchases facilitate more social connection (Caprariello & Reis, 2013), are more closely tied to the self (Carter & Gilovich, 2012) and are less thought of in monetary terms (what one could have purchased instead), compared to material purchases (Mann & Gilovich, 2014). Similarly, Goodman (2014), showed how giving experiences as a gift leads to higher levels of happiness for the receiver than giving material goods.

To offer a variety of experiences we suggest collaborating with existing voucher platforms such as *Experience Days* and *Buy a Gift* that provide a large variety of experiences as gifts. The collaborations would increase the exposure of these platforms and simplify the process of building the app.

Positive Consequences of a Virtual Wish List

The following table demonstrates how the three gift options can help reduce the negative consequences of excessive consumption of toys:

	Production's Environmental Cost	**Toy Waste**	**Cognitive Development**
Second-hand Toys	Reduces the number of newly produced, packed and shipped toys, meaning, the environmental harm of production	The circulation of toys makes the life-cycle of toys longer and reduces the chances of toys ending up in landfills	Increases awareness about sustainability from a young age on
	Reduction in the number of artificially cheap toys produced, purchased and disposed of, since quality and durability become key criteria for toy consumers		
Sharing a gift	The larger the number of people who share the gift the smaller the number of gifts that are produced and purchased	The number of toys that end up in landfill (in case they do) is reduced since the number of gifts bought is reduced	Reduces the number of toys kids have, which results in cognitive development benefits such as longer and more diverse play time and being less overwhelmed
Experiences as a Gift	Prevents the harmful production, packaging and shipping of toys	Since toys are not bought, no toy waste is created	Allows kids to explore nature and play outside which benefits their self-esteem and capability to focus

6.3 Additional Features

To provide a holistic end-to-end experience of using the app, which would increase the number of downloads and user engagement, we suggest adding additional features. For example:

6.3.1 Photos Drive

The app will include a group chat for the party planners and guests which can be used as an exclusive and private platform to share photos taken at the birthday party. Everyone would be able to upload and download photos as an alternative to sending the same photos to several guests, creating an additional group chat or uploading photos to social media. This is also useful

since the privacy of the kids who participated in the party would be protected from external viewers.

6.3.2 Suggestions for recyclable/reusable decorations, plates & cutlery

Birthday parties involve the usage of unsustainable products such as disposable plates, cups and cutlery, decorations, gift bags and more. To align the birthday celebrations with the goal of reducing environmental harm and waste, the app would also include a recommendations feature to promote stores that sell sustainable products for birthdays. A promo code for discount for the app users can be used as an incentive to buy sustainable products.

7. Solution Summary – Installation Theory

This essay aimed to find ways for reducing the excessive consumption of toys on birthday parties. The suggested solutions address different sub-goals of both the party planners and party guests/gift givers. When intervening in a sub-goal, the layers of the installations change (Lahlou, 2018):

Social Institutions – The solutions do not aim to change the social institution and the perceived obligation of buying gifts for others. Similarly, our solution conforms with the social perception that monetary gifts are less acceptable. Yet, our interventions do change some cultural norms. For example, by adding a second-hand toy market we challenge the social obligation of buying something new. Moreover, offering experiences as gifts changes the social perception that traditional material gifts are better. Finally, it positions sustainability as an element to think about when organizing and participating in a birthday celebration.

Physical Affordances – The success of the app depends on the ability of party planners, gift givers and new stakeholders such as suppliers (second hand-toys shops, voucher platforms, etc.) to connect and integrate the app.

Embodied Competencies – Creating a wish list minimizes the variance in the embodied competencies of gift givers regarding the birthday present. The gift choice guests make no longer depends on their assumptions of the kid's taste, knowledge about stores, the product's attributes, or their personal knowledge, but rather on the party planners' choices. On the other hand, this would require the party planners and their children to have the competencies to find the gifts they want to receive and add them to their list. Also, all the involved stakeholders would have to learn how to use and interact with the app and acquire this new competence.

8. Feasibility of app

One possible business model for the app is a freemium one. This would ensure it covers the fixed and variable costs of the app while preventing people from avoiding the app due to incurring costs.

This model would give all customers the same basic functionalities, while enabling the business to cover costs and even make a profit based on premium functions. For example, if businesses pay for the premium option, they will be able to promote their listings on the app, so people could add them to the wish list. Additionally, the space of the photo drive would be limited and users would have to pay for additional space/number of photos they share.

Next to these subscription-based services, a transaction fee could be charged for purchases made through the app.

9. Limitations and Alternative Solutions

We are aware our suggested solution is not exhaustive and has limitations:

Restraints of the App

We acknowledge that the effectiveness of our solutions is based on the success of our app. If guests choose not to engage with the app, our solutions will not work as the app is based on network effects. Using the app becomes more attractive the more users are already on the platform.

One of the potential barriers is the need to download the app and register. App fatigue is when customers are no longer eager to download or use new apps. The fatigue occurs due to facing an excessive number of applications and alerts (Shaw, 2021).

To address this potential problem, we suggest three possible solutions. The first solution is technology based while the other two are based on the use of nudges. Technology can be used to develop a web-page which resembles the actual app and offers the same features. Second, the use of social norms (Sunstein, 2016) could be utilized to promote the app. Collaboration with mom-influencers to promote it can create a social norm of downloading and using the app. Lastly, as a complementary step, the nudge of simplifying and easing of requirements (Sunstein, 2016) should be implemented to ensure a short on-boarding process which would require the new user to provide only a minimal amount of information.

Additionally, the suggested solution is tech-based which might exclude invitees whose technological embodied competencies are limited (e.g., grandparents). An alternative solution can be sending regular invites specifying that sustainable gifts such as second-hand toys are encouraged.

Barriers to secondhand shopping

Although the second-hand goods market has been on the rise in recent years, there are external and psychological barriers that exist. With our app, we address the external barriers such as the ease of accessing second-hand items which lowers the barrier for gift-givers to purchase second-hand items. However, the social institutions in this installation (Lahlou, 2018) might be a challenge. The existing social regulations and norms dictate the purchase of a new gift for any occasion. Additionally, not all parents might be comfortable with their child receiving second-

hand gifts, this could be tied to the contamination theory which is based on the principle “once in contact, always in contact” (Rozin, Millman & Nemeroff, 1986). This principle suggests that once a person touches an object, their attributes are permanently transferred to the object, hence “tainting” the product (Rozin, Millman & Nemeroff, 1986; Fernando, Sivakumaran, & Suganthi, 2018). Argo, Dahl, & Morales, (2006) also found that when the law of contagion is extended to the retail context, shoppers viewed the product less favorably. Nonetheless, it is important to note that Fernando et al. (2018) pointed out that the sensitivity towards “contamination” is highly influenced by one's culture which suggests that social norms do play a role. Therefore, by using effective advertisements and with the raised interest in second-hand items, we believe that it is possible to change the descriptive vs prescriptive norms around second-hand items.

Gift givers do not tend to give experiences

Goodman (2014) also demonstrated how gift givers tend to conform with social norms of gift giving and buy traditional material gifts and believe they would result in bigger happiness (Goodman, 2014). To address this issue in the app, we can utilize the use of social norms for an opposite goal. One of the reasons people follow norms is because they tend and prefer to conform with others (Asch, 1955). The app would display an informative message of descriptive (Goldstein & Cialdini, 2009) and dynamic norms. The message would point out the increase in the number of guests that have already purchased experiences as a gift. Presenting a dynamic norm can be effective since people adopt new trending behaviour due to the belief that change in one direction will continue in that direction (Hubbard, 2015).

Presence of other stakeholders

Our paper only addresses two main stakeholders in the value chain despite the existence of others (Appendix 1). We believe that additional interventions are needed to address the other stakeholders in order to fully tackle the issue. For example, manufacturers and retail stores should be required by legislators to label toys according to their environmental impact to nudge shoppers to make better purchases (green labels for environmentally friendly and red for harmful products). Another solution could be promoting hybrid-toys that consist of one physical toy which connects to an app that offers different variations of the toys and/or different games using the same toy.

10. Literature

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10. Appendices

Appendix 1 – Toys Production Value Chain