

## Relationship between product attachment and product retention: Reference to chair and wedding attire

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### ABSTRACT

Emotional bond between a product and its user is stronger when the user is the product owner as well. While products can be used without the product being owned, decisions on the lifespan of products for retention or disposal are governed by the owner's motives. People's motive influence perception and thus, users and owners of the product will have different views and perception of the product during its lifespan. This study explores people's ownership experiences of their favourite chair and wedding attire through the concepts of *product attachment* and *product retention*. The study reveals that product attachment significantly predicts product retention. It derives that product attachment leads to product retention, resulting in sustainability in product ownership and use.

**Key Words :** Product Attachment, Product Retention, Product Emotion, Product Sustainability

### INTRODUCTION

People tend to retain certain products whereas they easily dispose of other products depending on the attachment they have with them. Some users dispose products that still function properly, because they look old-fashioned, are no longer compatible with others or because new products offer better possibilities (Schifferstein and Zwartkruis-pelgrim, 2008). We live in a throwaway culture where products are discarded while they are still usable. A meaningful user-product relationship is therefore necessary for the user to want to keep the product for its lifespan and even beyond through restoration. Schifferstein and Zwartkruis-pelgrim (2008) cited that a product's life can be lengthened by increasing the user's attachment towards the product, as a person will handle the product with care, repair it when it breaks down and postpone its replacement as long as possible when he becomes emotionally attached to it.

Mugge *et al.* (2006b) cites that product attachment

and product lifetime are connected and that product lifetime is a direct consequence of the experience of attachment to a product. Product lifetime is the length of time for which it is estimate that the product will perform its intended functions, assuming reasonable use (Babbit *et al.*, 2009). Lengthening the life span of products is a desirable viewpoint of sustainability. According to Schifferstein and Zwartkruis-pelgrim (2008), a possible strategy to increase product life span is to increase the emotional attachment people have towards their products as people will take better care of their products and postpone their replacement as long as possible. Increasing lifespan of products through retention of wedding attire and favourite chairs by respondents were studied in relation with Schifferstein and Zwartkruis-pelgrim's study of product *irreplaceability* and *indispensability*. Product *irreplaceability* relates to the emotional dependency on the product when it has a symbolic meaning to its owner that is not present in other products and becomes irreplaceable while *indispensability* relates to when a product becomes indispensable for practical

reasons and not so for emotional reasons, where the product cannot be missed because it is needed to perform certain functions.

## METHODOLOGY

An exploratory research was conducted to know people's practices concerning acquisition, ownership, use, retention and disposal of products with reference to their favourite chair and wedding attire. Chair, which is high on utilitarian quotient and wedding attire which is high on emotional quotient were selected for the study. Products on extreme ends of utilitarian quotient and emotional quotient were selected so that they contribute to a wide range of factors for selection and retention of products. It is important to study ownership experiences in real-life contexts as ownership involves an on-going user-product interaction. It was for this reason that a study of users' emotional value in real-life context was chosen as research strategy and not a controlled environment experiment.

The study was conducted in NCT of Delhi, India where the practices concerning ownership, use, retention and disposal of products with reference to the favourite chair and wedding attire was explored for 240 respondents. Snowball sampling technique was used to select the respondents. Privately owned households with four to five rooms were considered for the study and was premised that they belonged to middle income group (MIG) and high-middle income group (H-MIG). Married ladies were considered for the study since the study calls for possession of wedding attire. Also, people living in their own residences were considered as permanence of residence influence selection and retention of products.

A standard tool for measurement of people's emotional attachment to products developed by Mugge *et al.* (2006a) for the study "A Longitudinal Study of Product Attachments and its Determinants" was used to explore the level of emotions respondents attach towards their wedding attire and favourite chair. Schifferstein and Pilgrim (2008) investigated the relationship of product attachment to concepts of irreplaceability, indispensability and self-extension in the study "Consumer-Product Attachment: Measure and Design Implications". The concepts of *irreplaceability* and *indispensability* were considered as determinants of product retention in the current study and measurement scale for the same were used for measurement of product retention.

## RESULTS AND DISCUSSION

### Product attachment:

Product attachment was explored using fifteen statements to assess degrees of emotional attachment the respondents had for their products in regard to the determinants of product attachment: *self-expression* (5 items), *group affiliation* (3 items), *memories* (4 items) and *pleasure* (3 items). Each of the fifteen statements was considered a specific indicator of emotional attachment the respondents had towards their favourite chair and wedding attire. Tables 1 and 2 display the frequencies and percentages of responses of the 240 respondents. Analysis of tables showed that responses leaned mostly towards the positive and neutral responses for determinants like *self expression*, *memories* and *pleasure* for both wedding attire and favourite chair. However, for the determinant *group affiliation*, it was observed that the responses leaned mostly towards neutral and the negative responses. This result is supported by other studies on product attachment which found *group affiliation* to be an insignificant independent determinant of product attachment (Mugge *et al.*, 2006a; Tlhabano *et al.*, 2013). Although *group affiliation* did not contribute independently to product attachment, it was observed that it still contributed to product attachment jointly with the other three determinants, which was consistent with the findings of Tlhabano *et al.* (2013). Therefore, scores obtained from statements of all the four determinants were considered to compute the level of emotional product attachment to be used for further statistical analysis.

Mean of scores of items within each determinant was computed. Mean of the overall determinants was computed to obtain product attachment score of the respondents. Product attachment scores represented by the computed means of the fifteen statements categorized the level of emotions the respondents attached towards their favourite chair and wedding attire into different levels ranging from *high positive product attachment* to *high negative product attachment* as shown in Table 3.

Table 4 represents the frequencies and percentages of the respondents for each level of product attachment for both the products. Analysis of the table showed different outputs of product attachments for wedding attire and favourite chairs. It was observed that there was no negative product attachment for wedding attire while significant negative product attachment was observed for favourite chairs. The levels of product

**Table 1: Result of Likert scale test for product attachment to wedding attire (n=240)**

Sr. No.	Statements	SA		A		N		D		SD	
		#	%	#	%	#	%	#	%	#	%
<b>Self Expression</b>											
1.	My wedding attire reflects who I am	35	14.58	91	37.92	76	31.67	33	13.75	5	2.08
2.	Other people can tell by my wedding attire what kind of a person I am	22	9.17	81	33.75	89	37.08	40	16.67	8	3.33
3.	My wedding attire fits my identity	20	8.33	97	40.42	94	39.17	26	10.83	3	1.25
4.	My wedding attire suits me	59	24.58	122	50.83	43	17.92	15	6.25	1	0.42
5.	My wedding attire says nothing about me as an individual	9	3.75	51	21.25	87	36.25	71	29.58	22	9.17
<b>Group Affiliation</b>											
6.	My wedding attire indicates my occupational profile	11	4.58	37	15.42	64	26.67	106	44.17	22	9.17
7.	Through my wedding attire, I feel connected to other people in my occupational profile	10	4.17	34	14.17	64	26.67	99	41.25	33	13.75
8.	Through my wedding attire, I belong to the group of my occupational profile	10	4.17	30	12.50	66	27.50	96	40.00	38	15.83
<b>Memories</b>											
9.	My wedding attire reminds me of people or events that are important to me	62	25.83	106	44.17	50	20.83	20	8.33	2	0.83
10.	My wedding attire makes me think back of someone or something that has happened	86	35.83	86	35.83	52	21.67	16	6.67	0	0.00
11.	I see my wedding attire as a reminder of certain people or events	81	33.75	102	42.50	48	20.00	8	3.33	1	0.42
12.	Through my wedding attire I think back to certain people or events	89	37.08	95	39.58	39	16.25	16	6.67	1	0.42
<b>Pleasure</b>											
13.	I enjoy my wedding attire	72	30.00	114	47.50	51	21.25	3	1.25	0	0.00
14.	It is a pleasure to use my wedding attire	66	27.50	120	50.00	44	18.33	8	3.33	2	0.83
15.	I feel good when I use my wedding attire	63	26.25	121	50.42	51	21.25	5	2.08	0	0.00

SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree; #: Frequency

attachment were also observed to be higher for wedding attire with 4.58% having *high positive product attachment* and 52.92% having *positive product attachment* towards their wedding attire. Levels of product attachment towards the respondents' favourite chairs were lower for most respondents with just 2.08% having *high positive product attachment* and 17.92% having *positive product attachment*. The rest of the respondents had neutral to high negative attachment towards their favourite chair. This could be attributed to the reason that comfort, utility and habitual practices were some major reasons for the chair being the favourite for most of the respondents.

### Product retention:

Schifferstein and Pilgrim's (2008) concepts of *irreplaceability* and *indispensability* were considered as determinants of product retention in the current study. The measurement scale for *irreplaceability* (3 items)

and *indispensability* (4 items) was considered to explore product retention, using the seven statements to assess degrees of product retention levels respondents had for their wedding attire and favourite chair. Each of the seven statements was considered a specific indicator of the level of product retention the respondents had towards their wedding attire and favourite chair. Tables 5 and 6 display the frequencies and percentages of responses of the 240 respondents of product retention for each of the seven statements.

Analysis of the tables showed that responses of the respondents leaned mostly towards neutral to positive responses for wedding attire while it showed more of an even distribution of responses across the scale for favourite chairs. This finding was consistent with findings of a preliminary study where it was observed that the most respondents had retained their wedding attire and some of them had been re-wearing them even post wedding at special events, with most of them planning

**Table 2: Result of Likert scale test for product attachment to favourite chairs (n=240)**

Sr. No.	Statements	SA		A		N		D		SD	
		#	%	#	%	#	%	#	%	#	%
<b>Self-expression</b>											
1.	My chair reflects who I am	19	7.92	48	20.00	92	38.33	57	23.75	24	10.00
2.	Other people can tell by my chair what kind of a person I am	11	4.58	47	19.58	89	37.08	71	29.58	22	9.17
3.	My chair fits my identity	11	4.58	50	20.83	92	38.33	64	26.67	23	9.58
4.	My chair suits me	19	7.92	68	28.33	97	40.42	42	17.50	14	5.83
5.	My chair says nothing about me as an individual	5	2.08	52	21.67	104	43.33	57	23.75	22	9.17
<b>Group Affiliation</b>											
6.	My chair indicates my occupational profile	13	5.42	39	16.25	71	29.58	92	38.33	25	10.42
7.	Through my chair, I feel connected to other people in my occupational profile	10	4.17	30	12.50	67	27.92	94	39.17	39	16.25
8.	Through my chair, I belong to the group of my occupational profile	8	3.33	28	11.67	72	30.00	91	37.92	41	17.08
<b>Memories</b>											
9.	My chair reminds me of people or events that are important to me	29	12.08	78	32.50	80	33.33	41	17.08	12	5.00
10.	My chair makes me think back of someone or something that has happened	32	13.33	66	27.50	91	37.92	40	16.67	11	4.58
11.	I see my chair as a reminder of certain people or events	36	15.00	77	32.08	76	31.67	40	16.67	11	4.58
12.	Through my chair I think back to certain people or events	40	16.67	86	35.83	70	29.17	35	14.58	9	3.75
<b>Pleasure</b>											
13.	I enjoy my chair	46	19.17	131	54.58	56	23.33	6	2.50	1	0.42
14.	It is a pleasure to use my chair	52	21.67	123	51.25	58	24.17	6	2.50	1	0.42
15.	I feel good when I use my chair	55	22.92	126	52.50	50	20.83	9	3.75	0	0.00

SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree; #: Frequency

**Table 3 : Categorization of product attachment scores based on computed mean**

Scores	Product Attachment Category
4.21 – 5.00	High positive product attachment
3.41 – 4.20	Positive product attachment
2.61 – 3.40	Neutral product attachment
1.81 – 2.60	Negative product attachment
1.00 – 1.80	High negative product attachment

**Table 4 : Frequency distribution of product attachment level of respondents for their wedding attire and favourite chairs (n=240)**

Product Attachment Category	Wedding Attire		Favourite Chairs	
	Frequency	%	Frequency	%
High positive product attachment	11	4.58	5	2.08
Positive product attachment	127	52.92	43	17.92
Neutral product attachment	102	42.50	138	57.50
Negative product attachment	0	0.00	47	19.58
High negative product attachment	0	0.00	7	2.92

to retain them for memory of their special day and their loved ones (Fig. 1 and 2). For the favourite chairs it was observed that the frequency of their use is quite high and most of the respondents had intentions of extending the

life of the chairs either through retention by repairing, recycling and up-cycling, or by sharing them with people in need or selling them off at cheaper prices as found in the preliminary study (Fig. 3). However, some

**Table 5: Result of Likert scale test for product retention of wedding attire (n=240)**

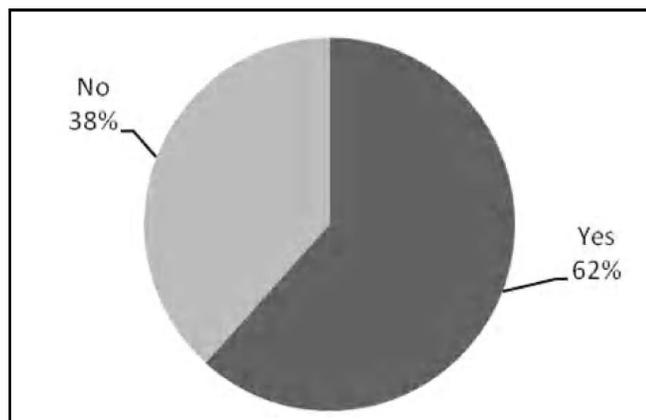
Sr. No.	Statements	SA		A		N		D		SD	
		#	%	#	%	#	%	#	%	#	%
<b>Irreplaceability</b>											
1.	Even a completely identical wedding attire cannot replace this wedding attire for me	67	27.92	87	36.25	67	27.92	12	5.00	7	2.92
2.	Another identical wedding attire has the same meaning for me	23	9.58	84	35.00	79	32.92	44	18.33	10	4.17
3.	This wedding attire is different for me than other wedding attires of this type	41	17.08	97	40.42	77	32.08	19	7.92	6	2.50
<b>Indispensability</b>											
4.	Without this wedding attire, my life is fine	7	2.92	66	27.50	90	37.50	66	27.50	11	4.58
5.	This wedding attire is necessary for me	34	14.17	75	31.25	99	41.25	25	10.42	7	2.92
6.	This wedding attire is indispensable for me	42	17.50	72	30.00	103	42.92	20	8.33	4	1.67
7.	I need this wedding attire to live the way I want to live	32	13.33	53	22.08	108	45.00	33	13.75	14	5.83

SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree; #: Frequency

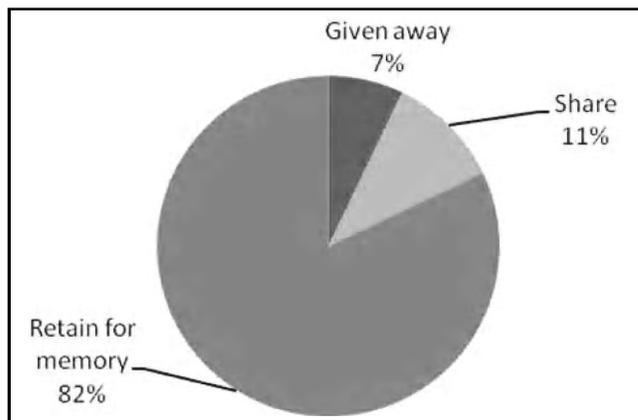
**Table 6: Result of Likert scale test for product retention of favourite chairs (n=240)**

Sr. No.	Statements	SA		A		N		D		SD	
		#	%	#	%	#	%	#	%	#	%
<b>Irreplaceability</b>											
S 1	Even a completely identical chair cannot replace this chair for me	25	10.42	58	24.17	99	41.25	52	21.67	6	2.50
S 2	Another identical chair has the same meaning for me	3	1.25	47	19.58	113	47.08	63	26.25	14	5.83
S 3	This chair is different for me than other chairs of this type	23	9.58	65	27.08	104	43.33	44	18.33	4	1.67
<b>Indispensability</b>											
S 4	Without this chair, my life is fine	7	2.92	39	16.25	114	47.50	63	26.25	17	7.08
S 5	This chair is necessary for me	27	11.25	75	31.25	95	39.58	39	16.25	4	1.67
S 6	This chair is indispensable for me	26	10.83	68	28.33	101	42.08	35	14.58	10	4.17
S 7	I need this chair to live the way I want to live	24	10.00	58	24.17	97	40.42	47	19.58	14	5.83

SA: Strongly Agree; A: Agree; N: Neutral; D: Disagree; SD: Strongly Disagree; #: Frequency



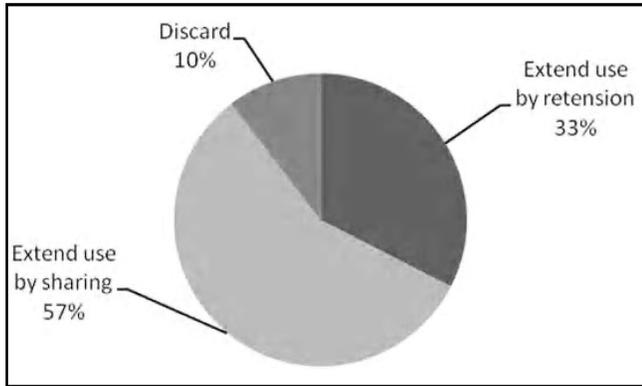
**Fig. 1 : Wear wedding attire after wedding day**



**Fig. 2 : Future intention of respondents with wedding attire**

respondents mentioned to simply discard them when their favourite chair had served its purpose for them.

Mean of scores of items within each determinant was computed. Mean of the overall determinants was



**Fig. 3 : Future intention with favourite chair**

computed to obtain product retention score of the respondents. Product retention scores represented by the computed means of the seven statements categorized the level of retention the respondents attached towards their wedding attire and favourite chair into different levels ranging from *high positive product retention* to *high negative product retention*.

Table 8 represents the frequencies and percentages of the respondents for each level of product retention for both the products. Analysis of the table showed similar

**Table 7 : Categorization of product retention scores based on computed mean**

Scores	Product Retention Category
4.21 – 5.00	High positive product retention
3.41 – 4.20	Positive product retention
2.61 – 3.40	Neutral product retention
1.81 – 2.60	Negative product retention
1.00 – 1.80	High negative product retention

distribution of levels of product retention for both products. It was observed that most of the respondents were on the levels of *positive product retention* and *neutral product retention* for both products with 2.92% each on *high positive product retention*. Chairs had a slightly higher percent at 10 % for *negative product retention* as compared to wedding attire which has 4.58%. This can be corroborated with the finding in the preliminary study (Fig. 3) where 10% of respondents intended to discard their favourite chair by just throwing them away, should they come to a point in the future when the chair no longer served its purpose for them.

**Linear regression analysis:**

Linear regression analysis was used to examine relationships between product attachment and product retention. The regression models for both wedding attire and favourite chair are shown in Table 9.

Analyses of the regression models show significant positive relationships between product attachment and product retention where the *p* value for the models were < 0.01. The independent variable *product attachment* had a significant positive relationship with the dependent variable *product retention* for both wedding attire and favourite chair.

It can be observed that the coefficients of determination *R*<sup>2</sup> were significantly low for both the models which explain a lot more about the findings of the study. The current study focused on real-life contexts of product ownership experiences and was not a model experiment. The study explored respondent’s emotional attachment towards their wedding attire and favourite

**Table 8 : Frequency distribution of levels of product retention of respondents for their favourite chairs and wedding attire (n=240)**

Product Retention Category	Wedding Attire		Favourite Chairs	
	Frequency	%	Frequency	%
High positive product retention	7	2.92	7	2.92
Positive product retention	98	40.83	64	26.67
Neutral product retention	124	51.67	145	60.42
Negative product retention	11	4.58	24	10.00
High negative product retention	0	0.00	0	0.00

**Table 9 : Regression models showing relationship between various study variables for wedding attire and favourite chairs**

Variables		Product	Regression Model
Independent	Dependent		
Product Attachment	Product Retention	Wedding attire	$R^2 = .074, F(1, 238) = 19.089, p = .000$
		Favourite chair	$R^2 = .339, F(1, 238) = 122.176, p = .000$

chairs. People have a lot of variation in their choice of products which could be dependent on a host of factors like design trends, accessibility, affordability, personal preferences, self-identity, social recognition and so on. Although some of these factors were considered in the measure of emotional value, others could not be included in the measure.

Interpreting a regression coefficient that is statistically significant does not change based on the  $R^2$  value (Moksony, 1990; Frost, 2017). Moreover, a low value of  $R^2$  does not necessarily indicate that the impact is small and negligible (Frost, 2017). The coefficient of determination  $R^2$  measures the variability around the predictions. The low  $R^2$  values obtained simply indicated that the dependent variable *product retention* was affected by a host of other factors in addition to the ones considered in the study. People's opinion and emotion are hard to predict and therefore the low coefficient of determination  $R^2$  obtained from the study revealed low variability around the predictions. These findings are supported by literature which stated that studies attempting to predict human behaviour generally have low  $R^2$  values (Frost, 2017).

### Conclusion:

It could be inferred from the results of regression analyses that *product attachment significantly explains product retention*. The findings showed that products served as symbols of people's emotions. People had greater chances of retention for products they had higher emotional attachments of. This reveals that the emotions people attach towards their products are significant predictors of people's attitude for retention or disposal of products. People's attitude towards the meanings they associate with their products determines user behaviour and the structure of retention and disposal of their products. A meaningful user-product relationship is

necessary for retention of products for its entire lifespan. Thus, it is vital to stimulate people's emotional attachment to products they own and use which will lead to retention of products, resulting in product sustainability.

## REFERENCES

- Babbitt, C.W., Kahhat, R., Williams, E. and Babbitt, G.A. (2009). Evolution of product lifespan and implications for environmental assessment and management: A case study of personal computers in higher education. *Environmental Sci. & Technol.*, **43**(13): 5106-5112. <https://doi.org/10.1021/es803568p>
- Frost, Jim (2017). How to interpret regression models that have significant variables but a low R-squared. Retrieved from <http://statisticsbyjim.com/regression/low-r-squared-regression/>
- Moksony, F. (1990). Small is beautiful: The use and interpretation of  $R^2$  in social research. *Szociological Szemle, Special Issue*, 130-138.
- Mugge, R., Schifferstein, H.N.J. and Schoormans, J.P.L. (2006a). A longitudinal study of product attachment and its determinants. *European Adv. Consumer Res.*, **7**: 641-647.
- Mugge, R., Schifferstein, H.N.J. and Schoormans, J.P.L. (2006b). Product attachment and product lifetime?: The role of personality congruity and fashion. *European Adv. Consumer Res.*, **7**: 460-467. <https://doi.org/10.1086/429607>
- Schifferstein, H.N.J. and Zwartkruis-Pelgrim, E.P.H. (2008). Consumer-product attachment: Measurement and design implications. *Internat. J. Design*, **2**(3): 1-13.
- Tlhabano, K., Selemogwe, M., Balogun, S.K. and Ibrahim, A. (2013). Self-expression, group affiliation, pleasure and memory as predictors of consumer product attachment and satisfaction among mobile phone users. *Internat. J. Development & Sustainability*, **2**(1): 1-14.

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